

The 24,289-acre National Elk Refuge was established by Congress on August 10, 1912, to acquire, preserve and manage lands for the wintering elk of Jackson Hole. The refuge lies within Teton County and is bounded on the north by Grand Teton National Park, on the east by the Bridger-Teton National Forest and on the south and west by the town of Jackson and mixed private and Bureau of Land Management lands, respectively.

Elk wintering on the National Elk Refuge spend their summers in Grand Teton National Park, Yellowstone National Park, or Bridger-Teton National Forest. Migration to the refuge is usually complete by mid-November. Elk begin to leave the refuge in April, and are generally gone by mid-May. No more than 100 or so elk usually remain on the refuge during the summer.

A major management effort of the refuge is the winter supplemental feeding of elk which is accomplished under the direction of a cooperative agreement between the Fish and Wildlife Service and the Wyoming Game and Fish Department dated August 1974, a copy of which is attached. Under this agreement, the Refuge elk herd is not to exceed 7,500 animals. Cost for the winter supplemental feed is shared equally by the FWS and Wyoming Game and Fish Department. The local Boy Scouts of America troop annually collects dropped antlers on the refuge, which are sold at public auction. The Scouts, in turn, annually donate approximately \$35,000, toward the purchase of elk feed.

Because of the importance of the elk in the Jackson Hole area and because of the legal responsibilities for study and management of these animals, a Memorandum of Understanding covering the "Jackson Hole Cooperative Elk Studies" group has

been in existence since 1959; a copy of the agreement is attached. Membership consists of the Wyoming Game and Fish Department, U.S. Forest Service, National Park Service, and Fish and Wildlife Service. Meetings are regularly held to discuss the management needs of the animals, and this is generally done through two committees; an Advisory Council composed of agency administrators and a Technical Committee composed of delegated technicians from the participating agencies.

An agreement had recently been reached with the Bureau of Reclamation for the placement of a seismograph station to monitor earthquakes on the Elk Refuge. Additionally, a number of mutually beneficial agreements are in existence between the FWS and the National Park Service, and cover a variety of areas and endeavors. These include:

1. The sharing of equipment such as trucks, crawler tractor, snowplows, etc., on either an exchange or cost reimbursement basis.
2. The utilization of Parks National Crime Information Center terminal and State of Wyoming's teletype system on law enforcement matters. The Fish and Wildlife Service also utilizes the State of Wyoming radio dispatch service, firing range, firearms instructors, training opportunities, and seasonal law enforcement people when needed.
3. Utilization of the National Park Service sign shop for construction and major repairs to refuge signs.
4. Through a reciprocal written agreement with the Grand Teton Natural

History Association, the Service contrasts for a winter sleigh ride activity which serves as a major interpretive program for 25,000 visitors annually. A copy of the agreement is appended to my statement. Under this agreement, periodicals and other interpretive publications are sold.

5. Under a Memorandum of Understanding, the Park provides crew members and equipment to assist with wildfire and control prescription burns on the refuge. Service personnel are also available for Park usage.

Operation by Federal and even State agencies in the Jackson Hole area of Wyoming are generally very well coordinated. It is the general rule that agency personnel almost daily share their management decisions with "neighbors," and constantly ask for input for development projects. Each year, roughly 2,000,000 people visit the Jackson Hole area. This volume of public use requires and receives the full cooperation of all State and Federal agencies.

Copies of other interagency agreements, membership lists for the cited committees, and the Interagency Grizzly Management Guidelines are also attached to the statement.

This concludes my prepared statement. I would be pleased to answer any questions you may have.



## United States Department of the Interior

BUREAU OF LAND MANAGEMENT  
WASHINGTON, D.C. 20240

IN REPLY REFER TO:

1780 (622)

July 9, 1984

Instruction Memorandum No. 84-585

Expires 9/30/85

To: All Field Officials

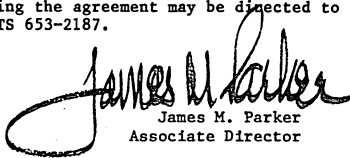
From: Director

Subject: Interagency Agreement Between the Bureau of Land Management and  
the Forest Service for Mineral Leasing

A copy of the subject agreement is enclosed for your information and prompt implementation (Enclosure 1). The expressed purpose of the agreement is to ensure cooperative, timely, and efficient action by the Bureau of Land Management and the Forest Service with respect to mineral leasing. Note that a single environmental analysis is to be completed and is to serve as the environmental basis for all recommendations and/or decisions made by both agencies. Therefore, joint scoping of proposed actions to identify issues, concerns, and responsibilities is essential, and participation rather than review is to be emphasized.

The agreement is written broadly to provide general guidelines for mineral leasing. Supplemental agreements are encouraged to implement more specific local procedures. For information purposes, such agreements are to be forwarded to the Director (500).

Comments or questions concerning the agreement may be directed to Karl Duscher or Greg Shoop, FTS 653-2187.



James M. Parker  
Associate Director

1 Enclosure

Encl. 1 - Interagency Agreement Between the Bureau of Land Management  
and the Forest Service for Mineral Leasing (5 pp)

INTERAGENCY AGREEMENT  
BETWEEN  
THE BUREAU OF LAND MANAGEMENT  
AND  
THE FOREST SERVICE  
FOR  
MINERAL LEASING

The Bureau of Land Management (BLM), Department of the Interior, and the Forest Service (FS), Department of Agriculture, hereby agree that the policy and procedures set forth in this Interagency Agreement (IA) shall be followed with respect to the processing of authorizations, such as licenses, permits, and leases, that grant rights to federally owned minerals in the National Forest System (NFS) and in adjoining lands with Federal minerals (split estate lands). Such authorizations are collectively referred to in this IA as leases. This agreement does not include permits issued by the FS to do preliminary mineral-related investigations or surveys.

#### I. AUTHORITIES

The BLM manages the Federal leasable mineral estate under authority of the Mineral Leasing Act of 1920 (30 U.S.C. 181 et seq.), the Mineral Leasing Act for Acquired Lands (30 U.S.C. 351-359), the Geothermal Steam Act of 1970 (30 U.S.C. 1001 et seq), Section 402 of Reorganization Plan No. 3 of 1946 (5 U.S.C. Appendix), the Federal Coal Leasing Amendments Act of 1976 (90 Stat. 1083), and other Acts.

The FS manages the NFS for multiple use and sustained yield of products and services and is authorized to make rules and regulations to govern surface use and occupancy under the authority of the Organic Administration Act of 1897 (16 U.S.C 473-475, 477-482, 551), the Multiple-Use Sustained-Yield Act of 1960 (16 U.S.C. 528 (note), 528-531), and the National Forest Management Act of 1976 (90 Stat. 2949). Under certain statutes the FS has consent authority for leasing of the NFS. Also, in accordance with 43 CFR 3101.7 and through long standing agreement between the Departments, the FS provides recommendations where consent authority does not exist.

#### II. PURPOSE

This IA establishes the policy and procedures by which leasing proposals which involve the NFS and adjoining private lands with Federal minerals are to be processed by the BLM and the FS. This policy and these procedures are adopted to ensure cooperative, timely, and efficient action by the BLM and the FS with respect to such leasing, consistent with the statutory and regulatory responsibilities of each agency.

### III. RESPONSIBILITIES

A. NEPA Compliance and Coordination. Issuance of leases by the BLM is a Federal action which requires an environmental analysis to be made in conformance with the National Environmental Policy Act of 1969 (NEPA), its implementing regulations (40 CFR 1500-1508), and agency direction. In order to comply with these requirements in an efficient and effective manner, both agencies will participate jointly in scoping each proposed action. A single environmental analysis and, if appropriate, a single document is to be completed such that it will be an adequate environmental basis for all recommendations and/or decisions to be made by either the FS or the BLM.

For leasing proposals which primarily involve the NFS or adjoining private lands with Federal minerals and which primarily involve NFS issues, the FS will have the lead for environmental analysis and, when necessary, documentation in an environmental assessment or environmental impact statement. For leasing proposals which involve primarily non-NFS lands or issues, the participation of each agency in environmental analysis and documentation will be determined during scoping. In all cases, FS expertise will be recognized for that portion of any analysis or document concerning protection and utilization of the NFS.

B. Stipulation Development and Use. The BLM and the FS will coordinate the development of stipulations in conjunction with NEPA compliance at the local level to ensure appropriate wording and to ensure that adequate justification for their use exists in the record. The BLM and the FS will coordinate agency-wide stipulation use policy at the Washington level.

C. Agency Decisions. Leasing decisions are to be coordinated by the BLM and the FS so that requirements identified through the environmental analysis and, if appropriate, the environmental document are considered in FS recommendations (including those pertaining to adjoining private lands with Federal minerals) and/or consent decisions and in subsequent BLM leasing decisions. Coordination with respect to FS recommendations and/or decisions is to be such that FS is aware of final action to be taken by BLM.

1. Recommendations. When the FS role in the leasing decision is limited to providing the BLM with advisory, nonbinding recommendations, the FS will forward its recommendations to BLM as to the leasing of the NFS and adjoining private lands with Federal minerals.

2. **Consent.** When the decision requires consent of the FS for the leasing of the NFS, the FS shall notify affected parties of its decision. After expiration of the FS appeal period, the FS shall forward its decision to BLM. When the FS provides recommendations for adjoining private lands with Federal minerals or recommendations involving non-NFS lands or authorities within its decision, they are to be so identified.

**D. Appeal Coordination.** To the extent that potential leasing of the NFS and of adjoining private lands with Federal minerals involves only FS recommendations, FS actions are not subject to appeal to the FS. However, to the extent that such leasing of the NFS requires FS consent, FS decisions are subject to appeal to the FS under 36 CFR 211.18. If a decision is appealed, the FS will promptly notify the BLM.

All BLM decisions, subsequent to either FS recommendations or consent decisions, are then subject to protest to BLM and/or appeal under 43 CFR 4. The BLM will promptly notify the FS if a BLM decision affecting a lease proposal of the NFS is protested or appealed.

**E. General Program Coordination.**

1. The BLM will review proposals for leases prior to forwarding them to the FS to ensure compliance with applicable regulations. The BLM will forward acceptable proposals to the FS within 15 days of receipt with a request for a FS recommendation and/or consent decision and, if acquired minerals are proposed for leasing, a request for a title report.
2. Within 30 days of FS receipt of a leasing proposal, the BLM and the FS will, if necessary, scope the proposal.
3. The FS will forward its recommendation and/or consent decision within 60 days of the initial receipt by the FS of the leasing proposal, or will provide the BLM with a date to expect a response giving the reason for such delay.
4. The BLM State Director and the FS Regional Forester will attempt to resolve differences concerning FS leasing recommendations or differences involving specific leasing procedures. Differences which cannot be resolved will be forwarded promptly to the BLM Director and the FS Chief for resolution.

5. The BLM will close a case by either issuing a lease or rejecting an offer within 60 days of receipt of FS recommendations or consent decisions.
6. The BLM will provide the FS information relative to changes in the status of offers, licenses, permits, and leases within 10 days of the change.
7. The BLM and the FS will incorporate the policies and procedures set forth in this agreement into their respective manual systems. The BLM and the FS will coordinate and share at the local and national level manual releases, policy memoranda, and directives affecting the respective leasable mineral programs.
8. The BLM and the FS will coordinate the preparation of budget proposals for leasable minerals at the national level to ensure that data and information are consistent and that major projects, such as coal leasing plans, are appropriately considered in the budgets of both agencies. The BLM and the FS will coordinate work plans at the State Director/Regional Forester level and, with respect to NEPA compliance for leasing of split estate lands, will notify respective Washington Offices when substantial costs will be incurred.

#### IV. SUPPLEMENTAL AGREEMENTS

The BLM State Directors and the FS Regional Foresters are encouraged to enter into supplemental agreements consistent with this IA in order to implement local procedures which will contribute to the cooperative, timely, and orderly processing of mineral leasing proposals. A copy of supplemental agreements will be forwarded to the BLM Director and the FS Chief for information.

#### V. EFFECT ON PRIOR AGREEMENTS

This IA supersedes the following interagency agreements, in whole or in part as indicated, as they relate to the processing of mineral leasing proposals and, to the extent inconsistent, any other agreements between the BLM and the FS.

1. Sections III, IV, and V of the Cooperative Agreement Between Forest Service (USDA) and the Geological Survey (USDI) for Operations Within Solid Mineral Permits and Leases on National Forest System Lands, dated November 1980, are superseded.
2. The Interim Memorandum of Understanding Between the Bureau of Land Management and the Forest Service, dated December 1980, is superseded in its entirety.

3. Sections I.A., I.B., III.A., and III.B., of the Memorandum of Understanding for the Geothermal Program between the U.S. Geological Survey - Bureau of Land Management - USDA, Forest Service, dated December 1981, are superseded.

#### VI. AGREEMENT REVIEW

Within 1 month prior to the anniversary date of this IA, the FS Regional Foresters and the BLM State Directors shall apprise their respective Washington Offices of suggested modifications, if any, to this agreement which would contribute to the cooperatively, timely, and orderly processing of mineral leasing proposals. These suggestions will be reviewed by the BLM Director and the FS Chief to determine if the IA should be amended.

*F. Dale Robertson*  
 For: Chief, Forest Service

*6/19/84*  
 Date

*James H. Parker*  
 For: Director, Bureau of Land Management

*6/19/84*  
 Date

MEMORANDUM OF UNDERSTANDING  
Between the  
BUREAU OF LAND MANAGEMENT AND FISH AND WILDLIFE SERVICE

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MEMORANDUM OF UNDERSTANDING  
Between the  
BUREAU OF LAND MANAGEMENT and FISH AND WILDLIFE SERVICE

I. PURPOSE

The purpose of this agreement is to promote harmonious and effective cooperative relationships between the Bureau of Land Management (BLM) and the Fish and Wildlife Service (FWS) in resource management activities in a manner that recognizes existing cooperative relationships with the States.

II. AUTHORITY

This agreement is made under authority of the Economy Act of June 20, 1932 (31 U.S.C. 686, 6866).

III. RESPONSIBILITIES

The key to achieving the purpose of this agreement is clear definition of BLM and FWS roles and responsibilities within respective statutory authorities. Broad responsibilities are defined below. Specific relationships are set forth in subsequent sections of this agreement. Additional procedures relating to OCS and Geothermal matters are set forth in Secretarial Orders 2974 (Revised) of August 8, 1978, and 2962, respectively.

A. The BLM has the statutory responsibility for cadastral survey, inventory, planning, and multiple-use management of the public lands and public land resources, including fish and wildlife. BLM is also required to assure that fish and wildlife resources are effectively considered in all stages of its land management programs and activities. In connection with this responsibility, BLM must have the capability to efficiently inventory, manage, and protect fish and wildlife habitat.

B. The FWS has principal statutory responsibility and authority for migratory birds, threatened and endangered (T/E) species, certain marine mammals, international resources within the continental United States, and all fish and wildlife on lands under Service control and as described in the Fish and Wildlife Act of 1956 [16 U.S.C 742(a) - 754].

C. FWS and BLM have general responsibilities to conduct research and to compile information on the status of fish, wildlife, and plant resources and those factors affecting them in their respective areas of responsibility. These general FWS assessments for wildlife and vegetative conditions and trends may at times extend to areas within the public lands under BLM administration in response to statutory, Presidential, or Secretarial direction.

D. Both Agencies have fish and wildlife advocacy roles within their statutory authorities or other assigned functions.

## IV. COORDINATION

A. Field Coordination. Frequent informal consultation on matters of mutual concern is to be encouraged at all levels. Where disagreements arise, they should be expressed through the levels of authority of the two Agencies, beginning at the lowest appropriate field level.

1. The BLM State and OCS Offices and the FWS Area Offices or their delegated offices will be the primary offices through which field coordination will take place. Each is responsible for ensuring that appropriate offices of its organization are involved whenever appropriate.

2. On matters of mutual interest, the FWS Area Manager or the BLM State Director or the OCS Office Manager will determine which of their respective offices should be the focal point for coordination, including referral to other field organizational units (i.e., BLM Denver Service Center (DSC), FWS Research Centers, Area Offices, and National Teams). The Directors or Leaders of these field units will apprise FWS Area Managers and BLM State Directors and/or OCS Office Managers of planned or ongoing studies, projects, and activities.

B. Washington Office (WO) Coordination Committee. Close coordination is also essential at the WO level. This agreement reaffirms the need to continue the BLM-FWS Interagency Committee for Program Coordination with the following responsibilities:

1. To coordinate the full range of related programs between the two Agencies.

2. To arrange for cooperation, support, and standards in the operational conduct of programs relating to wildlife.

3. To provide for exchange of data, information, findings, and services of mutual concern.

4. To coordinate budget and program execution activities.

The Committee will have the authority to make decisions within its areas of responsibility where the cochairpersons of both Agencies agree.

The Committee will have the authority to establish working groups on specific proposals or problem areas, as required.

The Committee will be jointly chaired by the Associate Director, BLM, and the Deputy Director, FWS. The Committee will be made up preferably with officials at the policy level concerned with the activities involved. It will meet at least once every two months at the call of the cochairpersons.

C. Meetings. There shall be, as a minimum, annual coordination meetings between State and OCS Offices and appropriate FWS Regional and Area Offices, and such other offices as deemed appropriate, timed to coincide with the budget cycle and to discuss programs and plans relative to items of concern to both Agencies for the coming year. WO level meetings shall be held by the BLM/FWS Coordinating Committee.

D. Written Communication. When either Agency solicits, from the other, advice/recommendations on subjects related to this agreement, 30 days, unless specified otherwise, will be afforded for reply. If no response is received within the specified time period, the requesting Agency will assume that the other either concurs or has no comments to offer.

E. Supplemental Agreements. BLM and FWS field offices or other appropriate organizational units may enter into supplemental agreements where needed to specify interrelationships in detail or for specific project-type activities. Such agreements must be within the policy parameters of this agreement and will stress coordination at the lowest appropriate field units.

F. General Assistance. FWS will assist BLM in a manner consistent with this memorandum of understanding (MOU), through cooperative procedures mutually agreed to by BLM State Directors or OCS Office Managers and FWS Area Managers, or as appropriate, Directors or Leaders of other BLM or FWS field units. Examples include participation in certain field projects, providing specialized expertise, developing data collection and interpretation methods, assessing major impacts on wildlife, recommending measures for preventing or mitigating damage to important habitats, and conducting research and sharing research findings to support identified BLM needs.

G. Conflicts. Conflicts shall be resolved in accordance with procedures set forth in section XI of this agreement. Each Agency will strive to support the other in the public arena, to the maximum extent possible.

## V. GENERAL PRINCIPLES AND PROCEDURES

### A. Multiple-Use Planning

Principles: The cooperative relationship between the two Agencies is built upon the concept that field level input and information exchange, as early as feasible during the land planning process, will contribute to the achievement of basic objectives of both Agencies.

#### Procedures:

1. BLM State Directors and OCS Office Managers and FWS Area Managers will develop procedures, consistent with this MOU and the five-way inter-agency agreement relating to "Classification and Inventories of Natural Resources," to provide for regular exchange of information and advice as early as feasible in the planning process.

2. Both Agencies will provide comment on the land-use planning documents of the other within their area of expertise by participating in a consultative manner to minimize conflicts and disagreements. FWS will recognize BLM's responsibility to balance wildlife interests with other concerns in multiple-purpose management.

3. Both Agencies will consider all comments of the other and incorporate those deemed appropriate into decisionmaking.

#### B. Inventory, Collection, and Analysis of Resource Data

Principles: BLM is responsible for assuring the collection, inventory, and subsequent analysis of fish, wildlife, vegetative, and other resource related data on the public lands. FWS has responsibilities for collection and analysis of data to meet its requirements relative to endangered species, migratory birds and other species, and animal damage control (ADC). FWS is also concerned with the general adequacy of data and analysis for management and protection of wildlife, wildlife habitat, and T/E plant species on a national and regional basis.

#### Procedures:

1. Both Agencies will coordinate inventory system development and applicable data-gathering activities to foster a common and compatible resource data base, to share information, and to minimize conflicts and disagreements concerning adequacy of wildlife data. Joint efforts in this regard will be guided by the Interagency Agreement Relative to Classification and Inventory of Natural Resources, effective June 6, 1978. Both Agencies will work in partnership to ensure that needed data are obtained in a cost effective and expedient manner, including coordinating to use compatible inventory techniques and developing standards and methods to facilitate data exchange.

2. Each Agency will seek participation of the other in the actual conduct of data collection activities to meet their requirements. FWS and BLM will provide mutual support in terms of cooperative development of new methodology and inventory techniques that will facilitate data collection and mutual management decisions.

3. FWS will conduct inventories and collect data necessary for Critical Habitat determinations on private surface under which Federal minerals are located. This data will be provided to BLM when requested. All pertinent information on public lands will be made available to the FWS upon request.

4. BLM's land-use planning system contains an inventory, data, and information collection step. The regulations (43 CFR, Part 1600) which guide the BLM planning process identify specific opportunities for the FWS to participate in the preparation of resource management plans (RMPs).

<u>RMP Step</u>	<u>BLM Responsibility</u>	<u>FWS Input(s)</u>
a. Preplanning Analysis and Issue Identification	Determine wildlife resource data needs; develop planning/inventory schedule for wildlife resources; estimate financial requirements	Help identify general wildlife situations; recommend data elements needed to address wildlife issues when requested by BLM
b. Management Situation Analysis (MSA)	Identification of existing wildlife resource conditions and potentials on planning area basis	Help identify known significant wildlife habitats (existing and potential); provide other assistance, technical support, and advice upon request by BLM

#### C. Cooperation with State Fish and Wildlife Agencies

Principles: Both Agencies share the concern that State fish and wildlife resource agencies be routinely consulted to strengthen coordination and cooperative relationships. Every effort will be made to prevent duplicative requests or contacts for information and data assistance with these State agencies.

#### Procedures:

1. BLM State Directors and OCS Office Managers and FWS Area Managers will keep each other apprised of actions planned or taken with State wildlife agencies on wildlife matters of mutual concern.
2. Whenever resource related research actions and nonoperational studies are proposed with State wildlife agencies by field units within BLM and FWS that are not administered by the FWS Area Manager or BLM State Director or OCS Office Manager, it shall be the responsibility of the Director or Leader of that field unit to keep both the Area Managers and State Directors informed.
3. BLM will ensure State wildlife agency involvement in its programs. Officials of both Agencies will also keep each other informed of their respective resource related activities on lands under their jurisdiction.

#### D. Environmental Analysis

Principles: The National Environmental Policy Act requires agencies taking major Federal actions significantly affecting the quality of the human environment to prepare environmental impact statements (EIS) on

those actions. The preparation of environmental assessments (EA) and EISs must be carried out in consultation with all appropriate agencies and organizations.

#### Procedures:

1. Each Agency will keep the other apprised of current and projected EIS schedules via the regularly scheduled meetings of the FWS/BLM Coordinating Committee and by other means, as appropriate.

2. Each Agency will request from the other data and other inputs into the applicable EISs and EAs at the earliest possible date. Where one Agency has special expertise or unique talent needed by the other, such will be made available to the EIS or EA team under terms and conditions mutually agreeable to the concerned FWS Area Manager and BLM State Director or OCS Office Manager. This may include detail of personnel to assist in EIS or EA preparation.

3. FWS and BLM budget requests for EISs, EAs, and associated work will be coordinated to reflect their respective responsibilities in the most cost-effective approach and to foster clear communications between the two Agencies. Where budgets are being formulated in advance for specific efforts, normally the budget of the Agency which has lead for such EIS or EA preparation shall be the vehicle for appropriate fund and manpower requests. Coordination at the field level will be in accordance with procedures agreed to by FWS Area Managers and BLM State Directors and OCS Office Managers.

4. Each Agency will provide to the other review copies of draft EISs at the earliest possible time for official review and comment within specified time frames.

#### E. Research

Principles: Resource related research efforts of both Agencies will be coordinated in the best interest of sound resource management and for maximum cost effectiveness.

#### Procedures

1. Each Agency will be given an opportunity to identify and review the other's research proposals relating directly to its lands or management responsibilities in order to avoid duplication, help ensure management application when appropriate, and determine if similar research is being conducted by other sources.

2. Pertinent research results, including significant interim findings, of either Agency will be made available to the other on a timely basis. BLM State, District, and OCS offices are to be included on

applicable FWS mailing lists, including cooperative fishery and/or wildlife units, for research reports and summaries on matters that relate or that are applicable to wildlife, mineral, and vegetative resource management on the public lands. FWS Regional and Area offices are also to be included on the mailing list for BLM Technical Notes.

3. FWS and BLM may conduct cooperative research either on public lands or elsewhere. FWS shall coordinate, in advance, with the appropriate BLM State Director, plans for research or special studies on public lands.

4. Annual meetings shall be held at the field and WO levels to coordinate research surveys, investigations, and studies being conducted which are of mutual program interest to both Agencies. This also includes such work being conducted by the FWS's Western Energy Land Use Team and The Eastern Energy Land Use Team, cooperative research units, or other applicable entities of FWS and BLM's DSC. Such meetings shall be initiated, scheduled, and organized by mutual agreement of appropriate officials of both Agencies. Both FWS Area Managers and BLM State Directors and OCS Office Managers shall participate in such meetings when appropriate. Agenda items should provide for discussion/resolution of Agency needs and priorities relative to wildlife related considerations.

#### F. Information/Data Sharing

Principles: A wide variety of biological, ecological, and scientific information, published and unpublished, exists within both Agencies. This includes information relating to resource conditions and trends, wildlife and habitat inventories and baseline studies, economic or other values, demand/supply, and use statistics. Free exchange of this information in compatible and standardized formats is essential.

#### Procedures:

1. Each Agency shall furnish or otherwise make available unpublished resource information and data to the other, upon request, when it is practical to do so.

2. Each Agency distributes technical publications and resource materials to aid in communications and to present program/activity information and results. Each Agency shall ensure that appropriate field and headquarters offices of the other Agency are included in any such mailing lists maintained by its organizational elements.

3. Both Agencies shall explore ways to improve the exchange and distribution of resource-related materials which may be applicable to the planning, decisionmaking, and evaluation needs of the other.

4. Both Agencies shall move expeditiously to implement mutually agreeable procedures for information/data collection, storage, or associated matters resulting from the Interagency Agreement Relative to Classification and Inventory of Natural Resources.

### G. Endangered Species Consultation

Principles: Both Agencies are firmly committed to the protection of T/E species. Both also recognize the need and requirements for close consultation on any action which may affect such species or their habitats.

#### Procedures/Consultation:

##### 1. General

(a) Whenever it is found that T or E species or their habitat may be affected by BLM activities, the concerned BLM State Director or OCS Office Manager must initiate consultation in accordance with Interagency Cooperation Regulations. Consultation may be necessary for species proposed for listing in construction type actions. To the extent that the concerned BLM State Director or OCS Office Manager and the FWS Regional Director can agree, and as provided for in the above regulations, an aggregate approach to consultation on the public lands will be followed.

(b) Whenever FWS finds that additional data are needed upon which to issue a biological opinion, such data must be provided by BLM before the consultation process can be concluded.

(c) It is jointly agreed that not all habitat modifications are prohibited, only those which destroy or adversely modify habitat essential to the conservation of a listed species.

(d) The FWS will provide methodology, expertise, and recommendations, upon request, to help resolve operational problems caused by endangered species on public lands.

##### 2. Recovery Teams

(a) FWS shall provide technical leadership in developing and coordinating recovery plans for T or E species.

(b) BLM shall be afforded an opportunity to participate on recovery teams where such plans involve species inhabiting the public lands under its control.

(c) Recovery teams will not obligate either Agency to expend funds or establish specific time schedules for actions, but may recommend needed actions.

### H. Sikes Act Cooperation

Principles: Both Agencies agree to the need for maintaining guidelines and procedures for the planning, coordination, and development of fish and wildlife programs under authority of the amended Sikes Act.

Procedures:

1. BLM will develop and implement comprehensive programs for conservation and rehabilitation of wildlife resources on the public lands under its control.

2. FWS, upon request and within its capability, will provide technical assistance to BLM relative to such comprehensive plans for management of the public lands under BLM control.

3. State cooperative wildlife management plans developed in accordance with the Act shall be coordinated to the extent practical with statewide comprehensive plans developed under authority of the amended Fish and Wildlife Restoration Act, Public Law (P.L.) 91-502.

## I. Fish and Wildlife Diseases

Principles: A variety of diseases are capable of inflicting heavy losses among fish and wildlife populations. To minimize losses from disease, both Agencies recognize the need for close cooperation in the early detection, quick and accurate diagnosis, and rapid implementation of suitable control activities.

Procedures: BLM State Directors, FWS Area Managers--and where appropriate--OCS Office Managers will prepare contingency plans which will describe procedures and methods for combatting disease outbreaks which occur on public lands.

## J. Fish and Wildlife Coordination Act Cooperation

Principles: Both Agencies agree that the Fish and Wildlife Coordination Act should be read and interpreted in the light of its primary purpose. Recognizing exclusions provided by Section 2(h) of the Act, the purpose is nonetheless to ensure that fish and wildlife and associated environments be given equal consideration and be coordinated with other features of water resource development programs.

Procedures:

1. BLM will consult--at the earliest appropriate stage of its planning process--with the FWS and with the appropriate State wildlife agency when it is proposing to construct or to permit actions involving water development that is not considered routine land management activities.

2. FWS will review and/or study the proposed water development activity and will prepare a report to BLM which will assess or concur in BLM's assessment of project impacts on fish and wildlife resources. In addition, FWS will make recommendation and/or concur with BLM's recommendations on (1) how to prevent or compensate loss of fish and wildlife and associated resources, and (2) to improve or enhance these resources.

3. BLM will give full consideration in its decisions to the report and recommendations made by the FWS and will incorporate into the permit or lease appropriate stipulations that would prevent, compensate, and/or enhance fish and wildlife resources.

K. Permit Regarding Work Affecting Navigable Waters, Waters of the United States, and Ocean Waters

Principles:

The Secretary of the Interior has delegated to the FWS the responsibility for investigating and reporting on applications for permits for dredging, filling, excavation, discharge of dredged or fill material, and other activities, including construction of facilities and works in the navigable waters and ocean waters of the United States issued by the Corps of Engineers (503 DM 1, August 3, 1973). Permits pursuant to the Rivers and Harbors Act of 1899, the Clean Water Act of 1977, the Marine Protection, Research, and Sanctuaries Act of 1972, and other applicable legislation may be required for activities conducted on public lands and waters under the control of BLM. Such permits may or may not fall under the provisions of 503 DM 1.

Procedures:

1. Proposals and applications for applicable activities and operations on public lands under BLM control and conducted by the BLM shall be coordinated by the BLM District Offices with the appropriate FWS Area or Field Office. BLM shall consult with FWS before a formal application is made to the appropriate regulatory agency.
2. For all permit applications falling under the provision of 503 DM 1, BLM District Offices will be responsible for arranging for the receipt of permit applications, reviewing them in accordance with their program interests, communicating any recommendations on such applications promptly to the FWS Area or Field Office, and cooperating in resolution of differing views pursuant to Section 503.1.3 E.

L. Wild Horses and Burros

Principles: Both Agencies recognize the need for cooperative management of wild free-roaming horses and burros which normally range on their lands.

Procedures:

1. BLM State Directors and FWS Area Managers will develop agreements and, as appropriate, joint plans for the management of wild horses and burros which range interchangeably upon the lands of the other.

2. BLM State Directors shall consult with FWS Area Managers in those areas where wild free-roaming horses and burros are found to determine appropriate management levels for these animals and whether actions should be taken to remove excess animals.

#### M. Fire Management and Protection

Principles: The need for sound wildland fire management programs, rapid response to wildfire in high danger situations, and efficient utilization of fire control personnel and equipment is jointly recognized. Further, the use of prescribed burning as a habitat or other resource management tool will be practiced by both Agencies, to the extent appropriate.

Procedures: Each Agency will provide fire management assistance to the other as determined by appropriate field officials. Fire suppression capabilities of both Agencies will be coordinated, as appropriate, through the Boise Interagency Fire Center and through field officials designated by BLM State Directors and FWS Area Managers.

#### N. Animal Damage Control

Principles: All native animals are important in the functioning of public land ecosystems and are resources of value and interest to the people of the United States. It is recognized, however, that ADC measures are sometimes necessary for the protection of human health and safety, forest and rangeland resources, agricultural crops, and livestock.

#### Procedures:

##### 1. General

(a) The program will be consistent with the President's predator damage control policy and the goals and policies of the Secretary's November 8, 1979, decision on the ADC program.

(b) The program will be operated within the framework of a state-wide plan to be developed by FWS Area Managers with input from BLM and other agencies, as deemed appropriate.

(c) Where an active ADC program exists in a BLM District, the FWS will annually develop a plan setting forth predator damage management activities designed to alleviate documented livestock loss and respond to requests for control services. Such plans will be coordinated with the State wildlife agency.

(d) Authorization for predator damage control will be based on livestock operator requests and demonstrated need based on losses verified by FWS.

(e) To ensure an expeditious response to livestock damage problems, livestock operators will submit requests for predator control services directly to the FWS, in accordance with the ADC plan.

(f) Where there is a need for measures to resolve rodent damage problems, planned control activities will be incorporated into the plan based on needs identified by the BLM, FWS, and other appropriate sources.

(g) Predator damage control will be directed toward individual predators causing the damage rather than the general population and will be limited to the specific area where losses due to predators have been verified.

2. The FWS will:

(a) Take the lead in preparation of an annual operational predator management plan for each BLM District.

(b) Review and evaluate requests for control and conduct control work as provided for in the ADC plan pertaining to public lands.

(c) Ensure that the ADC activities are compatible with existing policies and all appropriate laws and regulations.

(d) Be responsible for overall coordination and management of the ADC program, including arrangement of interagency meetings whenever needed.

3. The BLM will:

(a) Identify and delineate human safety zones and similar areas where ADC will be restricted or not allowed.

(b) Participate in the evaluation of the need for ADC (including rodent) programs for the protection of BLM resources.

(c) Determine whether ADC will be authorized on the public lands under its stewardship and the manner in which such control shall be implemented.

0. Cadastral Surveys

Principles: Cadastral surveying involves the creation and reestablishment of public land boundaries, the subdivision of the areas, and the determination of the amount of area within such surveys; the preparation of the official plat and written record of these surveys to be used in describing lands for patents, leases, or retention for Federal management purposes; and the preparation of protracted Federal boundaries over unsurveyed lands and offshore areas on the OCS.

Procedures:

1. Departmental cadastral surveying will follow the Manual of Instructions for the Survey of the Public Lands of the United States (1973 edition), and its amendments and supplements published by BLM. (see 757 DM 2.7.)

2. The BLM is responsible for the administration, coordination, and execution of the Public Land Survey System (PLSS). This includes the establishment and maintenance of a system for the storage and dissemination of survey data for use by local and national realty, land title, and mapping interests. The data also includes the geographic coordinates of all corner positions established or reestablished under, or directly related to, the PLSS. BLM is the custodian of the official U.S. public land survey records and maintains public information centers in those States which still have active cadastral survey programs and in Washington, D.C. BLM is also responsible for establishing a direct line of cadastral survey data communication to the Department's National Mapping Program (U.S. Geological Survey (USGS)) on a continuing basis (see 757 DM 2.3B, National Mapping Program).

3. BLM responsibilities include the segregation by survey of valid private rights acquired through a variety of public land laws, including the general mining laws. BLM is also responsible for determining the Federal offshore boundaries on the OCS.

4. The FWS will coordinate its cadastral surveying needs with BLM and will report to BLM all actions taken which serve to change the official PLSS records.

5. FWS shall submit its requirements for cadastral surveys to BLM with adequate lead time for program implementation. BLM will determine the appropriate action necessary to satisfy the needs of each request. This may include the use of existing survey data or original surveys or resurveys by BLM. Such surveys are normally provided by BLM on a reimbursable basis. In those cases where BLM authorizes FWS to perform the actual survey work, BLM will provide the necessary instructions, guidance, and official approval of the records. The records of such surveys will then also enter the public domain.

#### P. International Activities

Principles: In the development and implementation of international treaties, agreements, and legislation, both Agencies will work cooperatively in the study, protection, and management of wildlife and other matters of mutual interest.

#### Procedures:

1. Each Agency will keep the other apprised of international actions of mutual concern.

2. Where mutually beneficial, both Agencies will jointly develop and implement programs to carry out international responsibilities.

#### Q. Withdrawals

Principles: The FWS and BLM jointly recognize that the National Wildlife Refuge System (NWRS) is an independent land management system mandated by

statute and that it is appropriate for public lands needed for units of the system may be made available through section 204 withdrawal. It is also recognized that public lands needed for the system or for other FWS uses such as fish hatcheries, administrative sites, research areas, etc., be kept to a minimum necessary for proper administration of such areas.

Procedures:

1. To the greatest extent practical, alternatives to outright withdrawal of public lands will be considered along with withdrawals. Such alternatives include cooperative agreements and rights-of-way.
2. FWS and BLM agree that discretionary mineral leasing operation on lands withdrawn for FWS purposes shall be allowed after compatible and enforceable lease stipulations and terms have been agreed to by FWS.
3. It is recognized that most FWS lands are not subject to section 204(1) review provisions of the Federal Land Policy and Management Act of 1976. However, except for units of the NWRS, wherein by statute only Congress can remove lands from the System, the FWS will make every effort to return other withdrawn public land to BLM administration when such lands are no longer needed for FWS purposes.
4. FWS and BLM will cooperate to the fullest extent possible in order to process withdrawal applications to completion in a timely manner.
5. BLM shall promptly furnish FWS the status of pending applications for withdrawal and restorations upon request.

**R. Pesticides and Other Toxic Substances**

Principles: The application of pesticides is sometimes essential in the management of public lands for the protection of resources. It is recognized, however, that both positive and negative habitat changes may result from pesticide applications.

Procedures:

1. Pesticide applications on public lands will be operated within the framework of BLM and Departmental policies. All such applications will adhere to the stipulations regarding use set forth in the registration labeling of the Environmental Protection Agency, which has the primary responsibility for directions regarding use and the safety of the chemicals labeled for use (P.L. 92-516).
2. FWS has expertise which BLM may request for special projects involving the use of pesticides and other toxic substances.

## VI. RELATIONSHIPS TO STATE, OTHER AGENCIES, AND INSTITUTIONS

Nothing in this MOU is intended to modify in any manner the present or future cooperative programs of either Agency with States, other public agencies, or educational institutions.

## VII. OBLIGATION OF FUNDS

Nothing in this agreement shall be construed as obligating either party to the expenditure of funds in excess of appropriations authorized by law or otherwise commit either Agency to actions for which it lacks statutory authority.

## VIII. RELATIONSHIPS TO PREVIOUS MEMORANDA OF UNDERSTANDING

The previously developed MOUs listed below become annexes to this Master MOU on the date subscribed by the last signatory, and are not changed by this agreement without prior joint review and concurrence. These include:

- A. Interagency Coordination in Nonemergency Critical Habitat Determinations pursuant to Section 7 of the ESA of 1973 (effective March 18, 1976) (Annex I).
- B. Responsibility Definitions for OCS Operations (GS-BLM-FWS) (effective November 8, 1972) (Annex II).
- C. MOU concerning OCS Activities (effective March 30, 1976) (Annex III),
- D. MOU between BLM, FWS, and USGS concerning OCS Environmental Research and Monitoring Activities (effective April 30, 1976) (Annex IV).
- E. MOU between BLM, FWS, and USGS on Geothermal Cooperative Procedures (effective June 6, 1976) (Annex V).
- F. MOU between BLM and FWS on Mutual Law Enforcement Support (effective February 23, 1978) (Annex VI).
- G. MOU on Coal (effective September 26, 1978) (Annex VII).

The previously developed MOUs listed below are rescinded upon signature of this MOU since appropriate components are incorporated in this agreement.

- A. Sikes Act (P.L. 93-452) Implementation (effective November 4, 1975).
- B. Interagency Committee on Program Coordination (effective January 23, 1975).
- C. Joint Subcommittee on Energy and Minerals Development (effective October 6, 1975).

Encl. 1-16

D. Joint Subcommittee on Wildlife Management (effective October 7, 1975).

E. Joint Subcommittee on Program and Budget Development (effective October 30, 1975).

#### IX. EFFECTIVE DATE, REVIEW, AMENDMENT, AND TERMINATION

This agreement shall become effective upon the date subscribed by the last signatory, and shall remain in force until terminated by either Agency upon 90-days written notice. It shall be reviewed by all parties no later than Calendar Year 1981 for adequacy and timeliness. Amendments to existing wording within this agreement may be proposed by either Agency at any time and shall become effective upon joint approval.

#### X. BUDGET COORDINATION

To ensure maximum compatibility of budgetary requests and the subsequent distribution and utilization of funds, the following coordinating functions shall apply:

##### A. Joint Review of Budget Materials

1. Each Agency shall provide the other an opportunity to review budgetary material relating to activities of mutual concern; e.g., coal.

2. To the extent possible, review opportunity shall be given sufficiently in advance of budgetary due dates to permit meaningful input and discussion before such budget material becomes final.

3. Neither Agency shall advance a program which is directly linked or referenced to the activities, actions, or authorities of the other Agency which has the lead for those activities or actions without advance consultation and mutual understanding as to the nature of that program and actions to be undertaken within the scope of this agreement.

4. Budget materials as used herein apply to Departmental Program Strategy Papers, Office of Management and Budget Estimates, Budget Justifications for Congressional Review, and any amendments or supplementals thereof.

##### B. Budget Year Consultation

1. Where the budget (or appropriations act) for the upcoming fiscal year (FY) in one Agency contains funds or positions earmarked for direct transfer to the other Agency, such funds and positions shall be identified in writing prior to the start of the FY for budget planning.

2. Where funds and manpower are to be retained in the Agency, but are to be committed toward those efforts involving both Agencies, each

Agency shall, to the extent known, inform the other as to the approximate level of direct funding, its distribution, and expected accomplishments for the upcoming FY. Each Agency's plans shall be communicated to respective field offices to facilitate further coordination at the State-Regional level.

3. Funds earmarked for cooperative research shall be identified and transferred to the Agency designated as "lead Agency" for the research project.

#### C. Coordination Points

Coordination activities, as described in this section, shall be the primary responsibility of:

For BLM - Chief, Office of Budget

and

For FWS - Assistant Director - Planning and Budget

#### XI. CONFLICT RESOLUTION

Should interagency controversy arise at any working level, the facts regarding such controversy shall be forwarded to the next higher level of authority for resolution.

5/27/80  
Date

05-27-80  
Date

*Frank L. Negro*  
Director, Bureau of Land Management

*Lynne A. Greenwalt*  
Director, Fish and Wildlife Service

Encl. 1-18

## I. Introduction

The following section is hereby incorporated into Section V of the MOU signed by Bureau of Land Management and Fish and Wildlife Service on May 27, 1980. The purpose of this amendment is to set forth relationships relative to oil, gas and associated products pipelines consistent with Section IX of the umbrella MOU.

## II. Principles

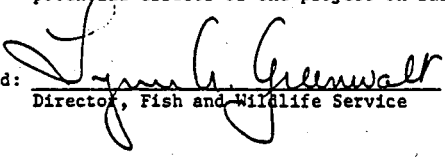
Section 28 (c)(2) of the Mineral Leasing Act of 1920, as amended, and applicable regulations (43 CFR 2880) authorize the Secretary of the Interior, through BLM, to grant or renew rights-of-way (ROW) and/or Temporary Use Permits (TUP) and to enter into cooperative agreements with other Federal agencies to expedite review of ROW and TUP applications for construction, operation and maintenance of oil, gas and associated products pipelines whenever such a project will cross lands administered by two or more Federal agencies. Whenever such a pipeline involves the statutory responsibilities of both the FWS and BLM, close coordination is essential and shall be guided by the following procedures.

## III. Procedures

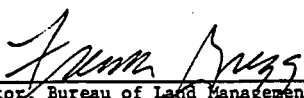
1. Each bureau shall notify the other as soon as a proposed pipeline becomes known.
2. The appropriate FWS Area Office shall notify the appropriate BLM State Office of any proposed pipelines crossing FWS administered lands.
3. Project specific cooperative agreements between the lead FWS Area Office and BLM State Office may be required to define procedures to be used. These procedures will address relevant involvement in the needed environmental analysis, review and comment on the ROW Grant, TUP's and associated terms and conditions and other matters related to mitigating fish and wildlife adverse environmental impacts.
4. Both Bureaus shall follow Departmental cost recovery guidelines and respective Bureau procedures in the collection and transfer of funds, and in the estimating and reporting of project obligations. Reimbursable costs will include direct and indirect agency costs (exclusive of management overhead) for project related activities, including:
  1. Preparation of an environmental analysis.
  2. Section 7, Endangered Species Act Assessment.
  3. Review and processing applications for TUP's.

4. Review and processing applications for R/W grants.
  5. Development and review of grant and permit terms and conditions, including Notices-to-Proceed.
  6. Review of project design and environmental plans.
  7. Project monitoring and enforcement during the construction, operation, maintenance, and termination phases.
  8. Special studies, as required and approved.
5. Prior to issuing a grant for a ROW across lands in the National Wildlife System, the BLM Authorized Officer must have a signed Compatibility Statement from the FWS Regional Director as required by 16 U.S.C. 668dd (d)(1)(B). The terms and conditions of the ROW grant must include mitigation requirements for crossing FWS administered lands in accordance with 50 CFR 29.21-7(c). The fair market value for ROW across FWS administered lands shall be determined separately and receipts deposited into the Migratory Bird Conservation Fund for National Wildlife Refuge System lands and to the Revenue Sharing Fund for other FWS lands.
  6. The FWS has certain responsibilities on all pipeline projects, whether or not they cross FWS lands. The FWS level of involvement will be determined by statutory responsibilities and the potential effects of the project on fish and wildlife resources.

Approved: \_\_\_\_\_


  
Director, Fish and Wildlife Service
Date: 09-19-80

Approved: \_\_\_\_\_


  
Director, Bureau of Land Management
Date: 9/26/80

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COPI

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
OFFICE OF THE SECRETARY  
WASHINGTON 25, D. C.

May 21, 1945

The Honorable

The Secretary of Agriculture.

Sir:

This Department agrees with the suggestion in your letter of April 13, that before mineral leases are issued for lands in national forests the Forest Service should have an opportunity to suggest adjustments that would avert conflict with necessary activities of that Service.

The Commissioner of the General Land Office has been instructed to inform the Forest Service promptly upon the filing of any lease application for national forest lands. In order that this procedure may function without causing undue delay in the issuance of leases, it is essential that prompt action be taken by the Forest Service. Necessarily, a period of time must elapse between the filing of an application and the offer of a lease to the applicant in order to permit its processing. This should afford sufficient time for a report from the Forest Service, suggesting appropriate stipulations to be incorporated in the lease for the protection of properties or rights in the forest.

The stipulation under the provisions of enclosed Circular 1450 with reference to location and maintenance of camp sites will continue to be required and there will be no change in the policy of transmitting to the Forest Service copies of all oil and gas leases issued for lands in national forests.

Very truly yours,

/s/ OSCAR L. CHAPMAN

Assistant Secretary.

Enclosure 34893

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COPY

UNITED STATES  
DEPARTMENT OF AGRICULTURE  
WASHINGTON, D. C.

April 13, 1945

The Honorable  
The Secretary of the Interior

Dear Mr. Secretary:

Your Department, in its execution of the public land laws applicable to lands reserved for national forest purposes, has rather generally and consistently followed the practice of apprising this Department of pending applications, entries, filings, withdrawals, etc., which, if granted or approved, would affect the status or the subsequent use and occupancy of the national forest lands. Under long established and effectively functioning procedures, this Department then determines and advises you as to the probable consequences to public interest if the described lands are subjected to the proposed emsement, right-of-way, appropriation or withdrawal; or as to the special stipulations required to safeguard public interest and property.

By this procedure, lands upon which material Federal expenditures have been made, or which are or will be urgently needed for the development, administration and management of the national forests or for use by the public, are brought to your attention before they are passed to other ownership or subjected to contractual commitments not consistent with their basic and permanent public values; or steps are taken to have the applicant execute such stipulations as may be necessary to safeguard public interest. The general practice exemplifies good interdepartmental cooperation and correlation.

But one increasingly important class of cases is not now subject to this general practice; that is, leases under the Federal Mineral Leasing Act of February 25, 1920, and acts amendatory thereof or supplementary thereto. In earlier years such leases were not sufficiently numerous nor extensive to cause concern, but the present trend of oil and gas development is towards the national forest areas and the leases are multiplying in number. Under current practice, this Department receives no notice of such leases until after they have been issued, except in the rare case where the application embraces a tract formally withdrawn as an administrative site on the records of the General Land Office.

By letter of May 1, 1922, the Secretary of Agriculture advised the Secretary of the Interior that notice of applications for permits to prospect for oil, gas, coal, phosphate, etc., under the Act of February 25, 1920, need not be sent to this Department; but that the Department desired that applications for leases under the Act be sent the Forest Service for consideration since local conditions in some cases might make it advisable that the lease when

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## 2-The Secretary of the Interior

granted contain special stipulations or conditions for protecting the Government's interests in the national forests. We can find no record of any subsequent change in this viewpoint of the Department; but there has been no general compliance with the Department's request.

The situation recently has been exemplified by an oil and gas lease to the Ohio Oil Company, G.L.O. Serial 09617, involving lands acquired by exchange under the Act of July 31, 1912 (37 Stat. 241) in the Huron National Forest, Michigan. Among the tracts to which that lease has been made applicable is one comprising a developed public campground, another developed Y.M.C.A. Organization Site, and another a group of sites planned and developed for summer home occupancy under special use permit. Oil and gas activities obviously would be incompatible with the types of use to which the tracts have been devoted, yet such activities have been authorized under lease issued by the General Land Office. In connection with these and other associated lands, the Chief of the Forest Service, by letter of December 11, 1944, apprised the Commissioner of the General Land Office of existing occupancies and asked that before leases were issued the Forest Service be afforded an opportunity to review them and suggest adjustments that would avert conflict. However, that procedure was not followed. A similar principle or procedure of general applicability was proposed by the Chief of the Forest Service in a letter to the Commissioner of the General Land Office under date of July 24, 1944. Its adoption would bring interdepartmental action on oil and gas leases into conformity with that long followed in relation to other forms of land occupancy, utilization or alienation. Your approval of such procedure would be appreciated.

Sincerely,

/s/ CHARLES F. BRANNAN

Assistant Secretary

UNITED STATES DEPARTMENT OF AGRICULTURE, UNITED STATES DEPARTMENT  
OF THE INTERIOR AND STATES OF IDAHO, MONTANA, WYOMING, AND WASHINGTON  
MEMORANDUM OF AGREEMENT TO REVISE AND EXPAND THE  
INTERAGENCY GRIZZLY BEAR COMMITTEE

A. Need:

The grizzly bear is listed as a threatened species in the 48 conterminous States under provisions of the Endangered Species Act of 1973, as amended. To achieve the recovery of the grizzly bear, it is necessary that all Federal and State agencies with responsibilities for this species coordinate their management and research actions to the greatest extent possible to insure the best utilization of available resources and prevent duplication of effort.

To attain the objectives established by the Grizzly Bear Recovery Plan, the United States Department of Agriculture (U.S. Forest Service), the United States Department of the Interior (Fish and Wildlife Service, National Park Service, Bureau of Land Management, Bureau of Indian Affairs), and the States of Idaho, Montana, Wyoming, and Washington find it in the best interest of the grizzly bear to revise and expand the Interagency Grizzly Bear Committee (IGBC) established in April 1983).

B. Organization:

Members

3 Regional Foresters, USDA Forest Service	
1 Regional Director, National Park Service	
1 Regional Director, U.S. Fish and Wildlife Service	
1 State Director, Montana, Bureau of Land Management	
1 State of Idaho Representative	)      Named by Appropriate Governor
1 State of Montana Representative	
1 State of Wyoming Representative	
1 State of Washington Representative	

Advisor

Grizzly Bear Recovery Coordinator, U.S. Fish and Wildlife Service

Invitees

In addition to the members specified above, the following parties involved with the grizzly bear management and research in the State of Washington may participate in the committee and attend committee meetings: Regional Forester, National Park Service Regional Director, and the Fish and Wildlife Service Regional Director. The Bureau of Indian Affairs Area Directors from Portland, Oregon and Billings, Montana and representatives from the Canadian Provinces of British Columbia and Alberta also are invitees to committee and subcommittee meetings.

Subcommittees

## Yellowstone Ecosystem

- National Park Superintendent (2)
- National Forest Supervisor (5)
- State Representatives from Wyoming, Montana and Idaho
- U.S. Fish and Wildlife Service Representatives (2)

## Northern Continental Divide Ecosystem

- National Park Superintendent (1)
- National Forest Supervisor (5)
- State Representative from Montana
- U.S. Fish and Wildlife Service Representative (1)
- Bureau of Indian Affairs and/or Tribal Representative from each Indian Reservation (2)
- Bureau of Land Management Representative, Montana (1)
- Canadian Representatives

## Northwest Ecosystems

- National Park Superintendent (1)
- National Forest Supervisors (5-7)
- State Representatives from Montana, Idaho, and Washington
- U.S. Fish and Wildlife Service Representatives (2)
- Canadian Representative

## Research

- U.S. Fish and Wildlife Service Representative
- U.S. Forest Service Representative
- National Park Service Representative
- States of Idaho, Montana, Washington, and Wyoming Representatives
- Bureau of Indian Affairs and/or Tribal Representative(s)
- Bureau of Land Management Representative
- Canadian Representatives
- (Existing Interagency Grizzly Bear Study Team to continue under Research Subcommittee.)

C. IGBC Operation:

1. Chairmanship of the IGBC shall rotate among representatives with the chairman serving a 2-year term, beginning with the representative of the U.S. Fish and Wildlife Service. Chairmen of the Research Subcommittee and Yellowstone, Northern Continental Divide and Northwest Ecosystems Subcommittees will be elected by Subcommittee members for 2-year terms.
2. Meet a minimum of twice per year, with additional meetings as needed and agreed to by majority of Committee.

D. IGBC Committee Responsibilities:


1. Implement the Grizzly Bear Recovery Plan, and all management and research activities necessary to provide for recovery of the grizzly bear.
2. Make provision for implementation of approved actions.
3. Guide and plan research direction.
4. Evaluate implementing activities to determine the effectiveness of achieving recovery plan objectives.
5. Take appropriate action under existing authority where necessary and make joint recommendations to Federal agency heads and States.
6. Review and approve or disapprove actions proposed by Subcommittees.

E. Northern Continental Divide Ecosystem, Yellowstone Ecosystem, and Northwest Ecosystems Subcommittee Responsibilities:

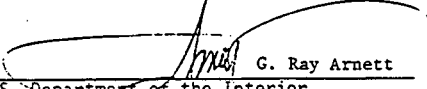
1. Implement management actions in a coordinated fashion.
2. Propose management policy to the IGBC.
3. Establish necessary task forces to implement approved actions when necessary (i.e., law enforcement, information and education, improvements).
4. Identify research needs and financial needs for management and submit to the IGBC.
5. Report to IGBC on progress concerning management actions necessary for grizzly bear recovery.

F. Research Subcommittee Responsibilities:

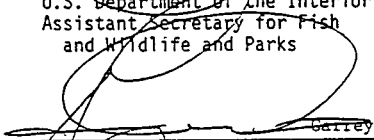
1. Identify and propose needed research programs to the IGBC as directed by the Grizzly Bear Recovery Plan.
2. Coordinate and direct needed research activities approved by IGBC.
3. Review and develop research plans to assure that they adequately address research needs and that the objectives, methods, analyses, timetables, and budgets are valid and realistic.
4. Establish ad hoc task forces to examine and report on special topics as approved by IGBC.
5. Review research findings and reports for scientific validity and make recommendations to IGBC on their adequacy or relevance for assisting management decisions. Circulate these reports for peer review when necessary.

  
John B. Crowell, Jr.  
 U.S. Department of Agriculture  
 Assistant Secretary for Natural Resources  
 and Environment

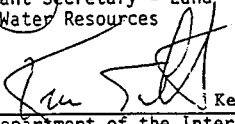
5 January 1984  
 Date

  
G. Ray Arnett  
 U.S. Department of the Interior  
 Assistant Secretary for Fish  
 and Wildlife and Parks

5 Dec 83  
 Date

  
Garrey E. Carruthers  
 U.S. Department of the Interior  
 Assistant Secretary - Land  
 and Water Resources


12/31/83  
 Date

  
Kenneth L. Smith  
 U.S. Department of the Interior  
 Assistant Secretary for Indian Affairs

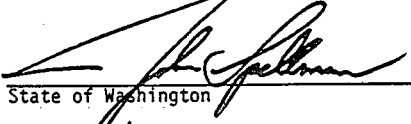
1/9/84  
 Date

  
John V. Evans  
 State of Idaho

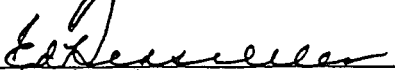
2-6-84  
 Date

  
Ted Schwinden  
 State of Montana

3/1/84  
 Date

  
[unclear]  
 State of Washington

3/21/84  
 Date

  
[unclear]  
 State of Wyoming

4/5/84  
 Date

sent to *Red Rock Lakes NWR, Agreement 14-16-0006-84-960*  
*Montana State, B. 15*  
*57739*  
*Cado*  
 COOPERATIVE AGREEMENT

between

BUREAU OF LAND MANAGEMENT

and

FISH AND WILDLIFE SERVICE

and

MONTANA DEPARTMENT OF FISH, WILDLIFE AND PARKS

and

THE PEREGRINE FUND, INC.

THIS COOPERATIVE AGREEMENT is made and entered into this 15th day of April 1984, by and between the BUREAU OF LAND MANAGEMENT, hereinafter referred to as "BLM", the U. S. FISH AND WILDLIFE SERVICE, hereinafter referred to as "FWS", THE MONTANA DEPARTMENT OF FISH, WILDLIFE AND PARKS, hereinafter referred to as "MDFWP", and THE PEREGRINE FUND, INC., WITNESSETH THAT:

WHEREAS, MDFWP is the principal wildlife management authority in Montana and desires to reestablish wild populations of peregrine falcons in the state, and,

WHEREAS, BLM and FWS jointly have suitable habitat for breeding peregrine falcons in the Centennial Valley of Montana, more specifically, the Red Rock Lakes National Wildlife Refuge and vicinity, and desire to reintroduce this endangered species to establish a viable breeding population, and,

WHEREAS, The Peregrine Fund, Inc., has the peregrine falcons, the expertise to make the reintroduction, and desires to do so,

NOW, THEREFORE, it is mutually understood and agreed upon by the parties concerned, the following stipulations:

1. The Peregrine Fund, Inc., the vendor:

- a. Shall identify a suitable location for placement and operation of a hack site for peregrine falcons (*Falco peregrinus anatum*). The site selection shall be in consultation with MDFWP, BLM, the Dillon Resource Area, and FWS, Red Rock Lakes NWR. The primary area for location of the hack site shall be in the Centennial Valley in the vicinity of the Red Rock Lakes NWR.

b. Add the following as paragraphs G, H, and I

- G. The FWS shall provide the 200 gallon fire pump and the LFRD shall provide the fire truck for this cooperatively managed pumper unit.
- H. The FWS agrees to maintain the truck and pumper unit, and store both at refuge headquarters, Lakeview, Montana.
- I. The pumper unit will be used to respond to fires as outlined in the Memorandum of Understanding signed by both parties and which is currently in effect.

2. Article IV, Period of Performance is deleted in its entirety and the following substituted in lieu thereof:

The period of performance of this memorandum of understanding shall be from October 1, 1984 through September 30, 1989.

3. Article V, Financial Administration is deleted in its entirety and the following substituted in lieu thereof:

V. When requested assistance is provided by either party, each shall be responsible for and pay its own incurred costs, and no reimbursement shall be made by the protecting agency to the other.

4. Article VIII Changes, ADD the following:

Any change to this memorandum of understanding shall be issued in writing, and signed by the Contracting Officer of the Fish and Wildlife Service and an authorized official of the Fire Department.

MEMORANDUM OF UNDERSTANDING  
COVERING  
THE JACKSON HOLE COOPERATIVE ELK STUDIES GROUP

WHEREAS, the following agencies have legal responsibilities for the study and management of the Jackson Elk Herd and its habitat.

1. The Wyoming Game and Fish Commission has been created under the laws of the State of Wyoming to provide an adequate and flexible system of control, propagation, management, protection, and regulation of wildlife in Wyoming.
2. The U.S. Forest Service, under the laws of the United States and the regulations of the Secretary of Agriculture, is charged with research responsibilities and the sustained multiple use management of resources on National Forest lands;
3. The National Park Service, under the laws of the United States and the regulations of the Secretary of the Interior, is responsible for the management and control of National Park lands and waters together with the maintenance and preservation of the biota therein;
4. The U.S. Fish and Wildlife Service is responsible for migratory bird resources, inland sport fisheries, international agreements, Federal aid to States, wildlife enhancement and services, sport fisheries services, development and management of the National Wildlife Refuge System, and other programs including studies to recommend measures for the protection and improvement of these resources, and

WHEREAS, the Jackson Elk Herd is of major importance to the economy of the State of Wyoming and the biotic aspects of private and public lands in the vicinity of Jackson Hole, and

WHEREAS, the proper maintenance and management of the Jackson Elk Herd is subject to the varied responsibilities of the agencies named, and

WHEREAS, management goals for elk and the resources on which they and other mammals depend can be reached only through coordinated efforts of those agencies with legal responsibilities for wildlife and land management, and

WHEREAS, wise management must be based on results of basic fact finding studies on the elk herd and the land upon which it depends;

NOW, THEREFORE, the Wyoming Game and Fish Commission, through the Wyoming Game and Fish Department; the U.S. Forest Service, through the Bridger-Teton and Targhee National Forests; the National Park Service, through the Yellowstone and Grand Teton National Parks; and the U.S. Fish and Wildlife Service, through its regional office and the National Elk Refuge, subscribe to the following:

#### A. Organization of the Advisory Council and Technical Committee

Plans for future studies and actions pertaining to or affecting the welfare of the Jackson Elk Herd shall be coordinated through and by two committees (Advisory Council and Technical Committee) functioning under authority of this Memorandum of Understanding. These two committees shall carry on and be responsible for a program known as the "Jackson Hole Cooperative Elk Studies" and shall be organized as:

Advisory Council, composed of the administrators of those agencies having legal management responsibilities for the Jackson Elk Herd or land upon which it lives. Representation on this Council shall consist of the Director of the Wyoming Game and Fish Department, Supervisors of the Bridger-Teton and Targhee National Forests, Superintendents of Grand Teton and Yellowstone National Parks, and Regional Refuge Supervisor (R-6), U.S. Fish and Wildlife Service; provided, however, that the U.S. Forest Service, the National Park Service, the U.S. Fish and Wildlife Service and the Wyoming Game and Fish Department shall each have only a single vote on such council.

Technical Committee, composed of delegated technicians from the agencies on the Advisory Council and represented as follows: Two members from the Wyoming Game and Fish Department, two members from the National Park Service, representing Grand Teton and Yellowstone National Parks, two members from the U.S. Forest Service, one each from the Bridger-Teton and Targhee National Forests, and two members from the U.S. Fish and Wildlife Service. Additional members may be invited and may serve on the Technical Committee by unanimous approval of the Advisory Council.

#### B. Purposes of the Advisory Council and Technical Committee

Relative to studies and actions pertaining to the Jackson Elk Herd, the purposes of the Advisory Council shall be to:

1. Maintain a clear definition of agency responsibilities and jurisdictions.
2. Establish such policies as may be required for conducting the "Jackson Hole Cooperative Elk Studies."
3. Provide an interagency exchange of budget and planning, work load plans and limitations, and short range and long range study objectives.
4. Keep the Technical Committee informed of the above items and act in a consultant or advisory capacity to them in matters of administration and policy.
5. Instrument official representation on the Technical Committee as provided for in this document.
6. Invite and approve representation on the Technical Committee other than as specifically provided for in this document.
7. Provide for dissemination of public information or news issuing from activities of the Advisory Council or Technical Committee.
8. Provide for administrative coordination with any other agency or group not a member of this agreement.

9. Either independently, or upon petition by the Technical Committee, determine which land use and management actions that may affect the wellbeing of the Jackson Elk Herd are appropriate for consideration by the Technical Committee.

Relative to studies and actions pertaining to the Jackson Elk Herd, the purposes of the Technical Committee shall be to:

1. Provide for an open exchange of ideas in developing plans, programs, techniques and methods for management studies and actions.
2. Coordinate the programming of field studies and the possible exchange of personnel assistance in field operations.
3. Maintain a complete and open exchange of information and results, written or otherwise, of all studies by participating agencies and others.
4. Delineate and promote additional needed studies, particularly of a research nature, which may be outside the programs of participating agencies. Offer guidance in coordinating such studies into the needs for long range management of this elk herd and its habitat.
5. Invite, and provide for consultation, advice, or assistance from other technical people not members of this committee.
6. Evaluate and make recommendations dealing with appropriate land use and management actions, as determined by the Advisory Council.

#### C. Chairmanship

The chairmanship of both the Advisory Council and Technical Committee will be with one agency during each period of July 1 through June 30 and such chairmanship will rotate successively among the agencies in the following sequence as has been determined by lottery: Wyoming Game and Fish Department; U.S. Forest Service; U.S. Fish & Wildlife Service; U.S. National Park Service. The Advisory Council will meet at least annually during March.

#### D. Effective Dates and Amendments

This memorandum is effective as of July 1, 1958 and as amended on December 15, 1984, and shall continue in force thereafter as long as a useful purpose is served. It may be amended at any time by written consent of each member of the Advisory Council to the chairman of that council.

Any member may withdraw from participation in this Memorandum by 10 days written notice to the Advisory Council Chairman.

This Memorandum may be terminated at any time by written consent of each signatory agency to the Advisory Council Chairman.

## WYOMING GAME &amp; FISH COMMISSION

By *Donald Dutton*  
 Title Director  
 Date 1/18/85

## YELLOWSTONE NATIONAL PARK

By *Kevin B...*  
 Title Superintendent  
 Date 3/10/85

## BRIDGER-TETON NATIONAL FOREST

By *Neil Jackson*  
 Title Supervisor  
 Date 2-19-85

## GRAND TETON NATIONAL PARK

By *Jack E. Stark*  
 Title Superintendent  
 Date 1/29/85

## TARGHEE NATIONAL FOREST

By *John S. Burns*  
 Title Supervisor  
 Date 3/4/85

## U.S. FISH AND WILDLIFE SERVICE

By *Maryann Quinn*  
 Title <sup>acting</sup> Regional Director  
 Date 4/29/85

## RED ROCK LAKES

## A. Cooperative Agreements

1. Memorandum of Understanding and Modification of Contract between the U.S. Fish and Wildlife Service and Lima Rural Fire District.
2. Cooperative Agreement between Bureau of Land Management and Fish and Wildlife Service and Montana Department of Fish, Wildlife and Parks and The Peregrine Fund, Inc.

## B. Committee Membership

1. Trumpeter Swan Technical Committee
  - a. Justin Nodarman, Idaho Non-game Biologist
  - b. Don Childress, Montana Migratory Bird Coordinator
  - c. Dave Lockman, Wyoming Migratory Bird Coordinator
  - d. Barry Reiswig, Refuge Manager, Red Rock Lakes NWR
2. Southwest Travel Plan Group
  - a. Jim Flynn, Director, Montana Department of Fish, Wildlife and Parks
  - b. Joe Wagenfher, Superintendent, Beaverhead National ~~Forest~~, Montana
  - c. Jack McIntosh, BLM District Manager, Montana
  - d. Barry Reiswig, Refuge Manager, Red Rock Lakes NWR
3. Southwest Montana Fire Council
  - a. Lima Fire District
  - b. Ennis Fire District
  - c. Sheridan Fire District
  - d. Twin Bridges Fire District
  - e. Dillon Fire District
  - f. Red Rock Lakes NWR

## MEMORANDUM OF UNDERSTANDING

between the

U.S. FISH AND WILDLIFE SERVICE

and

LIMA RURAL FIRE DISTRICT

I. PURPOSE

This Memorandum of Understanding shall become effective upon the date of approval by the Manager of the Red Rock Lakes National Wildlife Refuge, hereafter called the FWS, and the Chief of the Lima Rural Fire District, hereafter called the LRFD.

Because Red Rock Lakes National Wildlife Refuge in the Centennial Valley, Beaverhead County, Montana, is almost entirely surrounded by lands given fire protection by the LRFD; and the two agencies desire to cooperate in the suppression of forest and range fires in the Centennial Valley, this understanding is being formed. This should provide adequate protection for all lands involved.

II. AUTHORITY

Fire Protection Act of September 20, 1922 (42 Stat. 857; 16-U.S.C. 594); Reciprocal Fire Protection Act of May 27, 1955 (69 Stat. 66; 67; 42 U.S.C. 1856, 1856a and b).

III. SCOPE OF WORK

## A. Definitions

1. "FWS lands" shall mean those federal lands administered as the Red Rock Lakes National Wildlife Refuge by the Refuge Manager.
2. "LRFD lands" shall mean lands in the Centennial Valley and its watershed given fire protection by the Lima Rural Fire District, Lima, Montana.
3. "Third Party lands" shall mean all lands not administered or given fire protection by the FWS or LRFD in the Centennial Valley and its watershed.

- B. LRFD agrees to have the primary responsibility for suppression of fires burning on LRFD lands.
- C. FWS agrees to have the primary responsibility for suppression of fires burning on FWS lands.
- D. Both agencies and their employees agree to report immediately the location

of any fire they discover whether located on the lands of either agency or of a Third Party. The agency whose fire-fighting crew shall first reach the fire burning on FWS or LRFD lands is responsible for fighting that fire until relieved of such responsibility by the agency upon whose lands the fire is burning.

- E. Each agency agrees to render assistance to the other in fighting fires on the lands of the other agency when it is the first to reach the fire. The Officer in Charge of the crew arriving at the fire will act as fire boss until the arrival of a crew from the agency which has primary responsibility, at which time he will place himself and his crew at the disposal of the Officer in Charge from the agency which has primary responsibility.
- F. Each agency agrees to assist the other through the loan of men and equipment to suppress fires burning on the lands of the other agency, but neither agency is obligated to jeopardize the fire security on its own lands by the dispatch of all its available fire protective resources to a fire burning on the lands of the other agency.

#### IV. PERIOD OF PERFORMANCE

This Memorandum of Understanding shall continue in force and effect until terminated by agreement of the parties or by written notice by either party to the other; provided, that such notice shall only be given between the dates of November 1 of any year and April 1 of the following year.

#### V. FINANCIAL ADMINISTRATION

The effort cited under the terms of this agreement shall be accomplished at no cost to either party.

#### VI. PROJECT OFFICERS

U.S. Fish and Wildlife Service  
Barry Reiswig, Refuge Manager  
Red Rock Lakes NWR  
Lima, Montana  
Telephone 276-3347

Lima Rural Fire District  
Ron Holton, Chairman  
Grayson Phipps, Fire Chief  
Lima, Montana

#### VII. SPECIAL PROVISIONS

Due to the fragile nature of portions of the refuge, and its Wilderness status a Modified Suppression Action Area (MSAA) has been developed for a significant part of the refuge (see attached map). Except during the "extreme" fire condition or the presence of private livestock under grazing permit,

fires will be allowed to burn in the MSAA and suppression efforts will be concentrated on the Area boundary. If either the U.S. Forest Service or the Dillon Resource Area Bureau of Land Management predict the extreme fire danger for the Centennial Valley and surrounding area, or; there is threat of damage or loss to private livestock grazing in the MSAA, or; there is a threat posed to any livestock, life, or property outside the refuge boundary, full suppression will be conducted.

- B. Neither party will be responsible to the other for any loss, damage, personal injury, or death occurring in the performance of this agreement.
- C. Repairs Necessary to keep any equipment, covered by this agreement, in operation will be made at the expense of each party to their own equipment.

#### VIII. CHANGES

Prior to the first of April each year, the Refuge Manager and the Fire Chief will discuss fire control procedures so that necessary adjustments may be made prior to the start of the fire season.

#### IX. TERMINATION

Notice of termination of this understanding shall be given only between the dates of November 1 of any year and April 1 of the following year.

U.S. Fish and Wildlife Service

Lima Rural Fire District

Name: Barry Reisiwg  
 Title: Refuge Manager  
 Date: 6-28-84  
 Signature: [Signature]

Name: Ron Holton  
 Title: Board Chariman  
 Date: \_\_\_\_\_  
 Signature: [Signature]

#### CONCURRENCE

Name: Darrell L. Mahlik  
 Title: Chief, Contracting and General Services  
 Date: AUG 7 1984  
 Signature: [Signature]

Name: Greyson Phipps  
 Title: Fire Chief  
 Date: 7/5/84  
 Signature: [Signature]

Signature: [Signature]  
ROBERT H. SHIELDS

Title: Acting Regional Director

Date: AUG 10 1984

## NATIONAL ELK REFUGE

## A. Cooperative Agreements

1. Memorandum of Understanding between the Bureau of Land Management and Bureau of Sport Fisheries and Wildlife.
2. Memorandum of Understanding Covering The Jackson Hole Cooperative Elk Studies Group.
3. Cooperative Agreement between the United States Department of the Interior, Fish and Wildlife Service, and the Wyoming Game and Fish Department Relative to Management of the National Elk Refuge.
4. Memorandum of Agreement on Siting of Seismograph Installation in the National Elk Refuge, Jackson, Wyoming.
5. Special Use Permit - Boys Scouts of America, Jackson District, P.O. Box 1844, Jackson, WY 83001.
6. Memorandum of Understanding between the State Highway Commission of Wyoming and the United States Department of Agriculture, Forest Service and Department of the Interior, Fish and Wildlife Service.
7. Memorandum of Understanding between Grand Teton National Park and the National Elk Refuge.
8. Cooperative Agreement and Amendment of Solicitation/Modification of Contract between the U.S. Fish and Wildlife Service and the Grand Teton Natural History Association.

## B. Committee Membership

## Jackson Hole Cooperative Elk Studies Group

1. Advisory Council
  - a. Mr. Jack Stark, Superintendent, Grand Teton National Park
  - b. Bill Morris, Eirector, Wyoming Game and Fish Commission
  - c. Reid Jackson, Supervisor, Bridger-Teton National Forest
  - d. John E. Burns, Supervisor, Targhee National Forest
  - e. Robert Barbee, Superintendent, Yellowstone National Park
  - f. Barnet W. Schranck, Refuge Supervisor, Region 6, Denver
2. Technical Committee
  - a. Bruce Smith, Biologist, National Elk Refuge
  - b. Garvice Roby, Biologist, Wyoming Game and Fish De-artment
  - c. Kent Schmidlin, Game Warden, Wyoming Game and Fish Department
  - d. Floyd Garden, Biologist, Bridger-Teton National Forest
  - e. Mark Orme, Biologist, Targhee National Forest
  - f. Bob Wood, Resource Management Specialist, Grand Teton National Park
  - g. Ken Czarowski, Resource Management Specialist, Yellowstone National Park

- b. Shall provide three to six peregrine falcons of the subspecies anatum for the hacking operation.
  - c. Will operate and maintain the hack site until the falcons have successfully fledged, dispersed, and are no longer dependent on the station. This will entail two persons operating the hack site for a period of up to ten weeks. These people will be responsible for the welfare, monitoring and feeding of the birds. The vendor shall provide the necessary food, water and other items the birds may require during the hacking operation.
  - d. Shall remove all materials and refuse from the hack site and camp site at the end of the hacking operation and when no further activity is planned in succeeding years.
  - e. Is responsible for compliance with the Endangered Species Act of 1973, as amended, and obtaining all necessary state and federal permits.
  - f. Shall furnish MDFWP, BLM, and FWS a written report on the selection, operation and success of the hack site. The report shall be submitted within three months following completion of the hacking process.
2. FWS:
- a. Will provide \$4,000, to the Peregrine Fund, Inc., by means of a Purchase Order, prior to April 30, 1984, for the above services.
  - b. Provide assistance, as needed, in the selection of potential hacking sites and provide other consultation and assistance, as appropriate.
3. BLM:
- a. Will provide \$8,000 by purchase orders to the MDFWP, 3/4 (\$6,000) payable prior to April 30, 1984 and the balance of \$2,000 payable after receipt of a field report and final payment request voucher.
  - b. Provide assistance, as needed, in the selection of potential hacking sites and provide other consultation and assistance, as appropriate.
4. MDFWP:
- a. Shall provide a properly constructed hack box.

- b. Shall coordinate scheduling and placement of peregrine chicks at the Centennial site relative to other recovery efforts in such manner as to provide for optimum probability of success in the peregrine falcon recovery effort.
  - c. Shall conduct necessary liaison between peregrine recovery efforts in Montana and similar efforts in adjacent states.
  - d. Shall determine the priority of the Centennial sites relative to any and all peregrine recovery sites in the State of Montana.
  - e. Shall participate in final site selection(s) through ongoing consultation and field investigations.
  - f. Shall closely coordinate the selection of potential hack sites on BLM and/or FWS lands with the respective agencies.
  - g. Shall coordinate all field activities on BLM land with the Dillon Area Manager and on FWS lands with the Red Rocks Lake NWR manager.
  - h. Shall provide \$4,000 to the Peregrine Fund, 3/4 (\$3,000) payable prior to April 30, 1984 and the balance of \$1,000 payable after receipt of the young peregrines.
  - i. Shall provide the FWS and BLM a field report by September 15, 1984 summarizing the current year's reintroduction effort covered by this agreement.
5. The establishment and operation of the hack site will be accomplished during the normal peregrine falcon breeding season (April through August) in 1984, unless unforeseen difficulties arise. Should the hacking operations not occur in 1984 the work shall be completed the following year (1985). Factors which could delay the hacking operation until 1984 include: 1) adequate numbers of captive reared peregrine falcons not being available, 2) other higher priority hacking sites preclude peregrine falcons being available, 3) potential predation problems, 4) unforeseen human disturbance occurring in the vicinity of the site, or 5) wild peregrine falcon production is deemed adequate for maintenance of the peregrine population in the general area.
6. Hack boxes placed on BLM and FWS lands will meet the necessary standards determined by cooperating agencies including location, design and color.

7. Although this agreement is for one hacking operation, the parties anticipate continuing the program for a minimum of three years under similar agreements. Continuation of the program in future years will be contingent upon funding constraints and production of captive reared peregrine falcons.

BUREAU OF LAND MANAGEMENT

By *Joe A. Hiltz*  
District Manager, Butte Office

Contract No.

FISH AND WILDLIFE SERVICE

By *Bob Shindler*

MONTANA DEPARTMENT OF FISH, WILDLIFE AND PARKS

By *James W. Flynn*  
Director

THE PEREGRINE FUND, INC.

By *William Bunker*

## RECORD OF DECISION

## Oil and Gas Leasing Process

Environmental Assessment  
Deerlodge, Silver Bow, Beaverhead, Madison & Gallatin Counties  
Montana  
USDA - Forest Service  
Beaverhead National Forest

Based on the analysis and evaluation described in the Environmental Assessment, it is my decision to adopt Alternative C for the National Forest lands described in the report. The report assesses the broad affects associated with oil and gas leasing on the Beaverhead National Forest.

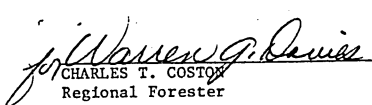
This alternative with mitigating measures specified, provides the best combination of physical, biological, social and economic benefits and is considered to be a preferable alternative. Under this alternative, leases will be granted with stipulations for surface protection. Applications will be evaluated against the Beaverhead Land Management Plan and against resource concerns identified in the environmental assessment. Appropriate stipulations, including "no-surface occupancy" in some instances will be applied to restrict oil and gas activities on portions or all of the given lease. Leasing procedures for areas recommended for further planning will be responsive to RARE II Final Environmental Statement. If unacceptable environmental impacts cannot be corrected, development will not be permitted.

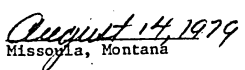
Recommendations to issue or deny leases in areas that are designated for wilderness study under the Montana Wilderness Study Act of 1977 (PL 95-150) are not within the Regional Forester's authority. Authority to make recommendations for leasing in Congressionally designated study areas is retained by the Chief. The following described lands on the Beaverhead National Forest include Congressionally designated study areas. Their location is shown on Map 2.

- West Pioneer (RARE II 01006), 147,992 net acres
- Madison North (RARE II N1549), 47,417 net acres
- Madison South (RARE II S1549), 42,959 net acres

Lease applications received for lands in Congressionally designated study areas, including an estimated 10,890 acres of existing applications, will not be processed under Regional Forester's Authority as a result of this clarification.

Implementation of the oil and gas leasing process may take place on or after August 14, 1979. Questions regarding this Decision should be sent to the Forest Service, P.O. Box 7669, Missoula, MT 59807.

  
CHARLES T. COSTON  
Regional Forester

  
August 14, 1979  
Missoula, Montana

FINDING OF NO SIGNIFICANT EFFECT

Oil and Gas Leasing Process  
 USDA - Forest Service  
 Beaverhead National Forest

An Environmental Assessment that discusses oil and gas leasing of National Forest lands in Beaverhead, Madison, Gallatin and Silver Bow Counties, Montana, is available for public review in the office of the Beaverhead National Forest in Dillon, Montana.

The Beaverhead National Forest will carry out its oil and gas leasing program in ways that will create and maintain conditions under which man and nature can exist in productive harmony, and fulfill social and economic needs of present and future generations of Americans. Therefore, it has been determined that an environmental impact statement is not needed.

This determination was based upon consideration of the following factors, which are discussed in detail in the Environmental assessment: (a) appropriate stipulations, including no-surface occupancy in some instances, will protect the surface and surface functions on a lease area, (b) physical and biological effects will be limited to the area of planned development and use, (c) if unacceptable environmental impacts can not be corrected, development will not be permitted, and (d) the action will not have a significant effect on the human environment.

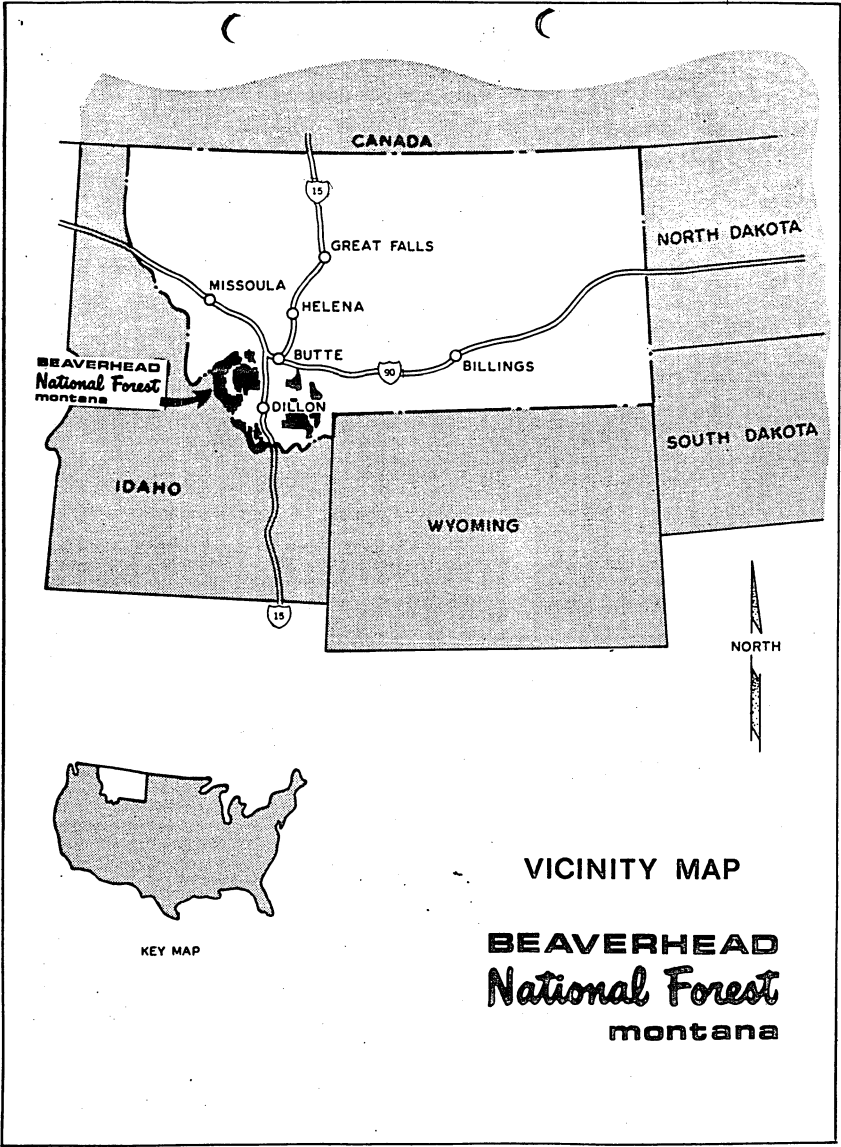
The responsible official is Charles T. Coston, Regional Forest, Northern Region, Federal Building, Box 7669, Missoula, Montana.

for Robert W. Larsen  
 CHARLES T. COSTON  
 Regional Forester  
 Northern Region

8-7-79  
 Date

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## I. INTRODUCTION

### Purpose

The purpose of and need for the environmental assessment is as follows: (1) to provide a basis for making recommendations to the Bureau of Land Management regarding (a) issuance of oil and gas leases and (b) the revision of existing no-surface-occupancy leases on the Beaverhead National Forest; (2) to determine if the action will have a significant effect on the quality of the human environment; and (3) to establish a procedure to determine appropriate conditions on leases to be recommended for issuance or revision.

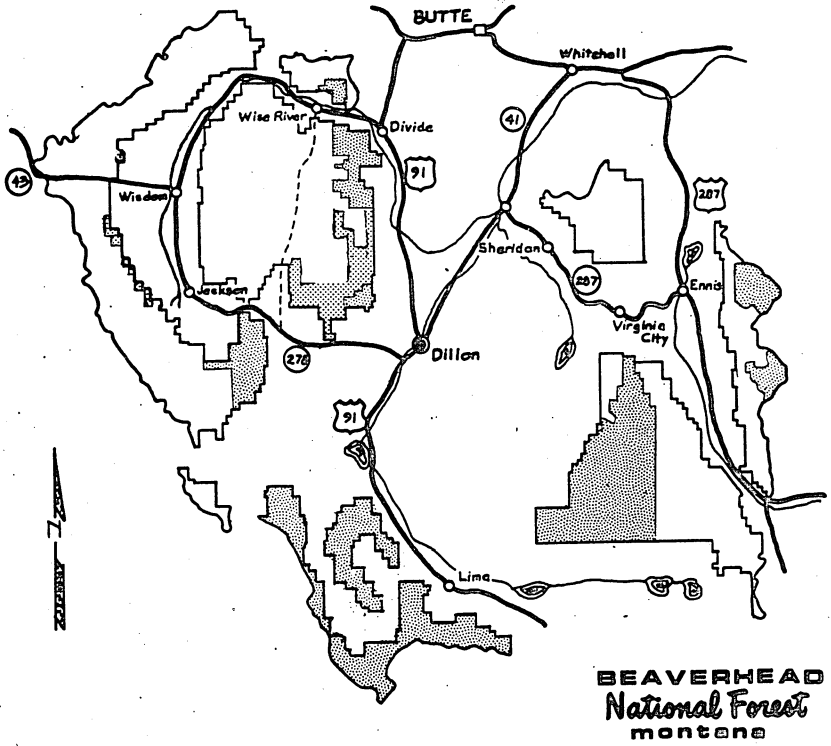
### Present Situation on the Beaverhead National Forest

A few oil and gas leases were routinely issued on the Beaverhead National Forest prior to 1975. Five leases with surface occupancy rights are still active, but no development has taken place.

Since 1975, interest in oil and gas has increased sharply. A total of 330 applications have been received since that date. These applications cover 633,930 acres (see map 1). Based on an Environmental Analysis Report (EAR) for Oil and Gas dated August 15, 1977, it was decided to issue only leases with "no-surface-occupancy" restrictions pending completion of the Beaverhead Land Management Plan. This was done to allow evaluation of the compatibility of oil and gas activities with other resource values identified through land management planning. It was also decided to allow preliminary exploration during the planning period since significant surface disturbance would not be involved in this activity. All of the applicants were asked if they would accept a "no occupancy" stipulation in their lease until further evaluation could be made. As a result of this inquiry, 145 leases were granted with a "no occupancy" stipulation. The remaining 185 applicants elected to leave their applications on file and wait until completion of the Land Management Plan for consideration of a lease. A final environmental statement was filed for the Beaverhead Land Management Plan on February 15, 1978. Except for several areas included in the RARE II process, the Land Management Plan is now in effect.

Of the 330 lease applications received to date, none occurs in designated wilderness area. A portion of the Anaconda-Pintler Wilderness area is within the Beaverhead National Forest. Leasing and development for minerals (including oil and gas) is allowable on National Forest land in designated wilderness areas until December 31, 1983, with ". . . such reasonable stipulations as may be prescribed by the Secretary of Agriculture for the protection of the wilderness character of the land consistent with the use of the land for the purposes for which they are leased. . . ." (16 USC 1131-1136). Lease actions within wilderness areas are not considered in this assessment. If applications are received to lease in wilderness areas, the decision to recommend or deny leasing would be made by the Chief of the Forest Service based on an environmental analysis that considers wilderness values.

MAP 1



OIL AND GAS APPLICATIONS AND LEASES



NATL. FOREST BOUNDARY

OIL AND GAS LEASE AREAS

Revised 5/6/80

The Forest Service RARE II (Roadless Area Review and Evaluation) Final Environmental Statement was made public in January 1979. RARE II areas are roadless lands being evaluated for possible addition to the Wilderness Preservation System. On April 16, 1979, the President announced his recommendations. The RARE II Final Environmental Statement as amended by the President, makes the following recommendations to Congress on areas in the Beaverhead National Forest (See Map 2):

<u>Recommended for Wilderness</u>	<u>Total RARE II National Forest Acreage</u>
B1001 North Big Hole	6,532
11943 West Big Hole	53,375
01008 East Pioneer	93,859

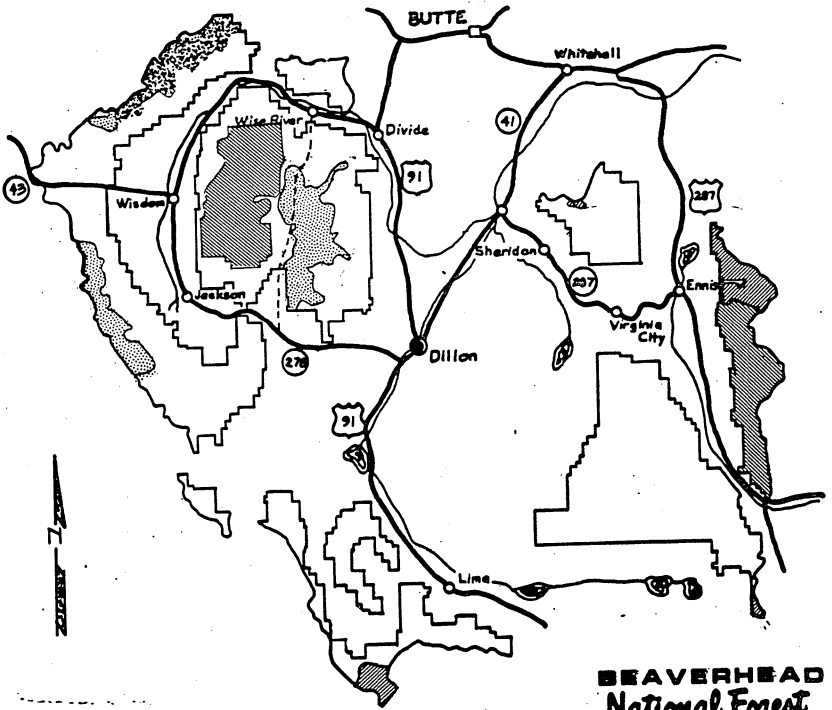
<u>Recommended for Further Planning</u>	<u>National Forest Acreage</u>
11945 Italian Peak	12,996
J1549 Madison**	29,826
N1549 Madison North*	47,417
S1549 Madison South*	42,959
01006 West Pioneer*	147,992
B1013 Middle Mtn-Tobacco Roots	2,000
01962 Mt. Jefferson	4,600

\* Designated by Congress for study in Montana Wilderness Study Act.

\*\* Designated by the Forest Service for study with the Madison Areas, N1549 and S1549.




Legislation to designate areas recommended for wilderness will be forwarded to the Congress for action. It is not known when Congress will take action on the President's proposal for such areas, but since the Administration has recognized the value of wilderness, the areas should be managed similarly to areas already in the Wilderness Preservation System. This means that until a decision on wilderness is made, lease applications in these areas would require an environmental analysis that considers wilderness values. Decisions to recommend or deny leasing in areas recommended for wilderness will be made by the Chief of the Forest Service. Currently there is one oil and gas lease application in an area proposed for wilderness status. The status of this application will not change as a result of this assessment.

MAP 2




**BEAVERHEAD**  
**National Forest**  
 montana

### RARE II AREAS

-  PROPOSED WILDERNESS
-  FURTHER PLANNING
-  FURTHER PLANNING--Also Congressionally designated for study (PL 95-150)

### WILDERNESS AREAS

-  ANACONDA PINTLER

 NATIONAL FOREST BOUNDARY

Roadless areas recommended for further planning will be managed to preserve the wilderness option until land management plans or specific project plans are completed. Recommendations for land allocation (either to wilderness or nonwilderness) will result from land management plans required under the National Forest Management Act (NFMA) or from the study associated with the Montana Wilderness Study Act.

The direction for oil and gas leasing for areas recommended for further planning is explicit. The RARE II final Environmental Statement states in part on Page 97:

"Unless there is additional exploration for oil and gas resources permitted in many areas allocated to further planning, subsequent wilderness - nonwilderness decisions will have to rely on data not much better than currently exists.

"Exploration by drilling to determine oil and gas potential is essential in reaching conclusions in land management or project plans that allocate roadless areas.

"For the above reasons, oil and gas exploration (including drilling where adequate exploration requires it) will be considered an integral part of the further planning process. Oil industry exploration proposals will be examined on a case-by-case, site-specific basis in full compliance with the National Environmental Policy Act. This means before on-the-ground activities are permitted, environmental assessments will be made. Where proposed activities individually or cumulatively, would have major effects on quality of the human environment, environmental impact statements will be prepared with full public involvement. Where environmental impacts are judged unacceptable, the proposed activities will be disapproved."

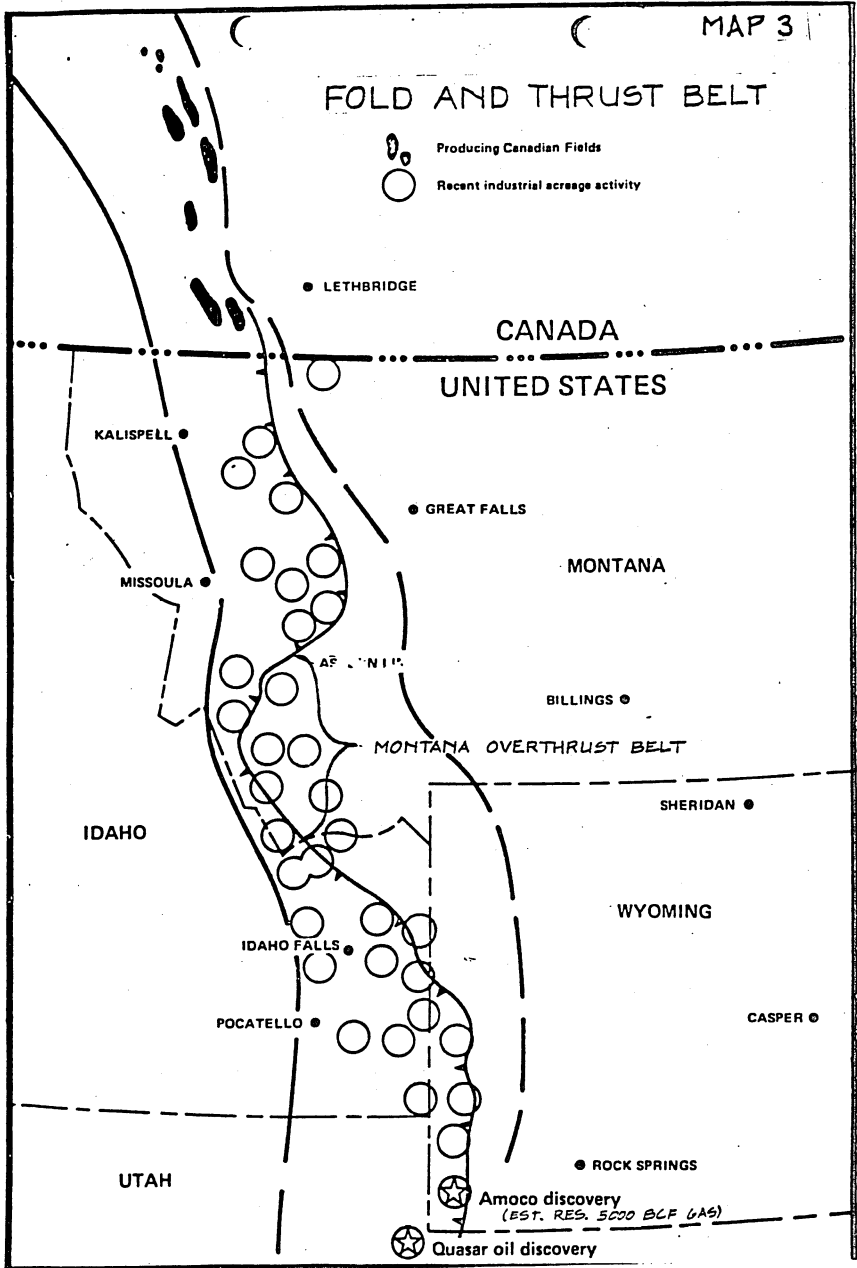
Decisions to recommend or deny leasing in areas recommended for further planning will be made by the Regional Forester based on this environmental assessment.

#### Activity on Other Lands

A review was made of oil and gas activity in land administered by the Bureau of Land Management, State of Montana, and privately owned lands. A major portion of all the land interspersed between the blocks of National Forest on the Beaverhead is under lease. Although several wells have been drilled on these other lands, none has resulted in a discovery. All of this activity is proceeding independently of actions taken by the Forest Service.

#### Why there is Interest in the Beaverhead Area

The Beaverhead National Forest lies within a geologic zone known as the Montana Overthrust Belt (see Map 3). This belt is a part of a larger geologic fold and thrust belt or province stretching from Canada to Mexico. Within this province sedimentary rocks are folded and faulted such that often older rocks have been thrust over younger rock formations. Petroleum geologists believe the province contains large amounts of deeply buried oil and gas.



Little exploration for oil or gas has been done in the Montana Overthrust Belt. However, a similar geologic province in Canada has major gas producing fields. Also, energy companies recently discovered oil and gas in southwestern Wyoming and northern Utah. These discoveries have caused much speculation on the potential of the Montana Overthrust Belt.

#### How Leases Are Made

Federal oil and gas leases are issued under authority of The Mineral Leasing Act of 1920 (41 Stat. 437 as amended; 30 U.S.C. 181) and The Mineral Leasing Act for Acquired Lands (61 Stat. 913; 30 U.S.C. 351-359). Rights granted include "... the exclusive right and privilege to drill for, mine, extract, remove, and dispose of all the oil and gas (except helium) deposits together with the right to conduct and maintain thereupon, all works, buildings, plants, pumping stations or other structures necessary to the full employment thereof, for a period of ten years, and so long thereafter as oil or gas is produced in paying quantities. . ."

All leases require rent payment in advance (one or two dollars/acre/year depending on type of lease<sup>1/</sup>). Lessees agree to pay royalties on any future production, the amount depending on the volume of oil or gas. Oil royalties are 12-1/2 percent for wells averaging up to 110 barrels per day and rise to 25 percent for wells producing 400 or more barrels. Gas royalties vary from 12-1/2 to 16-2/3 percent. Half of this lease income is returned to the host State, 10 percent goes to the U.S. Treasury, and 40 percent is deposited in the Federal Reclamation Fund. (Under Section 317 of the Federal Land Policy and Management Act of 1976, the State may spend its share for planning activities, the construction and maintenance of public facilities, or the provision of public services.) Prior to drilling, the applicant must secure a bond to insure compliance with all terms of the lease.

A lease on which there has been no discovery of oil or gas in paying quantities will expire at the end of the primary term for which the lease was issued (5 or 10 years depending on type of lease<sup>1/</sup>). A nonproducing lease automatically terminates at any time the lessee fails to make full and timely payments of the annual rental.

An owner of any lease issued under the authority of the Mineral Leasing Act may relinquish the lease in its entirety (or any legal subdivision of it) by filing a written notice to that effect in the proper Bureau of Land Management Office. A relinquishment takes effect the date it is filed, subject to the continued obligation of the lessee and his surety to pay all accrued rentals and royalties and to place all wells on the leasehold in proper condition for abandonment.

- <sup>1/</sup> Leases issued through competitive procedures are for 5 years and require rent payments of two dollars/acre/year. Leases issued through non-competitive procedures are for 10 years and require rental of one dollar/acre/year.

Leases may be cancelled administratively by the Department of Interior for failure of the lessee to comply with any provisions of the Mineral Leasing Act, the regulations issued under it, or the lease provisions if the land in the lease is not known to contain valuable deposits of oil or gas. Leases known to contain valuable deposits of oil or gas may be cancelled only by judicial proceedings.

#### General Agency Authorities and Responsibilities

The Bureau of Land Management (BLM), U.S. Geological Survey (GS), and U.S. Forest Service (FS) each play a specific role in regard to oil and gas leasing. The BLM has the primary responsibility for issuing and cancelling leases under the 1920 and 1947 leasing acts. The GS handles the technical administration of leases and permits within the area of operations. By interdepartmental agreement all applications to lease lands under Forest Service jurisdiction are referred to the Forest Service for review, recommendation, and special stipulations to protect the surface and surface functions.

Stipulations are conditions under which activity can take place on a lease. Some stipulations are standard, that is, they apply to any and all leases. These are provided by the BLM and are displayed in this report as appendices A and B. The Forest Service has found the need to request that the BLM employ the use of special stipulations on leases to be granted on the National Forest. Appendix C displays a preliminary draft of stipulations that will apply to leases issued on the Beaverhead National Forest.

It should be noted that since the BLM has the responsibility for issuing leases for oil and gas, the decision by the Forest Service resulting from this assessment is not final. The nature of the decision is rather that of recommending to the BLM. Historically BLM has honored Forest Service recommendations; but, if in the BLM's view the Forest Service has not recommended a course of action which is reasonable, responsive, and within the laws and established direction, the BLM has the discretionary authority to make decisions independent of Forest Service recommendations.

Whenever the lessee or operator of a federal oil and gas lease desires to drill on a leasehold, all proposed drilling operations and related surface disturbance activities must be approved before entry on to the lands involved. Approval by GS will be in accordance with (1) lease stipulations, (2) oil and gas operating regulations (Title 30 CFR, Part 221), and (3) notice to lessees number 6 (NTL-6) issued by the GS effective June 1, 1976 (see Appendix D). NTL-6 provides guidelines to the lessee or operator for planning lease development programs which insure that operations are conducted with due regard for the protection of the environment.

Agency roles in lease administration are shown in Figure 1.

Fig. 1.--Summary of Agencies' and operator's roles in lease administration 1/

OPERATOR'S ROLE	ROLE OF BUREAU OF LAND MGT. (BLM) U.S. GEOLOGICAL SURVEY (GS)	FOREST SERVICE (FS) ROLE	NOTES
Lessee contacts GS as to intention to enter leased lands, submits preliminary map and explanation of proposed activity	GS is in charge of ASU (area of surface use) operations	FS is notified of proposed entry on land - May ask for prestaking conference	15 day response time. Automatic approval if no FS response
Lessee submits Operating Plan and Application for Permit to Drill (APD) to GS	GS forwards Operating Plan/APD to Forest Service (FS).  Lead agency preparation of EIS if needed	District Ranger (DR) does environmental analysis on Operating Plan/APD Using Forest Plan & Interdisciplinary team. DR/Forest Supervisor provides consent or recommendation to GS; conference with GS and Lessee as needed. (Possibility of joint and/or industry environmental analysis.)	FS policy is to consolidate everything in Operating Plan when possible rather than going through numerous Special Use Permits.  Operating Plan may be supplemented or amended as needed.
	Approval of Operating Plan/APD by GS		State and Federal air and water quality standards must be met in Plan
Bonding requirements are met	Bond is set by BLM		See Cooperative Agreement-GS/FS for more information (FSM 1531.4)
Operator conducts drilling, transport, operating and required reclamation procedures	GS performs routine inspections within areas of surface use.	DR/Forest Supervisor performs routine inspections; FS can act directly in emergency situations to protect surface within or outside ASU, but routinely goes through GS	

1/ adapted from; Oil and Gas Guide, U.S.D.A., Forest Service, Northern Region, 1979.

OPERATOR'S ROLE	ROLE OF BUREAU OF LAND MGT. (BLM) U.S. GEOLOGICAL SURVEY (GS)	FOREST SERVICE (FS) ROLE	NOTES
Notice of Abandonment filed with GS by Lessee	GS sends copy to FS	Forest Supervisor/DR performs inspection and approves abandonment, release of bond. Regional Forester gives consent to GS on abandonment and bond release.	
	GS recommends release of bond to BLM		
	BLM releases bond		

### Activities on Leases

Once a lease has been issued several phases of activity may follow. The following discussion is a summary of Chapter III, Oil and Gas Guide, U.S.D.A. Forest Service, Northern Region, 1979.

Phase I: Preliminary Exploration (prospecting) - This includes seismic, gravity, magnetic, and remote sensing surveys to determine subsurface structure and aid in locating drill sites. Preliminary explorations goal is always to find where oil is likely to occur, how much is probably there and how deep it is; specifically, the goal is to detect probable traps, the quality and type of reservoir and source rocks, and the thickness and age of the sedimentary rocks in the area.

Where the bedrock geology of an area is well exposed, it is often possible to predict where oil might gather. The potential traps can sometimes be located with the aid of published geologic maps and aerial photos. Occasionally, additional data will be gathered by the use of aircraft to help identify rock outcrops that can be studied later on the ground by geologists. This type of exploration can usually be performed with little surface damage, requiring perhaps some off-road vehicle travel.

Subsurface geology is not always accurately indicated by surface outcroppings. In such cases, geophysical prospecting is used. Three subsurface characteristics are usually measured by geophysical methods: gravitational field, magnetic field, seismic characteristics.

Gravitational surveys and magnetic prospecting generally result in slight surface disturbance. Small trucks and jeeps with crews of several people are used in these two methods of subsurface data gathering, and off-road travel is likely.

Seismic surveys are the most popular of the geophysical methods and seem to give the most reliable results. A seismic survey is a method gathering subsurface geological information by recording impulses from an artificially generated shock wave.

Seismic methods are usually referred to by the various methods of generating the shock wave. The thumper method involves dropping a steel slab weighing three tons to the ground several times in succession along a predetermined line.

The vibrator method involves using a large truck equipped with a vibrator mounted between the front and back wheels. The vibrator pad is lowered to the ground and is triggered electronically from a recorder truck.

The dinoseis method can be used with a variety of vehicles. It's device consists of a bell-shaped chamber mounted underneath a vehicle. The seismic energy is imparted to the ground through the spark ignition of a propane oxygen mixture confined in the chamber. This method causes little surface damage.

Historically, subsurface and surface explosives have been the most widely used method to generate seismic shock waves. Subsurface detonation of a charge in some areas causes no surface disturbance, while in other areas a small crater up to six feet in diameter is created. The surface explosive charge method involves the placing of explosives directly on the ground, on snow, or on a variety of stakes and platforms. It results in good seismic data in some areas while creating little surface disturbance.

Low standard temporary roads and trails may be needed to use these survey methods.

Phase II: Exploratory drilling and associated road construction - There are basically two types of exploratory drilled holes: stratigraphic tests and wildcat tests. "Strat" tests involve drilling relatively shallow holes to supplement seismic data. Truck-mounted drilling equipment for strat tests is fairly mobile; therefore roads and trails to test sites on level solid ground are temporary, and involve minimal construction. In hilly or mountainous areas, more road building would be necessary.

If preliminary exploration or stratigraphic tests indicate the possible existence of oil or gas, a "wildcat well" will be drilled into the suspected trap to determine if oil and/or gas are present, and if it's quality and quantity is adequate for development. Wildcat well drilling involves constructing temporary roads on which to haul the drill rig and well service equipment, and for daily traffic to and from the drill site.

Phase III: Development - If oil or gas production appears promising, additional activities occur. Further drilling will be necessary to provide additional wells and to define oil or gas field boundaries. Roads, pipelines, storage tanks, and powerline construction may be necessary.

Phase IV: Production - This phase includes all actions associated with getting the oil and gas out of the ground and transporting it to a refinery or into a distribution system.

Production in an oil field begins soon after the discovery well is completed and often concurrently with the development operations. Temporary facilities may be used at first, but as development proceeds and reservoir limits are determined, permanent facilities are installed. The extent of such facilities is dictated by the number of producing wells, expected production, the chemical and physical nature of the oil and gas, the number of leases involved, and whether the field is to be developed on a unitized basis.<sup>1/</sup>

- 1/ Unitized = Unitization in its simplest form, means pooling of leaseholds and other rights within a given area and the sharing of the risks of exploration and development and the possible returns. One operator normally administers an entire unitized operation.

Phase V: Abandonment and reclamation - Once a well ceases production it must be plugged and the site rehabilitated. This phase also applies to all "dry holes". The average life of any given field is estimated from 15 to 25 years.

Abandonment of individual wells may start early in a fields' life and reach a maximum when the field is depleted. Well plugging and abandonment requirements vary with the rock formations, subsurface water, well site, and the well itself. In some cases, wells that formerly produced are plugged as soon as they are depleted. After plugging, the drilling rig is removed and the surface, including the water reservoir and mud pit, is restored to the requirements of the surface management agency. Usually a fence is erected to protect the site until the revegetation is complete, particularly in range areas if clover is part of the seed mixture.

#### About this Assessment

Relationship to land management planning -- The Beaverhead Land Management Plan allocates lands to certain uses or combination of uses. All lands have a single primary allocation (watershed, range, recreation, timber, wildlife, or wilderness). In addition, most lands also have one or more secondary allocations. For example, an area with a primary allocation to Timber Management may also have a secondary allocation to Wildlife Management.

In addition to allocations, the plan provides broad management guidance for specific parcels of land, but does not define when, where, and precisely how prescribed uses will be accommodated. This detail is to be provided by project plans. It is the intent of this environmental assessment to show how oil and gas leasing can take place within the context of the Beaverhead Land Management Plan. An alternative will not be developed which would be in direct conflict with land management plan direction.

Role of the Interdisciplinary Team -- The Forest Supervisor, Robert Williams assigned the task of preparing the environmental assessment to the Planning Branch of the Beaverhead National Forest. Interdisciplinary Team members were:

Frank Fowler, Planning Program Officer, Team Leader  
 Marvin Amundson, Planner  
 Roger Poff, Soil Scientist  
 Arnold Royce, Lands Specialist  
 Charles Sundstrom, Wildlife Biologist

Through interdisciplinary action, all or part of the team members participated in making recommendations on all major portions of the environmental assessment. At times it was necessary to consult with other specialists for needed information. Principal consultants were:

Norman Day, Geologist  
 Wallace Page, Hydrologist  
 Robert Wagenknecht, Landscape Architect  
 Terry Solberg, Minerals and Geology, Northern Region  
 Norman Yogerst, Soil Scientist, Northern Region  
 Lambert Wenner, Social Scientist, Northern Region

Issues and Concerns about oil and gas -- A review of past correspondence from the public led to the identification of issues and concerns. These were reviewed by personnel on the Beaverhead National Forest, and the Interdisciplinary Team compiled the following list as representing items for evaluation:

1. What effect will oil and gas activities have on:
  - a. Habitat for endangered and threatened species?
  - b. Habitat for big game animals?
  - c. Archeological and historical resources?
  - d. The visual resource of areas that now attract forest users?
  - e. Water quality and water yield?
  - f. Grazing permittees and the management of their allotments?
  - g. Existing rights conferred through special-use permits, mining claims, rights-of-way, etc.?
2. What areas are unsuitable for oil and gas activities because of land instability or high erosion hazards?
3. How will oil and gas activities affect employment, established industry, the tax base, cost of public services, schools, and medical services?
4. What oil and gas activities may occur on areas being considered for wilderness?
5. What is the potential for oil and gas development in this area and how vital is it to the economic welfare of the United States?

The effects of oil and gas leasing on these issues and concerns are considered in this environmental assessment.

## II. AFFECTED ENVIRONMENT

### Threatened and Endangered Species

The Endangered Species Act of 1973 (16 USC 1531 note) is intended to prevent the further decline and to bring about the restoration of endangered and threatened species (wildlife, fish, and plants) and their habitats. The Act recognizes that destruction, modification, or curtailment of species habitat may endanger or threaten that species with extinction. The management of critical habitats provides an important means for protecting and restoring endangered and threatened species.

Actions which result in modification of critical habitat for the listed species common to the Beaverhead National Forest would violate the Act if (1) such actions might be expected to result in a reduction in numbers or distribution of that species of sufficient magnitude to place the species in further jeopardy; or if (2) these actions restricted the potential and reasonable expansion or recovery of that species. The species on the Beaverhead National Forest to which the above statements apply are grizzly bear, grey wolf, bald eagle and peregrine falcon. Of these four species the gray wolf is the most widespread. In fact, on the Beaverhead there are few oil and gas lease applications that do not contain identified grey wolf habitat. See Appendix E.

Forest Service activities or programs will be evaluated to determine whether they will affect a threatened or endangered species or its habitat. If it is determined that an effect will or may occur, consultation with the U. S. Fish and Wildlife Service will be initiated. "Activities or programs" means all actions of any kind authorized, funded or carried out by the Forest Service, including those planned or implemented for the direct benefit of the species.

A review is the initial effort of a Federal agency to determine the nature and extent of the possible effects, if any, upon listed species. Such review must be competent, and must result in a decision that the action in question will affect, may affect, or will not affect a species or its habitat (see Appendix F).

Maps of the habitats for the threatened and endangered species are on file at the Beaverhead National Forest Office.

### Wildlife

The Beaverhead National Forest provides habitat for 367 species of wildlife. These habitats have been identified according to the type of species that utilize them and according to the season of the year they are utilized by a given species. Utilization is defined as a habitat condition necessary to a species for feeding or reproduction. Since utilization information is readily available for each species, it can be used effectively to evaluate the impacts of actions affecting most wildlife species.

Because most oil and gas activities in any given lease area will be temporary and limited to small, widely-scattered localized areas, it is doubtful that most species would be significantly affected by any phase of oil and gas activity. That is, individuals would not be affected directly, but loss of habitat needed for their survival would eventually affect species density and distribution. If leases are issued, the following wildlife concerns should be considered at the time of lease because they are considered critical to wildlife needs.

1. Riparian zones contain a unique variety of both aquatic and terrestrial ecosystems. These ecosystems comprise important habitat for a large number of wildlife species. For this reason, road development and drilling activity within the zone would have a high probability of serious conflict.
2. Habitat requirements for big game extend over large areas of land. Some requirements appear more important than others (e.g., winter ranges, calving grounds, wallows, etc.), but none can be assumed unimportant to maintenance of the populations at the present level. In some areas the habitat needs are so sensitive that wildlife and oil and gas activity are incompatible. More often the situation might be resolved by timing oil and gas activity to avoid conflict during critical periods.

Other wildlife concerns are more easily identified and mitigated when the specific nature of the impacting activity is known and its location established. Consequently, a site-specific wildlife evaluation should precede any activity which involves drilling, road construction, or development. Such analyses will occur when the lessee or operator submits a proposal for road construction or drilling.

#### Cultural Values

The Forest and the adjacent land areas have an interesting history, including old mines, towns, and other historical landmarks.

Numerous remains of the early days are still in evidence throughout the Forest. Many old mine shafts, mills, and miners' cabins are still largely intact in the more mineralized portions of the Forest. Most historical features are located on patented mining claims and on private holdings within the Forest. Twenty-five archeological sites are recorded on the Forest. Other sites are known to artifact collectors, but these have not been recorded. Some sites may have been obliterated during private collecting and are lost to scientific investigations and evaluations.

Any surface-disturbing activity generated by oil and gas exploration or development has the potential for adversely impacting cultural resources, including archeological and historical sites.

During the preliminary exploration phase, the activity most likely to impact cultural resources adversely would be unrestricted off-road travel which might damage cultural resource sites and lead to increased illegal artifact collecting. Limitations on the type of ORV and the amount of ORV use permitted would tend to alleviate this impact.

Any ground-disturbing activity (construction, leveling, etc.) associated with the construction of drilling and transportation facilities (well pad, sludge pit, road, powerline, pipeline) for the exploratory drilling and development phases would have the potential for damaging cultural resource sites.

It is unlikely that impacts would occur to cultural resources during the production and abandonment phases since these involve pre-existing facilities. However, any additional construction associated with these phases that occurs outside previously inventoried areas (e.g., borrow pits for fill dirt for abandonment phase reclamation) would have the potential for impacting cultural resources.

The following procedures would help prevent loss of cultural values due to oil and gas activities. Prior to initiating construction on National Forest land, inventory the affected area must be inventoried for cultural resources pursuant to the requirements set forth in Executive Order 11593. This inventory must be performed by a qualified cultural resource specialist holding a valid antiquities permit issued by the Department of Agriculture through the Regional Forester (see FSM 2700).

If sites are located within areas of planned activity and evaluated as qualifying for the National Register of Historic Places, such sites must be nominated to, formally determined eligible for, the National Register (pursuant to Executive Order 11593 and 36 CFR 63) and the effect of the undertaking determined pursuant to Section 106 of the National Historic Preservation Act of 1966.

#### Visual Resource

With over 600,000 acres either under oil and gas lease or with applications for lease, the area that could be visually impacted is large and diverse. However, only a small percentage of the leases are likely to be developed, and an even smaller percentage would have the potential for adverse visual impacts. The great diversity of the area, coupled with the uncertainty of development, makes it necessary to address the possible affects in general terms.

Landscapes which present broad vistas over uniform, low vegetation on gentle topography are most easily visually impacted. Such areas include high, broad ridgetops at or near timberline; broad sage-covered ridges and basins; and low elevation stream bottoms. Because these areas lack much screening capability (either topographic or vegetative) mitigative measures may be necessary to minimize the visual impacts of access roads, drill pads, structures, and equipment. Recently maps have been prepared which stratify the sensitivity of the view from various facilities (i.e., roads, trails, lakes, campgrounds and communities) into three levels. While these have not been formally adopted as guidance for the Beaverhead Forest, they could be used to obtain an indication of the impact of oil and gas leasing by overlaying the sensitivity maps on an application area. Any area within three miles of a facility identified as "Level 1" (most sensitive) and within one mile of a facility identified as "Level 2" (moderately sensitive) could be considered to have potential for adverse visual impacts.

It is obvious that the area of potential impact could be significantly reduced with field checking (topography and vegetation will screen portions of the lease area). This could be done as a part of the environmental analysis made when, and if, the lessee requests permission for road construction or drilling.

### Water

Water quality on the Beaverhead National Forest is generally high. The principal potential effects of oil and gas activity on water quality are increases in sedimentation, surface water contamination, and ground water contamination.

Sedimentation is identified in terms of increased total sediment yield, usually measurable at some point within established drainageways. Increases in sedimentation occur during preliminary exploration when equipment disturbs soils that have potential to be washed into stream channels. Exploratory drilling and development phases often require roads and drill pads that are completely stripped of vegetation, exposing mineral subsoil. The potential for erosion on these areas may be significant. Pipeline crossings of established waterways are especially susceptible to sedimentation, particularly where they are buried beneath the stream channels. Contamination prevention measures are required by the U. S. Geological Survey in all aspects of their administration of the drilling and production operations. However, a remote possibility of accidental contamination could occur from certain operations. Surface water contamination could result where mineralized water or oily residue resulting from drilling or production operation enters streams or wetlands. Oil spills are the most common cause of surface water contamination. Leakage at the face of reservoir and mudpits, which are required to hold waste and drilling mud during the drilling operation, could cause contamination during the drilling operation, if improperly designed or constructed. Leakage from evaporation pits and oil spills could also occur during the production operations. Evaporation pits are required to hold produced water that is removed from the oil when it is extracted from the ground.

Oil spills constitute the most serious hazard for surface water contamination and could occur when petroleum is in transit but may also occur as blowouts during exploratory drilling and development phases. Both the Geological Survey and the Environmental Protection Agency have authority to prescribe spill prevention measures and oil spill countermeasures.

Ground water contamination may occur during drilling operations from surface leaching of contaminated liquids, or the introduction of well fluids into the deep ground-water aquifers. The Geological Survey requires certain procedures in all drilling and production operations to prevent ground water contamination. However, there is always a remote chance that contamination from surface sources may occur from leakage or failure of mudpits and evaporation pits. Mudpit fluids or produced waters that infiltrate into the ground will eventually mix with the ground waters. Consequently, the ground water may accumulate certain

soluble minerals contained in the leach water. Deep ground water contamination may occur by the mixing of interformation waters where ground water levels are separated by impermeable geologic formations or strata. A formation containing "fresh" water, for example, may occur above or below a formation containing "briny" water or salt water. Regulations designed to prevent interformation contamination include cementing the surface casing and cementing the production casing above and below the producing zone. In special circumstances, oil companies are also required to cement and/or set casing through other formations. This would be the case in particularly high water yielding formations.

In addition to regulation and requirements of the U. S. Geological Survey and other regulatory agencies concerned with drilling and production activities, there are many mitigating measures that could be employed to minimize the potential to degrade the water quality resulting from other phases of the oil and gas operation. Most of these measures, however, apply to specific activities and can be specified when the lessee requests permission to build a road or do other disturbance type activities. Examples of mitigating measures are:

1. Minimizing or prohibiting surface disturbance or removal of the protective vegetation mat in areas where surface runoff may enter stream channels. This could prevent surface occupancy or use of some sites.
2. Minimizing crossing of all streams.
3. Locating roads, pipelines, and drill sites well away from water sources, including wells, springs, ponds, etc., and sealing of the pit bottom by various methods.

#### Grazing

The area covered by oil and gas applications is about 53% grazing lands. Included are 94 cattle and sheep allotments. Beaverhead National Forest lands provide important forage for grazing animals; 28%, or about 603,000 acres, of the Forest is used for livestock grazing. Effects on range ecosystems and their uses from oil and gas activity would vary considerably. Some activities will have a common effect on all range and range uses. Others may affect only certain uses, and possibly only during certain periods of the year. Disturbances such as construction of roads, pipelines, drillsites, production facilities, and the additional people employed during the exploratory drilling and development phases will have a negative impact on range ecosystems. Additional roads may facilitate the rancher's supervision of his livestock operation but can have negative effects on the domestic and wildlife uses of the rangeland environment. A significant problem during these phases would be the increased vehicular traffic. Range fences will be barriers to exploration activities. Gates left open and damaged fences may result in loss of livestock control. Buried range improvements such as waterlines could be damaged

during phases of oil and gas activity where earthwork occurs. There is also the remote possibility that accidental leaks or failure of mudpits and evaporation pits may contaminate ponds or watering areas where drill pads must be located near these improvements.

Most of the conflicts associated with grazing can be prevented by incorporating conditions in the leases that will protect or avoid these resource values during oil and gas operations. Concerns of a site-specific nature will be evaluated when and if the lessee requests permission to construct roads or drill.

#### Existing Rights

There are many "rights" which have been conferred to individuals through the permit system (e.g., grazing, firewood gathering, etc.), special use system (e.g., resort areas, water developments, hunter and guide permits, etc.), road rights-of-way, mining claims, etc.

Oil and gas leasing would not preclude these existing rights. There would be situations where established use would be affected, but the rights that may be conferred for oil and gas development would not supersede them. Since the oil and gas resource is deep beneath the ground surface, and the resource itself is not in competition with other uses of the land, the potential conflict would primarily center on access roads and drill site development. An environmental analysis will be required of those activities when a plan of operation is known and specific sites can be identified as to location.

#### Soil Resource

Activities associated with oil and gas exploration and development can alter soil properties. Severe soil compaction can cause long-term or permanent changes. Compaction reduces productivity by restricting root development and accelerates runoff and erosion by reducing infiltration. Erosion of topsoil caused by loss of vegetative cover also reduces productivity. Road construction and other earth-moving activities increase sediment loads in streams when they cause soil mantle failures and expose subsoils to erosion. Seismic work and off-road vehicle travel have the greatest potential to cause soil compaction. Road construction, drilling, and development activities have the greatest potential to cause soil mantle failures and erosion.

The Beaverhead National Forest contains a wide variety of soil and geologic types. The areas currently being considered for leasing generally occur on landforms and soils more susceptible to erosion and soil mantle failure than the rest of the Forest. Some stipulations to protect the soil resource can be specified when leases are granted, and the relative proportion of the lease covered by the stipulation can be estimated. However, these are only general guidelines. Additional, more specific recommendations can be made when specific locations and types of activities are known and an on-site investigation has been made.

Soil characteristics that affect soil stability vary considerably over short distances, and activities associated with oil and gas exploration and development are diverse. Most areas where the risk of soil mantle failure is high are site-specific and can be avoided by careful location of roads or sites chosen for development or drilling. Most other impacts on the soil resource can be mitigated by application of the standard stipulations and by good project design.

Surface erosion can be minimized by: (1) avoiding steep slopes, (2) controlling off-road vehicle travel, (3) adequately draining and stabilizing roads, (4) building no more road than necessary, (5) immediate rehabilitation of disturbed sites, and (6) stockpiling topsoil for use in rehabilitation. Compaction can be minimized by specification of type of equipment (seismic and ATV) and season or conditions of use on highly susceptible soils. Soil mantle failure can be minimized by avoiding highly unstable areas and steep slopes, and by drainage and stabilization of unstable cut and fill slopes.

#### Socioeconomic

Affected Area The social and economic environment affected by oil and gas leasing is much broader than the affected environments for individual resources. Activities associated with oil and gas development affect physical and biological resources on only a few acres within a lease, but development of any lease within the affected area creates far-reaching social and economic impacts. Also, the probability of development on a given lease is low and site-specific, while the probability of development somewhere in the affected area is much higher.

The affected social and economic environment for purposes of this Environmental Assessment is all of southwest Montana, including the communities of Dillon, Sheridan, Ennis, Lima, and other smaller rural communities. Since most of the affected area is in Beaverhead and Madison counties, and since data are available for these two counties, the following description of the social and economic environment for these two counties will serve as a profile for the affected area.

In 1970, the combined population of the counties was 13,201, increasing 4.2% from 1950 to 1970 (Table 1). During this same period there was a decrease in rural population and a decline in the 20 to 24 age group. The projected 1980 population for the two counties is 14,305, an 8.4 percent increase from 1970. The median age in Madison County is much higher than that of Montana or the nation, but it is about average in Beaverhead County.

TABLE 1: Past and Projected Populations in the Counties with Oil and Gas Lease Applications

County, Cities:	U.S. CENSUS DATA			MONTANA PROJECTIONS		
	1950	1960	1970	1980	1990	2000
Beaverhead	6,671	7,194	8,187	8,703	9,375	10,251
Dillon	3,268	3,690	4,548	4,870	5,246	5,736
Lima	483	397	351	382	411	450
Madison	5,998	5,211	5,014	5,602	5,455	5,433
Ennis	uninc.	525	501	674	656	654
Sheridan	572	539	636	727	708	705
Twin Bridges	497	509	613	569	554	551
Virginia City	323	194	149	174	169	169
Montana (thousands)	591	675	694	786	918	1,068
U.S.A. (millions)	151	179	203	225	257	287

Sources: U.S. Census, 1970; Population Projections, Montana Department of Community Affairs, August 1977.

Economic Characteristics The area is primarily dependent on agriculture, with significant contributions to earnings and employment also made by various levels of government (Table 2). The cool climate and poorly developed transportation network have not encouraged the location of people or industry, but the expectation is for continuing growth.

Table 2: Distribution of Employment in Beaverhead and Madison Counties, by Occupational Category

Agriculture	31%	Construction	7%
Government	20	Manufacturing	4
Wholesale and retail trade	18	Mining	2
Professional and related fields	17		

Unemployment levels in both counties are currently well below State and Federal averages, but remain at higher levels in the adjoining counties of Deerlodge (Anaconda) and Silver Bow (Butte). Table 3.

Table 3: Unemployment Trends in Southwest Montana, by County

County:	1972	1974	1976	1978	March 1979
Beaverhead	4.4	4.9	4.6	3.9	3.8
Deerlodge	5.5	5.3	8.6	8.4	6.3
Gallatin	3.8	5.6	6.6	4.2	3.7
Madison	6.1	6.7	7.8	3.9	3.5
Silver Bow	5.9	6.7	11.9	8.4	6.2
Montana	4.8	5.2	6.4	6.0	5.4
U.S. Rates	5.6	5.6	7.7	6.0	

Source: Montana Department of Labor and Industry, Montana Employment and Labor Force, April, 1979.

Social Characteristics People in low income groups (below poverty level) number 20-25 percent higher than state and national averages, and incomes are less equally distributed than for the rest of Montana. This may imply a greater desire for development than in other places, since development is associated with economic gains. On the other hand, many local residents seem willing to pay an "opportunity cost" (their lower income levels) for the amenities the area offers. Some have come to escape the rapid pace of development and growth in other areas and may feel industrial development is a threat to their lifestyle.

The area appears to contain a potential for conflict in terms of development vs. preservation, especially in Beaverhead County where change is more of a threat to existing lifestyles. However, residents of the Madison Valley are generally more receptive to a wide variety of changes as long as change can be seen as enhancing economic stability.

#### References:

Socio-Economic Overview--Beaverhead National Forest. USDA-FS, January 1974. Publication No. RI-74-005.

Wenner, Lambert, 1979. Social Impact Assessment: Proposed Oil and Gas Leasing in Beaverhead National Forest, rough draft of background document. U.S. Forest Service, Minerals Impact Evaluation Group, Northern Region, January 24, 1979.

### III. EVALUATION CRITERIA

The following criteria were identified by the interdisciplinary team to evaluate the alternatives (section VI) and identify a preferred alternative.

1. Forest Service Policy for leasable minerals -- The Forest Service policy is stated in the Forest Service Manual, 2822.03 which states; "The Forest Service considers mineral exploration and development to be important parts of its management program. It cooperates with the Department of the Interior in administering lawful exploration and development of leasable minerals. While the Forest Service is mainly involved with surface-resource management and protection, it recognizes that mineral exploration and development are generally in the public interest and can be compatible with the use and protection of surface resources in the long term."
2. National energy needs -- Our Nation currently imports over 50 percent of its oil. This fact has contributed significantly to our imbalance of payments and resulting instability of the dollar abroad. Development of hydrocarbon reserves on Federal land is one way to slow the erosion of our currency abroad and to help reduce the related consequences.
3. Protection of resource values and uses -- The resource values and uses listed below were identified by the public or members of the interdisciplinary team as significant concerns in evaluating oil and gas leasing. Applying these criteria should be done with recognition of the ability to mitigate conflict.
  - a. Land stability -- Soil stability is maintained and stream sedimentation avoided.
  - b. Water quality -- Streams and other bodies of water are maintained free from toxic materials extracted from beneath the earth's surface.
  - c. Visual resource -- The visually sensitive landscapes are retained with only short-term (one to two years) conflicts.
  - d. Wildlife habitat -- Animals are not harassed or displaced in significant numbers for extended periods of time, particularly on key habitats.
  - e. Threatened and endangered species -- Habitat for threatened and endangered species is protected.
  - f. Existing leases and permits -- Existing leases and permits continue unencumbered by oil and gas activity.

4. Social and economic concerns -- The following criteria identify conditions that could occur as a result of oil and gas leasing. Application of these criteria should consider short-term effects resulting from preliminary exploration activities, and the longer-term impacts for the following activities based on probability of occurrence on a particular lease block (from Socio-economic Assessment Guidelines for Oil and Gas Activities, tech-draft, Lambert Wenner, USDA, Forest Service, Northern Region, April 1979, p. 42.)

<u>Activity</u>	<u>Probability of Occurring</u>
preliminary exploration	1:1
exploration drilling	1:2
discovery	1:10
small field development & production (10 wells)	1:70
medium field development & production (50 wells)	1:150 to 1:300
large field development (100 wells)	1:1000 to 1:1700

- a. Maintaining community traditions and interpersonal relationships - Rapid in-migration can disrupt established community traditions and interpersonal relationships. The severity of effects depends on the speed and duration of the increase and the degree to which newcomers are culturally different from old-timers.
- b. Maintaining adequate social services and facilities - Population growth associated with mineral development can exceed an area's capacity to provide adequate public and private facilities and services depending on growth rate, the extent of advance planning, and the adequacy of these facilities before development.
- c. Increasing employment and business activity - Oil and gas development beyond the preliminary exploration stage and any related construction activity normally generates some local employment and increases the volume of local business activity.
- d. Adequate supplementary revenue to support short-term growth - Mineral development has the potential to develop additional revenues to offset increased public expenditures for facilities and services, but there is often a 2-5 year time lag during which supplementary income sources are needed to support this development.
- e. Capacity to adjust to higher taxes, rentals and prices - Local people tend to benefit unequally from mineral development. Some are enriched, while others are disadvantaged by rising rentals, taxes, and prices. A portion will change occupations in an effort to improve their circumstances.

#### IV. ALTERNATIVES CONSIDERED

The reasonable range of alternatives identified in this environmental assessment were developed by the interdisciplinary team to provide a basis for identifying and choosing an action plan relative to oil and gas leasing. All alternatives identified were developed with a consideration of the following criteria.

1. The Forest Service direction for complying with the National Environmental Policy Act states that "the alternative of taking no action (continuing the present course of action or no change) must always be considered."
2. Alternatives must be feasible in the sense that they would be compatible with existing laws, Executive Orders, regulations and judicial direction.
3. Alternatives must not be conflicting with direction provided in the Beaverhead Land Management Plan.
4. Alternatives must honor existing leases.
5. Alternatives must be reasonable.
6. Development of alternatives should be responsive to the issues and concerns identified and the evaluation criteria established.

The following three alternatives were judged by the interdisciplinary team to meet these criteria, and are considered viable alternatives in this assessment.

##### Alternative A - Continue present course of action

The present procedure for processing applications would continue in all areas except those recommended for further planning in RARE II (see Oil and Gas EAR, dated August 15, 1977). Leases would be granted (outside of further planning areas) with a "no surface occupancy" stipulation provided (1) the action would be compatible with the land management plan and (2) the lessee would be willing to accept the "no surface occupancy" stipulation. Leasing procedures for areas recommended for further planning would be responsive to RARE II F.E.S. (see Page 97).

##### Alternative B - Defer leasing pending completion of Forest planning under NFMA

All lease applications outside of further planning areas would be deferred pending completion of Forest planning required by the National Forest Management Act (NFMA). The NFMA planning process would result in a Forest land management plan which would meet specified standards. Standards for oil and gas leasing would be part of that process. The Beaverhead has been directed to begin this planning process by October 1980. Completion would be expected in 1983. Those leases already granted would be honored. Leasing procedures for areas recommended for further planning would be responsive to RARE II F.E.S. (see Page 97).

Alternative C - Lease with surface occupancy

Leases would be granted with stipulations for surface protection. Applications would be evaluated against the Beaverhead Land Management Plan and against resource concerns identified in this environmental assessment. Appropriate stipulations, including no surface occupancy in some instances, would be applied to restrict oil and gas activities on portions or all of a given lease. Leasing procedures for areas recommended for further planning would be responsive to RARE II F.E.S. (see Page 97).

Other alternatives were identified by the interdisciplinary team, but were dropped from further consideration because they were conflicting with the alternative formulation criteria.

One such alternative would have placed areas recommended for further planning in a deferred status. This would have conflicted with the direction in the RARE II Final Environmental Statement.

Another would have provided an opportunity to lease in certain geographic areas on the Beaverhead National Forest and to defer leasing on others. This would have been done with the assumption that "too much" leasing would be undesirable. The interdisciplinary team was not able to identify reasons for selecting some areas for lease and some areas for deferral, and concluded that this alternative would simply reflect that oil and gas activity must be arbitrarily suppressed.

Another would have denied all lease applications. Since there is established policy to provide for leasing in wilderness areas, wilderness study areas, Further Planning areas, it did not appear reasonable to do less in other areas.

The last example of an alternative identified, but discarded, was one which would have been more liberal in granting surface occupancy rights (than any of those selected for evaluation). A more liberal approach would have been conflicting with the direction in the Beaverhead Land Management Plan. Consequently, the alternative was not judged reasonable.

## V. EFFECTS OF IMPLEMENTATION

Effects of implementing each alternative are expressed below in terms of differences from the present condition and the expected future condition for each alternative. Discussion identifies long- and short-term changes that would reasonably be expected to occur as a result of leasing and associated oil and gas activities. The assumption is made that some profitable oil or gas discoveries will occur under alternatives B and C.

### 1. Extent of Development

Alternative A - Very little development would occur since leases would be granted under the direction provided in the Oil and Gas E.A.R. dated August 15, 1977. Under this direction, leases would be granted with a "no-occupancy stipulation" if requested by the lessee and if compatible with the Land Management Plan.

Alternative B - Very little development would occur prior to completion of Forest planning in 1983 since very little activity would be allowed on existing "no-surface-occupancy" leases. In the long run, there could be increased development due to change in management direction brought through the process of bringing the Forest Land Management Plan into compliance with NFMA.

Alternative C - The potential for development would be greatest under this alternative. Although no-surface-occupancy restrictions would apply to some leases, many leases would be granted with a right to develop contingent upon certain surface use and protection stipulations. The probability of incurring preliminary exploration impacts on any surface occupancy lease is 1:1; the probability of incurring drilling impacts is 1:2; and the probability of incurring any field development on a given block is 1:70 (from Socio-economic Assessment Guidelines for Oil and Gas Activities, Lambert Wenner, USDA, Forest Service, Northern Region, April 1979).

### 2. Environmental Change

Alternative A - Disturbance would be minimal since only work associated with preliminary exploration would occur. The disturbance that would occur would be unnoticeable in a short time (1 to 3 years).

Alternative B - Same as Alternative A until land management planning (NFMA).

Alternative C - The potential for change would be the greatest under this alternative. Leases that show enough promise to warrant road development and drilling would incur surface impacts which would affect such values as wildlife habitat, visual resource, and water quality. Mitigating measures would be needed to protect these values. Except in the instances where oil or gas are discovered, the effects would not be long lasting (1 to 3 years). Where oil and gas are discovered, effects would be confined to the access road and well site, but they would be long lasting (15 to 25 years or more).

### 3. Outputs of Goods and Services

Alternative A - Present output of goods and services from National Forest would not be affected. An additional revenue on lease rentals could be obtained from additional leases that would be issued. However, because production would not occur under no occupancy restrictions, there would be no revenues from oil and gas production. This alternative would not result in any energy outputs.

Alternative B - Present output of goods and services from National Forest would not be affected. Rental revenues from leases would not change until completion of NFMA planning in 1983. In the long-term rental and royalty revenues could increase pending outcome of Forest planning. Energy outputs would not occur until completion of Forest planning in 1983. In the long term the energy outputs would depend on the outcome of NFMA Forest planning.

Alternative C - Present output of goods and services from the National Forest, under the existing Land Management Plan, would not be appreciably affected. Lease rental revenue would increase as more area is put under lease. If drilling resulted in oil or gas discoveries, revenues from production (royalties) would be realized based on the volume of production. This alternative could contribute one-thousand billion B.T.U.'s or more energy depending on the extent of discovery.

### 4. Cost of Administering Oil and Gas Program

Alternative A - Forest Service and BLM expenses would be primarily that of processing lease applications. Since all leases would involve no-surface-occupancy, very little additional cost would be incurred by FS in field checking and administration of oil and gas activities. GS would not incur administration costs.

Alternative B - Expenses would be minimal until completion of Forest planning in 1983. Pending outcome of NFMA planning effort, FS and BLM could incur short-term expenses in issuing leases; and FS and GS could incur longer term expenses in administering oil and gas operations on leases with surface occupancy rights.

Alternative C - FS and BLM would incur expenses in processing the 348 applications now on file and any future applications. Because many applications would result in leases with the right to surface occupancy, FS would incur substantial cost for field checking and on-the-ground administration of preliminary exploration activities. If leases showed promise of discovery, additional expenses would be incurred by FS and GS in environmental assessments of roading, drilling, developing, etc. GS would incur substantial expense in administration of lease operations if preliminary exploration and exploratory drilling resulted in profitable oil and gas discoveries.

## 5. Economic Effects

Alternative A - Any large increase in geophysical exploration could generate a few local jobs and some local businesses would experience increased sales during this activity. Favorable exploration results could lead to increased leasing and greater rental income. There would be no benefits from revenue on oil and gas production.

Alternative B - No significant changes are expected until completion of NFMA planning in 1983. The potential for longer-term effects would depend on management requirements set forth in the NFMA Forest Plan. There would be no short-term benefits from revenue on oil and gas production; long-term benefits would be identified in NFMA Forest Plan.

Alternative C - The economic impacts associated with the full sequence of oil and gas development are complex. In general, the effects of initial activity are small and temporary. Oil and gas development is not labor-intensive, and much of the initial work is done by transient workers. The multiplier effect is small and much of the payroll is spent outside the affected area. As development becomes more intense, the need for supportive and service-type workers increases. Since oil, gas, and related construction jobs generally pay more than other local jobs, development could lead to higher average incomes, more equality of income distribution, and considerable switching from lower to higher paying employment (Table 4).

Table 4: Average Hourly Earnings by Occupation Group, Montana 1978.

Contract construction	\$11.48	Wholesale and retail trade	\$4.92
Mining	8.93	Finance, insurance, and	
Manufacturing	7.81	real estate	4.05
Transportation and		Services	4.03
public utilities	7.42	TOTAL (all employees)	5.92

Source: Montana Department of Labor and Industry, February 1979.

Other sources of local income normally generated by oil and gas development are: rental and royalty income, increased business for many local firms, eventual increases in tax revenues, and possible supplementary payments or grants from outside sources to offset the increased burden on local services and facilities. These are described in detail in Socioeconomic Assessment Guidelines for Oil and Gas Activities, tech. draft, Lambert Wenner, USDA, Forest Service, Northern Region, April 1979, Chapter 5). This alternative could generate revenue from oil and gas production. The amount depends on the size of the discovery.

## 6. Social Effects

Alternative A - Possible increases in geophysical exploration could result in one or more crews of about 20 workers residing in the vicinity of certain lease blocks during the warmer season. Greater demand for lodging and other transient services and increased presence of newcomers could occur in affected communities.

Alternative B - No immediate changes are anticipated because no significant developments would occur for several years. The potential for longer term effects would depend on the management requirements set forth in the NFMA Forest Plan.

Alternative C - Resource impacts of oil and gas development are easily defined, very localized, and can generally be mitigated; social and economic impacts are closely related, difficult to define, can affect a very broad area, and are very difficult to deal with effectively, if at all. Some social and economic impacts will occur in the affected environment whether the FS grants leases or not. Granting of leases on FS lands will only increase the probability of development to some degree. Some leasing has already occurred outside the National Forest boundary and drilling has been under way for several years. Small communities in the affected area have already felt the impacts of the initial phases of oil and gas development to some degree.

In the great majority of instances oil and gas activity will be small-scale and limited to a portion of the leaseholds. Given the great number of leases on the Beaverhead Forest, a significant discovery somewhere is a distinct possibility and would bring dozens to hundreds of people into a rural area with a limited capacity to host them. Considerable change would result.

Feelings about change are highly individual and, therefore, difficult to categorize. People have a tremendous capacity to adapt to change, and with training and experience can adapt to many new situations. However, there is a physical and mental limit to this capacity, and change can be so rapid as to exceed individual and collective abilities to adapt. It takes time to change attitudes, redefine priorities, and accept new values and lifestyles. In general, changes inconsistent with prevailing patterns that are introduced by "outsiders" (such as oil and gas development) are the most difficult to accept or mitigate.

Rapid growth and development can seriously affect lifestyles, outlooks, and the quality of social relationships. Communities with populations of more than 10,000 can usually absorb impacts readily; communities smaller than 2,000 rarely can. While Dillon is on the borderline, the other communities in the affected area are not large enough to adapt easily to the change in growth associated with oil and gas development.

Very rapid growth generally causes the following changes in the social environment. The first effect is a loss of stability in housing, zoning, and community services. Even a modest influx of people in a sparsely populated area can dramatically increase rents. (To some extent, even the initial exploration and drilling activities have caused this to happen in Dillon.) Real estate development becomes speculative and uncoordinated, public services (school, police, etc.) become overloaded and increased competition for goods and services often resulting in hardship for people on fixed incomes. The tax base rapidly becomes inadequate or adjustments are too tardy to deal with increased demands for public services. Local governments lacking in experience or authority are usually unable to deal with large-scale problems. At the same time, the weakening of informal controls creates the need for greater police and court control. Controlling the impacts of oil and gas development can itself create additional burdens.

A big factor in predicting the impacts of oil and gas development is the fear of unknown, which fosters uncertainty and speculation. Also, those not in favor of oil and gas development may be reacting to what they have learned to expect from experiences in other areas that have gone through the rapid changes that accompany oil and gas development. Social affects are discussed in more detail in Socioeconomic Assessment Guidelines for Oil and Gas Activities, Technical Draft, Lambert Wenner, USDA, Forest Service, Northern Region, April 1979.

## VI. EVALUATION OF ALTERNATIVES

The evaluation criteria (see Section III) were grouped into four general categories by the ID Team for choosing an alternative course of action: Forest Service policy for leaseable minerals, national energy needs, protection of resource values and uses, and social and economic concerns. The ID Team felt that each of the four categories were equal in importance. Consequently, the evaluation that follows is presented with discussion directed to each of these four categories.

### 1. Forest Service Policy

Alternative A would continue the present procedure for processing applications and leases would be granted with a "no-surface occupancy" stipulation. Under this alternative preliminary exploration would occur but since very little development would occur and since production would not occur under "no-surface occupancy" restrictions this alternative is not fully responsive to Forest Service policy which recognizes that oil and gas exploration and development are generally in the public interest and can be compatible with the use and protection of surface resources in the long-term.

Alternative B would defer all lease applications pending completion of the Forest planning required by the National Forest Management Act (NFMA); however, leases already granted would be honored. This alternative is similar to alternative "A", except that it could consider oil and gas exploration, development and production to be important aspects of the forest management program when the Forest Land Management Plan is brought into compliance with NFMA.

Under Alternative C leases would be granted with stipulations for surface protection. This alternative would consider oil and gas exploration, development and production to be important aspects of Forest management program, generally in the public interest, and compatible with the use and protection of surface resources in the long-term.

### 2. National Energy Needs

Alternative A would not contribute to meeting the national energy needs because production would not occur under "no-surface occupancy" restrictions.

Alternative B would not contribute to meeting the national energy needs until completion of Forest planning in 1983. After that date, oil and gas could be administered as a commodity resource to the extent that it is compatible with the NFMA land management direction.

Implementation of Alternative C could contribute to meeting the energy need beginning this year. Hydrocarbon reserves could be established in 3 to 5 years; field development and consequent production of oil and gas could occur in 3 to 10 years where oil and gas is found in quantities sufficient to promote development.

### 3. Protection of Resource Values and Uses

Alternative A: Since exploratory drilling and development would not occur outside further planning areas because of "no-surface occupancy" restrictions, the potential for affecting any resource value or use would be low. Short-term impacts could occur from preliminary exploration activities whether leases are issued or not. Wildlife could be harassed or displaced where seismic exploration activities are extensive and for significant periods; permittees and Forest users could be inconvenienced for short periods due to seismic activities.

Impacts resulting from implementation of Alternative B would be similar to alternative "A" prior to completion of Forest planning in 1983. Resource impacts due to exploratory drilling, development and production activities that may ensue following the implementation of the NFMA Forest plan would be addressed in the NFMA Forest Plan.

Implementation of Alternative C, which would result in issuance of more leases, would result in more cumulative preliminary exploration activities on National Forest land and could result in some exploratory drilling in the near future. Effects from preliminary exploration would be similar to alternative "A", but an increase in activity would require additional Forest Service supervision to insure that resource values and uses are protected. Drilling and associated road construction activities would produce essentially permanent changes in the landscape in some area. In the event of profitable oil and gas discoveries developments such as pipelines, tank batteries, service roads and utilities would be needed to extract and transport petroleum. The potential for affecting any of the identified resources and uses would be great under these circumstances. Considerable effort would be involved on part of the Forest Service to work with the Geological Survey to mitigate environmental effects resulting from these activities. In some instances full mitigation may not be accomplished. For instance, some sedimentation may occur where developments must be located near streams. It may not be possible to fully mitigate visual impacts where terrain is unforested and smooth. Wildlife may be forced to leave some areas during periods of human activity.

### 4. Social and Economic Concerns

Social and economic effects under Alternative A would result primarily from preliminary exploration activities. Impacts would be minor for all criteria identified. The most notable effect will be increases in employment and business during the field season. Considering the cumulative effects from activities on other ownerships, impact attributed to activities on National Forest land may be minor. The duration of any social and economic impacts would depend on the extent of oil and gas discovery on lands adjacent to National Forest land. Substantial discovery adjacent to National Forest land would spur preliminary exploration activity on National Forest lands to gather geologic data to locate potential oil and gas sources, and to determine size of the field discoveries.

Impacts resulting from implementation of Alternative B would be similar to alternative "A" prior to completion of Forest planning in 1983. Social and economic impacts due to exploratory drilling, development and production activities that may ensue following implementation of the NFMA Forest plan would be addressed in the Forest plan.

Implementation of Alternative C, which would result in the issuance of more leases, would result in more cumulative preliminary exploration activities on National Forest land, and could result in some exploratory drilling in the near future. The discovery of oil or gas could result in additional oil and gas activity. The extent of social and economic impacts resulting from such activity would depend largely on the size and extent of discoveries made and the discovery locations. The following matrix depicts our estimate of how identified evaluation criteria would be affected by certain aspects of oil and gas activity. The ratings (0-2) were assigned from information in Socioeconomic Assessment Guidelines for Oil and Gas Activities, Lambert Wenner, USDA, Forest Service, Northern Region, April 1979. See especially Tables 11, 12, 14, 15 and 17.

Activity	Probability of occurrence on any given lease.	Affected Population									
		Small, e.g., one or more rural communities.					Intermediate, e.g., Dillon or affected communities.				
		Evaluation Criteria 1/					Evaluation Criteria 1/				
		a	b	c	d	e	a	b	c	d	e
Preliminary Exploration	1:1	1	1	1	0	1	0	0	0	0	0
Exploratory Drilling	1:2	1	2	2	0	2	0	1	1	0	1
Small Field Development and production (10 wells)	1:70	1	1	1	1	1	0	1	1	1	0
Medium Field Development and production (50 wells)	1:150 to 1:300	2	2	2	2	2	1	2	1	1	1
Large Field Development and production (100 wells) or a combination of many smaller fields in the vicinity.	1:1000 to 1:1700	2	2	2	2	2	1	2	2	2	2

#### Definitions

- 0 - Minor effects -- problems or effects normally adequately managed by existing institutions.
- 1 - Significant effects for some sectors -- new programs, special efforts needed to mitigate any negative effects.
- 2 - Severe effects -- effects or problems cannot be fully mitigated due to insufficient time and/or resources; general decline in quality of life.

NOTE: Despite individual differences both "positive" and "negative" effects will be evident to most observers. Of course, only a portion of the total socioeconomic effect can be attributed to oil and gas activity on National Forest lands.

1/ The letters "a", "b", "c", "d", and "e" at the head of the columns represent the evaluation criteria for Social and Economic Concerns, Section III of this report. "a" = Maintain community traditions and interpersonal relationships; "b" = Maintain adequate social services and facilities; "c" = Increasing employment and business activity; "d" = Adequate supplementary revenues to support short-term growth; and "e" = Capacity to adjust to higher taxes, rentals and prices.

Summary of Evaluation of Alternatives

The following chart is intended to show the relative degree to which the various alternatives respond to the evaluation criteria.

Evaluation Criteria

1. Forest Service Policy
2. National Energy Needs
3. Protection of Resource Values and Use
4. Social and Economic Concerns

ALTERNATIVE		
A	B	C

-perspective of anti-development segment of community



-perspective of pro-development segment of community



- 1/ Evaluation for activities other than preliminary exploration are not considered in alternative B. Evaluation would be made through the NFMA planning process as part of the Forest Plan environmental analysis process.

Least Responsive

Intermediate

Most Responsive



## VII. IDENTIFICATION OF THE FOREST SERVICE PREFERRED ALTERNATIVE

The oil and gas decisionmaking process has systematically led to a development of a selected alternative. Rationale involved in reaching the decision includes the decision criteria identified earlier in this report, a series of "compelling reasons" for recommending the granting of leases for the exploration and development of leasable minerals, and the Forest Service's desire to cooperate with the Department of the Interior in administering lawful exploration and development of leasable minerals.

On the basis of alternative comparison and considering the evaluation criteria (e.g., laws, regulations, policy, etc.) the ID Team recommended Alternative C because it offers the best balance between resource protection and helping alleviate the National energy situation.

To reach the point of recommendation, the ID Team reviewed the summary of evaluation of alternative for each general category of evaluation criteria identified. (Section VI, Summary of Evaluation of Alternatives.)

Summary ratings were used only as a relative comparison between alternatives and categories of evaluation criteria. For example, alternative A is best at preserving environmental and human concerns, but is worst at helping alleviate the national energy situation. On the other hand, alternative C is best with the energy situation while potentially generating low to high levels of impacts.

The ID Team considered all evaluation criteria to be important in making their recommendations.

Alternative C, as previously described, is the preferred alternative. This alternative includes the following Forest Service actions:

1. Grant leases with stipulations for surface protection.
2. Evaluate applications against the Beaverhead Land Management Plan, against resource concerns identified in this environmental assessment, and against site specific data and information.
3. Apply appropriate stipulations, including "no-surface occupancy" in some instances, to restrict oil and gas activities on a portion or all of a given lease.
4. Refer to the Chief of the Forest Service the decision to recommend or deny leasing the wilderness areas and wilderness study areas.

This alternative was chosen since it best meets the evaluation criteria concerning Forest Service policy, national energy needs. Although this alternative has the potential to generate low to high levels of some resources or use impacts, protection of the surface and surface functions can largely be achieved through appropriate stipulations, including "no-surface occupancy," and effective planning and administration of oil and gas field activities. Both positive and negative social and economic effects would be generated, the number varying with the perception of the individual observer. Social and economic effects on nearby communities would be about the same whether activities occurred on public or private lands. Consequently, only a portion of the total social and economic effect can be attributed to oil and gas activity on National Forest lands.

### VIII. MITIGATING MEASURES

Throughout the previous sections of this report many concerns with oil and gas leasing on the Beaverhead National Forest have been identified. It is the objective of this section to define mitigation needs and to develop a procedure to provide mitigation for those needs. See Table 5. Following is an explanation of the table:

Column A -- This is a list of concerns needing evaluation for mitigation. Concerns one through thirteen are discussed in the body of the environmental assessment (E.A.). Concerns relative to item fourteen recognize that lease evaluations must consider direction given in the Beaverhead Land Management Plan. It also considers other recognized unique and localized concerns. Item 15 will not result in the utilization of a particular stipulation but rather in the exchange of information when lease evaluations are being made which could influence the use of all stipulations.

Column B -- This is a cross-reference to the page number in this E.A. where the concern is discussed.

Column C -- An "X" in this column means that a decision to recommend or deny leasing is needed by the Chief of the Forest Service by means of an environmental analysis that considers wilderness values.

Column D -- An "X" in this column indicates that the standard stipulations attached by the Bureau of Land Management to all leases on National Forest lands will probably mitigate the concern. Appendix A contains these stipulations. They provide protection for resources and structures under "normal" forest situations. The "Stipulation for Lands Under Jurisdiction of Department of Agriculture" states that all operations will be conducted "with due regard for good land management." More specifically, it defines responsibilities for protection of many resources and prescribes actions to be taken concerning fire. It also directs that existing uses be recognized.

The "Surface Disturbance Stipulations" (Appendix B) defines requirements of a lessee prior to entry upon the land or the disturbance of the surface for drilling. It requires that an environmental analysis be made setting forth conditions for operation. This environmental analysis requires definition of mitigating measures needed for resource protection when disturbing the surface on specific areas.

TABLE 5

## SUMMARY OF MITIGATION NEEDS

A	B	C	D	E	Mean to Mitigate	
					F	
Concerns identified in this E.A.						
						Additional mitigations would be considered when surface disturbing activities are proposed.
						Special stipulations identified as needed.
						Standard stipulations appear adequate.
						Lease application will not be acted upon under this
						Discussed in this E.A.R. on page number shown below.
1. Wilderness			3	X		
2. Proposed wilderness			3		X	X
3. Designated for further planning			5			
4. Fisheries management unit (as defined in the Land Management Plan -- confined to Ruby River area.)			43		X	X
5. Roadless management (as defined in Land Mgmt. Plan).			43		X	X
6. Threatened and endangered species			15		X	X
7. Big game winter range			15		X	X
8. Cultural values			16		X	X
9. Visual resource			17		X	X
10. Water (includes riparian zones for fish and aquatic life)			18		X	X
11. Grazing			19		X	X
12. Existing rights			20		X	X
13. Soil resource			20		X	X
14. Concerns not identified in this environmental assessment -- The following are examples of other items which should be considered even though not specifically mentioned in this environmental assessment: Administrative sites, buildings, Forest Travel Plan, direction in Beaverhead Land Management Plan, and any other concern identified when leases are evaluated on a lease-by-lease basis.						X
15. Needed coordination. The Bureau of Land Management administers lands interspersed with the Beaverhead National Forest. Since two federal agencies administer adjacent lands with oil and gas lease applications, consultation is needed to coordinate leasing. This will not result in stipulations in the lease but is nonetheless important in evaluating leases.						

Column E -- An "X" in this column identifies concerns which are not likely to be fully mitigated by the standard stipulations referred to in Column "D". Special stipulations will be required to achieve mitigation needs (even though the standard stipulations in many cases may provide a degree of mitigation). In the interest of uniformity the Northern Region is developing a set of special stipulations for use by the national forests. Although these have not yet been approved by the U. S. Geological Survey, they are included in Appendix C to show the nature of the stipulations which could be utilized in granting a lease (if these special stipulations have not been approved for use when leases on the Beaverhead are processed, the special stipulations approved for the Deerlodge National Forest will be used in the interim).

Column F -- This column shows that when an application for surface disturbing activity is made by the lessee, that an environmental analysis will be made. As such, it assures that further mitigation will be considered prior to development.

Processing of lease applications (and reevaluation of existing leases on which a "no-surface occupancy" stipulation was applied to the entire lease) will begin with the district ranger evaluating each lease or lease application and making recommendations to the Forest Supervisor for disposition. The Beaverhead "Lease Evaluation Procedure -- Part I" will be used to identify the need for special stipulations. The answers to the questions in this procedure provide a means to determine mitigating measures not covered sufficiently by the standard stipulations. The "Lease Evaluation Procedure" is on the following four-pages and for clarity the questions are listed in the same sequence as the concerns on Table 5.

The mitigating measures displayed in the right-hand column will be matched with an appropriate special stipulation(s). However, after leases and lease applications have been evaluated by the district ranger and the "Lease Evaluation Procedure -- Part I" has been completed, Part II will be used to display the special stipulations to be used. This form will be forwarded to the Forest Supervisor for review and approval. The Forest Supervisor will make his recommendations to the Bureau of Land Management.

The intent of this E.A. is to establish a procedure to evaluate lease applications now on file, reevaluate leases made with total coverage of a "no-surface occupancy" stipulation, and to provide the means to evaluate lease applications which may be received in the future.

Since there are several hundred lease applications and leases now on file to evaluate it was deemed appropriate to broadly display the effects of applying the Lease Evaluation Procedure to these leases and lease applications. This will permit those who have applied for an oil and gas lease to judge how their lease applications will be affected. Just as importantly, those concerned with protection of other resource values will be able to generally understand the extent of the mitigating measures. This display is shown in Appendix G.

## Lease Evaluation Procedure -- Part I

Item of Concern	Yes or No	Mitigating Measures
1. WILDERNESS. Is any portion (of the lease or lease application area) within a wilderness? Check map of Anaconda Wilderness.		If yes, an environmental assessment must be submitted to the Chief of the Forest Service for a decision.
2. PROPOSED WILDERNESS. Is any portion within an area proposed for wilderness? Check RARE II maps.		If yes, an environmental assessment must be submitted to the Chief of the Forest Service for a decision.
3. FURTHER PLANNING.		If yes, an environmental assessment must be submitted to the Chief of the Forest Service for a decision.
a. Is any portion with an area mandated by Congress in PL 95-150 for wilderness study? Check map of record for PL 95-150.		
b. Is any portion within an area designated through the RARE II process for further planning? Check RARE II maps.		If yes (and area was not included in PL 95-150), special stipulations for areas in further planning must be used. In addition, other special stipulations will also apply.
4. FISHERIES MANAGEMENT UNIT. Is any portion within a fisheries management unit identified in the Beaverhead Land Management Plan? Check management direction in L.M.P.		If yes, use a "no-surface occupancy" stipulation on that percentage of lease affected.
5. ROADLESS MANAGEMENT. Does any portion contain direction in the Beaverhead L.M.P. for retention as roadless? Check management direction in L.M.P.		If yes, use a "no-surface occupancy" stipulation on that percentage of lease affected.
6. THREATENED AND ENDANGERED SPECIES. Is any portion within lands that have been designated by the U. S. Fish and Wildlife Service as "critical habitat" for threatened and endangered species or is any portion within lands identified by the Forest Service as potential critical habitat? Check maps on file with the Forest Wildlife Biologist and consult with the Fish and Wildlife Service.		Whether yes or no, see "Consultation with U. S. Fish and Wildlife Service" contained in Appendix F.

Item of Concern	Yes or No	Mitigating Measures
7. BIG GAME WINTER RANGE. Has any portion been identified as big game winter range. Check maps on file with the Forest Wildlife Biologist.		If yes, use a stipulation which provides for a time or conditions when a specified activity (i.e., all surface disturbing activity, exploration, drilling development) cannot take place.
8. CULTURAL VALUES.		
a. Has an inventory been made of archeological, paleontological, and historical sites? Consult with Resource Program Officer.		If no, use a stipulation which prevents entering upon a lease area or disturbing the surface for exploration or drilling purposes until an inventory is made. Provide for protection of significant values encountered.
b. Does any portion contain an inventoried archeological, paleontological or historical site? Check statewide archeological data file.		If yes, use a stipulation which prohibits occupancy within a specified distance of the site.
9. VISUAL RESOURCE.		
a. Are there roads or trails on the transportation system on any portion. Check transportation system maps and records.		If yes, use a stipulation which prohibits occupancy within 500 feet of a road and 200 feet of a trail. Must justify the use of different distance.
b. Is any portion in a location where semi-permanent facilities may require painting or camouflage to blend with the natural surroundings? Consult with Forest Landscape Architect.		If yes, use a stipulation that may require painting or camouflaging to blend with the natural surroundings.
c. Is any portion located in such a way that it is visually sensitive from a road, lake, river or campground? Consult with Forest Landscape Architect.		If yes, use a stipulation that restricts access, earth cut or fill, structure or other improvements, other than an active drilling rig. Stipulation should provide for mitigation of unavoidable conflicts.

Item of Concern	Yes or No	Mitigating Measures
10. WATER. Does any portion contain first order/ streams or greater as displayed on stream order map on file with the Wildlife Biologist? Also, does any portion contain ponds, reservoirs or lakes?		If yes, use a stipulation which prohibits occupancy within 500 feet of the drainage or body of water. Must justify the use of a different distance.
11. GRAZING. Will standard stipulations mitigate concern? (It has been determined that usually they will.)		If no, enter concern under Item 14 below and show need for special stipulation.
12. EXISTING RIGHTS. Will standard stipulations mitigate concern? (It has been determined that usually they will.)		If no, enter concern under Item 14 below and show need for special stipulation.
13. SOIL RESOURCE.		
a. Does any portion contain slopes over 65%. Check topographic map.		If yes, use a stipulation which prohibits occupancy on that percentage of lease affected.
b. Does any portion contain land types that are sensitive to mass failure. Consult with Forest Soil Scientist.		If yes, use a stipulation which prohibits occupancy on that percentage of lease affected.
c. Are there other land types on any portion subject to mass failure if slopes are over 35%? Consult with Forest Soil Scientist.		If yes, use a stipulation which prohibits occupancy on that percentage of lease affected.
d. Are there land types on any portion which are highly susceptible to soil compaction? Consult with Forest Soil Scientist.		If yes, use a stipulation which prohibits off-road vehicle travel or use of vibrator or thumper-type seismic equipment except during dry periods.

Item of Concern	Yes or No	Mitigating Measures
14. CONCERNS NOT IDENTIFIED IN THIS ENVIRONMENTAL ANALYSIS. For example:		
Is there conflict with direction in the Beaverhead Land Management Plan?		If yes, list concern on a separate sheet and explain special stipulations needed.
Are there wildlife concerns not adequately covered by the concerns listed above?		If yes, list concern on a separate sheet and explain special stipulations needed. Also, consult with Forest Wildlife Biologist.
Are there administrative sites or buildings on the lease area?		If yes, use a no-surface occupancy stipulation on the affected area.
Are there any other concerns not mentioned above?		If yes, consider the need for a special stipulation.
15. Is there Public Domain land adjacent to the lease area?		If yes, consult with the local Bureau of Land Management managers to exchange information.

1/ For the purposes of evaluating oil and gas leases, a first order stream will be defined as any mapable unbranched tributary on a 1/4 inch-to-the-mile map. A second order stream is formed when two first order streams join. A third order . . . , etc., to the ocean.

## Lease Evaluation Procedure - Part II

**Ranger District** \_\_\_\_\_

The following stipulations should be attached to this lease.

Percent Restricted \_\_\_\_\_ Percent Open \_\_\_\_\_

Special Stipulation Number	Reason Special Stipulation Is Needed	Percent of Lease Affected
1	1	1
2	2	2
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**Abstract**

[illegible]

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1. The first part of the document is a title page. It contains the title "The History of the County of York" and the author's name "John Smith".

1

Prepared by: \_\_\_\_\_ Date: \_\_\_\_\_

Submitted by: \_\_\_\_\_  
(District Ranger)

Date: \_\_\_\_\_

Reviewed by: \_\_\_\_\_  
(Lands Specialist)

Date: \_\_\_\_\_

Recommended by: \_\_\_\_\_ Date: \_\_\_\_\_  
(Forest Supervisor)

Approved by: \_\_\_\_\_ Date: \_\_\_\_\_  
(Regional Forester)

IX. CONSULTATION WITH OTHERS

Public concern about oil and gas leases on the Beaverhead National Forest was identified formally in 1977 during public review of the draft environmental statement and land management plan for the Beaverhead N.F. The draft plan described the existing oil and gas situation and what action would be taken on the oil and gas applications pending completion of the Land Use Plan. The draft plan also discussed generally, the long-term affects of any oil and gas development.

On August 15, 1977, an environmental analysis report on oil and gas leasing on the Beaverhead National Forest was issued. The purpose of this environmental analysis report was to analyze the impact of a "no-occupancy" stipulation and to determine if such stipulations would be suitable for use on the Beaverhead National Forest. This environmental analysis report was to be used to permit exploration activities by those lease applicants who desire a "no-occupancy" stipulation for a non-disturbing type of exploratory work. Additional examination and evaluation would be necessary before other exploratory or developmental activities would be allowed.

In addition to the above, an information summary pamphlet was mailed to interested individuals and the news media in April of 1979. This pamphlet generated an inquiry from the Beaverhead Forest Concerned Citizens (BFCC) located in Butte. The Forest Supervisor and other Forest personnel attended a meeting with the BFCC in which the oil and gas situation on the Beaverhead National Forest was discussed. The BFCC was concerned about specific areas where wildlife would be affected. Also, many other informal contacts have been made with various public segments, especially the oil and gas industry.

The local Dillon office of the BLM was contacted to discuss the need for coordinating action on adjacent lease applications (the Beaverhead National Forest and the Public Domain administered by BLM is interspersed in many areas). Both agencies agreed to consult at the time either agency was in the process of evaluating a lease application adjacent to land administered by the other agency.

An interagency meeting was held in Missoula in June of 1979 between the U. S. Fish and Wildlife Service and the Forest Service. This meeting established commitments and level of involvement for each participating agency in the protection of Threatened and Endangered wildlife species.

An Inform and Involve (I&I) Plan has been prepared and initiated to inform and seek public involvement in this environmental assessment process on oil and gas leasing. The decision to prepare an I&I Plan was made because of the lack of public knowledge about oil and gas activity. A copy of this Plan is on file in the office of the Beaverhead National Forest.

On July 16, 1979, Chuck Sundstrom and Frank Fowler visited the U. S. Fish and Wildlife Service offices in Billings to specifically discuss Threatened and Endangered habitats on the Beaverhead. After this discussion Sundstrom prepared a letter to explain the relationship of oil and gas leasing on the Beaverhead with threatened and endangered species. This letter is included as Appendix E.

X. APPENDIX

- A. Stipulations for lands under jurisdiction of Department of Agriculture
- B. Surface disturbance stipulations
- C. Northern Region Draft of Surface Protection Stipulations
- D. NTL-6
- E. Forest Wildlife Biologist's July 17, 1979, memorandum on oil and gas leasing
- F. Procedure for Consultation with Fish and Wildlife Service on Endangered and Threatened Species
- G. Broad Application of "Lease Evaluation Procedure"

Form 3109-3  
(June 1971)UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

## STIPULATION FOR LANDS UNDER JURISDICTION OF DEPARTMENT OF AGRICULTURE\*

The lands embraced in this lease or permit being under the jurisdiction of the Secretary of Agriculture, the lessee or permittee hereby agrees:

(1) To conduct all operations authorized by this lease or permit with due regard for good land management, not to cut or destroy timber without first obtaining permission from the authorized representative of the Secretary of Agriculture, and to pay for all such timber cut or destroyed at the rates prescribed by such representative; to avoid unnecessary damage to improvements, timber, crops, or other cover; unless otherwise authorized by the Secretary of Agriculture, not to drill any well, carry on operations, make excavations, construct tunnels, drill, or otherwise disturb the surface of the lands within 200 feet of any building standing on the lands and whenever required, in writing, by the authorized representative of the Secretary of Agriculture to fence or fill all sump holes, ditches, and other excavations, remove or cover all debris, and so far as reasonably possible, restore the surface of the lands to their former condition, including the removal of structures as and if required, and when required by such representative to bury all pipelines below plow depth.

(2) To do all in his power to prevent and suppress forest, brush, or grass fires on the lands and in their vicinity, and to require his employees, contractors, subcontractors, and employees of contractors or subcontractors to do likewise. Unless prevented by circumstances over which he has no control, the lessee or permittee shall place his employees, contractors, subcontractors, and employees of contractors and subcontractors employed on the lands at the disposal of any authorized officer of the Department of Agriculture for the purpose of fighting forest, brush, or grass fires on or originating on the lands or on adjacent areas or caused by the negligence of the lessee or permittee or his employees, contractors, subcontractors and employees of contractors and subcontractors, with the understanding that payment for such services shall be made at rates to be determined by the authorized representative of the Secretary of

Agriculture, which rates shall not be less than the current rates of pay prevailing in the vicinity for services of a similar character: *Provided*, that if the lessee or permittee, his employees, contractors, subcontractors, or employees of contractors or subcontractors, caused or could have prevented the origin or spread of said fire or fires, no payment shall be made for services so rendered.

During periods of serious fire danger to forest, brush, or grass, as may be specified by the authorized representative of the Secretary of Agriculture, the lessee or permittee shall prohibit smoking and the building of camp and lunch fires by his employees, contractors, subcontractors, and employees of contractors or subcontractors within the area involved except at established camps, and shall enforce this prohibition by all means within his power: *Provided*, that the authorized representative of the Secretary of Agriculture may designate safe places where, after all inflammable material has been cleared away, campfires may be built for the purpose of heating lunches and where, at the option of the lessee or permittee, smoking may be permitted.

The lessee or permittee shall not burn rubbish, trash, or other inflammable materials *except* with the consent of the authorized representative of the Secretary of Agriculture and shall not use explosives in such a manner as to scatter inflammable materials on the surface of the lands during the forest, brush, or grass fire season, *except* as authorized to do so or on areas approved by such representative.

The lessee or permittee shall build or construct such fire lines or do such clearing on the lands as the authorized representative of the Secretary of Agriculture decides is essential for forest, brush, and grass fire prevention which is or may be necessitated by the

\* This form of stipulation may be used in connection with leases and permits issued under the Acts of February 28, 1926, as amended (30 U.S.C. 181 et seq.); August 7, 1947 (40 U.S.C. 351 et seq.); February 7, 1927, as amended (30 U.S.C. 281 et seq.); April 17, 1926, as

amended (30 U.S.C. 271 et seq.); June 28, 1944 (58 Stat. 483-485); September 1, 1949 (30 U.S.C. 192c); June 30, 1950 (16 U.S.C. 666b); or under the authority of any of the Acts cited in Section 402 of the President's Reorganization Plan No. 3 of 1946 (5 U.S.C. 133-16, Note).

express of the privileges authorized by this lease or permit, and shall maintain such fire tools at his headquarters or at the appropriate location on the lands as are deemed necessary by such representative.

(3) In the location, design, construction, and maintenance of all authorized works, buildings, plants, waterways, roads, telegraph or telephone lines, pipelines, reservoirs, tanks, pumping stations, or other structures or clearance, the lessee or permittee shall do all things reasonably necessary to prevent or reduce to the fullest extent scouring and erosion of the lands, pollution of the water resources and any damage to the watershed. Where construction, operation, or maintenance of any of the facilities on or connected with this lease or permit causes damage to the watershed or pollution of the water resources, the lessee or permittee agrees to repair such damage and to take such corrective measures to prevent further pollution or damage to the watershed as are deemed necessary by the authorized representative of the Secretary of Agriculture.

(4) If in the opinion of the authorized representative of the Secretary of Agriculture, the lands are valuable for watershed protection, the lessee or permittee shall provide for control of surface runoff and return the affected area to as productive condition as practicable.

(5) To pay the lessor or permitter or his tenant or the surface owner or his tenant, as the case may be, for any and all damage to or destruction of property caused by the lessee's or permittee's operations hereunder; to save and hold the lessor or permitter or the surface owner or their tenants harmless from all damage or claims for damage to persons or property resulting from the lessee's or permittee's operations under this lease or permit.

(6) To recognize existing uses and commitments, in the form of Department of Agriculture grazing, timber cutting, and special use permits, water developments, ditch, road, trail, pipeline, telephone line, and fence rights-of-way and other similar improvements, and to conduct his operations so as to interfere as little as possible with the rights and privileges granted by these permits or with other existing uses.

(7) To install and maintain cattle guards to prevent the passage of livestock in any openings made in fences by the lessee or permittee or his contractors to provide access to the lands covered by this lease or permit for automotive and other equipment.

(8) If lessee or permittee shall construct any camp on the lands, such camp shall be located at a place approved by the authorized representative of the Secretary of Agriculture, and such representative shall have authority to require that such camp be kept in a neat and sanitary condition.

(9) To comply with all federally-approved rules and regulations of the Secretary of Health, Education, and Welfare governing the emission of pollutants into the air from activities which are embraced in this lease or permit.

(10) To comply with all the rules and regulations of the Secretary of Agriculture governing the national forests or other lands under his jurisdiction which are embraced in this lease or permit.

(11) Unless otherwise authorized, prior to the beginning of operations to appoint and maintain at all times during the term of this lease or permit a local agent upon whom may be served written orders or notices respecting matters contained in this stipulation, and to inform the authorized representative of the Secretary of Agriculture, in writing, of the name and address of such agent. If a substitute agent is appointed, the lessee or permittee shall immediately so inform the said representative.

(12) To address all matters relating to this stipulation to  
at

who is the authorized representative of the Secretary of Agriculture, or to such other representative as may from time to time, be designated, provided that such designation shall be in writing and be delivered to the lessee or permittee or his agent.

(Signature of Lessee)



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

SURFACE DISTURBANCE STIPULATIONS

District Engineer (Address, include zip code)  
United States Geological Survey  
P. O. Box 2550  
3 Seventh Street West  
Billings, Montana 59103  
Phone: 406-245-6711, Ext. 6367

Management Agency (name)

Address (include zip code)

1. Notwithstanding any provision of this lease to the contrary, any drilling, construction, or other operation on the leased lands that will disturb the surface there, of or otherwise affect the environment, hereinafter called "surface disturbing operation," conducted by lessee shall be subject, as set forth in this stipulation, to prior approval of such operation by the Area Oil and Gas Supervisor in consultation with appropriate surface management agency and to such reasonable conditions, not inconsistent with the purposes for which this lease is issued, as the Supervisor may require to protect the surface of the leased lands and the environment.

2. Prior to entry upon the land or the disturbance of the surface thereof for drilling or other purposes, lessee shall submit for approval two (2) copies of a map and explanation of the nature of the anticipated activity and surface disturbance to the District Engineer or Area Oil and Gas Supervisor, as appropriate, and will also furnish the appropriate surface management agency named above, with a copy of such map and explanation.

An environmental analysis will be made by the Geological Survey in consultation with the appropriate surface management agency for the purpose of assuring proper protection of the surface, the natural resources, the environment, existing improvements, and for assuring timely reclamation of disturbed lands.

3. Upon completion of said environmental analysis, the District Engineer or Area Oil and Gas Supervisor, as appropriate, shall notify lessee of the conditions, if any, to which the proposed surface disturbing operations will be subject.

Said conditions may relate to any of the following:

- (a) Location of drilling or other exploratory or developmental operations or the manner in which they are to be conducted;
- (b) Types of vehicles that may be used and areas in which they may be used; and
- (c) Manner or location in which improvements such as roads, buildings, pipelines, or other improvements are to be constructed.

NORTHERN REGION DRAFT  
of  
Surface Protection Stipulations

The following stipulations are necessary to protect resource values identified in existing management direction in plans of the surface management agency. These limitations may be modified when specifically approved in writing by the District Engineer, Geological Survey (GS), with concurrence of the authorized officer of the surface management agency.

The number of stipulations can be kept to a minimum using this approach and should cover most situations. The need for additional stipulations should be low. If a situation does arise in the future and it cannot be covered under one of the approved stipulations a new stipulation will be added. All new stipulations will be submitted to the Regional Office (RS) or Montana State Office (BLM) for review and coordination. All new stipulations will be submitted to the United Geological Survey for approval.

The stipulations applicable to a lease will be checked in the left hand column.

1. No occupancy or other activity on the surface of the following described lands is allowed under this lease. ( ) Approximately % of lease.

Reasons for this restriction are: (Enter reasons)

(Example of reasons are steep slopes, specific ecosystem, roadless areas, water supply, administrative site, etc.)

2. Prior to the applicant undertaking any ground disturbing activities on the land covered by this lease, a competent review must be completed to determine the presence of any endangered or threatened plant or animal species or their habitats which will be affected by the operation. This may result in some restrictions to the applicant's plans or even disallow surface use and occupancy.

To help meet his own schedules, the applicant may desire to deposit funds with the Forest Service to have a competent review made under the supervision of a qualified specialist (botanist, wildlife or fisheries biologist) approved by the Forest Service. A report will be provided identifying the anticipated effects of the proposed action on the endangered or threatened species or their habitats.

The area is currently mapped: \_\_\_\_\_ (yes or no).

If yes, ( ) Approximately % of lease.

3. No \_\_\_\_\_ will be allowed within \_\_\_\_\_ feet of the \_\_\_\_\_.  
This area contains \_\_\_\_\_ acres and is described as follows:

(describe area)

( ) Approximately % of lease.

Note: First blank to be filled in with one or more of the following: drilling, storage facilities, surface disturbance or occupancy. Second and third blanks to be filled in with one or more of the following:

1. "x" feet wildlife habitat essential to specific species.
2. "x" feet peripheral or unique vegetative type
3. 500 feet either side of centerline of roads
4. 500 feet of normal high water line on all streams, rivers, ponds, reservoirs, lakes
5. 600 feet of all springs
6. 400 feet of any improvements

4. In order to (minimize) (protect) \_\_\_\_\_ will be allowed only during \_\_\_\_\_. This (does not) (does) apply to maintenance and operation of producing wells and facilities. Lands within leased area to which this stipulation applies are described as follows:

(describe)

( ) Approximately % of lease.

Note: First blank to be filled in with one or more of the following: watershed damage, soil erosion, seasonal wildlife habitat (winter range, calving/lambing area, etc.), and conflict with recreation.

Second blank to be filled in with one or more of the following: surface disturbing activities, exploration, drilling, and development.

Third blank to be filled in with one or more of the following: period from \_\_\_\_\_ to \_\_\_\_\_, dry soil periods, over the snow, and frozen ground.

- 5a. Lessee agrees not to enter upon the lease area or disturb the surface for exploration or drilling purposes until either:

(1) An inventory of archeological, paleontological, and historical sites is made by the surface management agency or its designated representative, or

(2) Lessee has engaged the services of a qualified cultural resource specialist to conduct an intensive cultural resource inventory of the area, submitted an acceptable report, and taken such measures as deemed necessary to preserve or avoid destruction of cultural resource values. Mitigation may include relocation of proposed facilities, testing and salvage or other protective measures deemed necessary by the authorized officer. All costs of the survey

and salvage of cultural resource values will be borne by the lessee or operator and all data and materials salvaged will remain under the operator and all data and materials salvaged will remain under the jurisdiction of the U.S. Government as appropriate.

(3) Should significant values be encountered in areas of the proposed action, prior to or during surface disturbance, the information will be forwarded to the District Engineer, U.S. Geological Survey and the authorized officer of the surface management agency. Such discoveries will be left intact until evaluated and appropriate action determined.

( ) Approximately % of lease.

- 5b. This lease contains an inventoried \_\_\_\_\_. Site located in \_\_\_\_\_ Section \_\_\_\_\_ T \_\_\_\_\_, R \_\_\_\_\_. No occupancy will be allowed within \_\_\_\_\_ feet of this site containing \_\_\_\_\_ acres until the site has been evaluated professionally.

( ) Approximately % of lease.

Note: First blank to be filled in with one or more of the following: historical, archeological, paleontological.

- 6a. To maintain esthetic values, all semi-permanent facilities may require painting or camouflage to blend with the natural surroundings. The paint selection or method of camouflage will be subject to approval by the District Engineer, Geological Survey (GS), with the concurrence of the authorized officer of the surface management agency.
- 6b. No access or work trail or road, earth cut or fill, structure or other improvements, other than an active drilling rig, will be permitted if it can be viewed from the \_\_\_\_\_. Unavoidable conflicts to this provision may be resolved through the use of camouflage and visual screening techniques. Mitigation of visual impacts resulting from exploration, development, and production activities will be required in the multipoint surface use and operations plan. These mitigation measures will be based on the visual quality objectives for the area and subject to the approval of the District Engineer, U.S. Geological Survey, with the concurrence of the authorized officer of the surface management agency.

Note: Blank to be filled in with road, lake, river, etc.

7. By accepting this lease, the lessee acknowledges that the lands contained in this lease which are identified below are being inventoried or evaluated for their wilderness potential by the Bureau of Land Management under Section 603 of the Federal Land Policy and Management Act of 1976, 90 Stat. 2743, 2785 (43 USC Section 1782).

☐ All lands within the lease

Part of the lands within the lease described as follows:

(describe)

( ) Approximately % of lease

Until the BLM determines that the lands described above do not meet the criteria for a wilderness study area as set forth in Section 603, or until Congress decides against the designation of lands included within this lease as "wilderness," the following conditions apply to this lease, and override every other provision of this lease which could be considered as inconsistent with them and which deal with operations and rights of the lessee:

(1) Any oil or gas activity conducted on the leasehold for which a surface use plan is not required under NTL-6 (for example: geophysical and seismic operations) may be conducted only after the lessee first secures the consent of the BLM. Such consent shall be given if BLM determines that the impact caused by the activity will not impair the area's wilderness characteristics.

(2) Any oil and gas exploratory or development activity conducted on the leasehold which is included within a surface use plan under NTL-6 is subject to regulation (which may include no occupancy of the surface) or, if necessary, disapproval until the final determination is made by Congress to either designate the area as wilderness or remove the Section 603 restrictions. If all or any part of the area included within the leasehold estate is formally designated by Congress as wilderness, oil and gas exploration and development operations taking place or to take place on that part of the lease shall become subject to the provisions of the Wilderness Act of 1964 which apply to national forest wilderness areas, 16 USC Sec. 1131 et. seq., as amended, the Act of Congress designating the land as wilderness, and Interior Department regulations and policies pertaining thereto. If it is found that the area does not have wilderness characteristics or is not suitable to be designated a part of the National Wilderness Preservation system, development and/or surface occupancy will be subject to the remaining lease terms and the special stipulations.

Note: Does not require special guidelines except to say that it is to be used only by the Bureau of Land Management.

8a. Access will be limited to existing route(s).

8b. \_\_\_\_\_ will not be used as an access route(s).

- 8c. Use of \_\_\_\_\_ as an access route for activities on this lease will be restricted as follows:

Note: 8b blank to be filled in with: road or trail number or name  
 8c blank to be filled in with: road or trail number or name  
 Restrictions:

1. No reconstruction
2. No weekend or holiday use
3. One-way travel (uphill or downhill)
4. Light duty vehicles 3/4 ton or less

9. The lessee, his agents, subcontractors, or other designated representatives of the lessee while acting in an official capacity relating to exploring for, developing, or producing oil and gas will be prohibited from carrying firearms in the lease area or on Federal land adjacent to the lease area, except as specifically authorized by the authorized officer of the Surface Management Agency.

10. The lease includes lands within \_\_\_\_\_

In order to reduce the level of activity at any one point in time, the lessee agrees to restrict his activity on this lease to include no more than geological/geophysical exploration activities for the first (1, 2, 3) year(s) after the effective date of this lease.  
 Circle one

Note: Blank to be filled in with one or more of the following:

1. Wildlife habitat essential to specific species (grizzly bear, etc.)
2. Special management units such as: Récreation Type I water supply, wilderness, etc.

11. The lease includes lands within \_\_\_\_\_

Exploration and development within this area will be unitized to reduce the level of activity at any one time. A unitization agreement must be approved by the District Engineer, Geological Survey (GS), with the concurrence of the authorized officer of the surface management agency prior to filing an Application for Permit to Drill (APD). If Federal lands within this area are not included, acceptable documentation for the exclusion must be provided.

Note: Blank to be filled in with one or more of the following:

1. Wildlife habitat essential to specific species (grizzly bear, etc.)
2. Special management units such as: Recreation Type I, water supply, wilderness, etc.

12. "The following described lands embraced in this (lease, permit, license) were identified in the Roadless Area Review and Evaluation (RARE II) decision document as requiring further planning:

(describe)

( ) Approximately % of lease.

Future planning may identify all or part of these lands as suitable for wilderness, and the lands so identified may ultimately be designated as wilderness. Information made available to the Forest Service regarding discoveries of mineral deposits on these lands will be considered in the planning process and may be key factors in the land allocation.

Notwithstanding any terms of this (lease, permit, license) to the contrary, the following terms shall apply to the above described lands:

A. Only exploration activities for the purposes of discovering and disclosing the extent of mineral deposits is allowed, until development and production operations are specifically approved by the Forest Service based on the applicable land management plan and/or a specific environmental analysis of an operating plan.

B. Exploration plans must be specifically approved by the Forest Service, in cooperation with the Geological Survey, under established procedures. The Forest Service will provide reasonable access for conducting necessary exploration operations.

C. Any lands covered by this (lease, permit, license) which Congress designates as wilderness shall become subject to the provisions of the Wilderness Act of September 3, 1964, (78 Stat, 890), as amended or supplemented, and the Secretary of Agriculture's regulations and Forest Service policies pertaining thereto.

D. The (lessee, permittee, licensee) will be responsible, as he deems necessary to protect his interest, for initiating requests to the Department of the Interior for suspension of (lease, permit, license) terms, rental, or minimum royalties. The Forest Service does not intend that the inclusion of this stipulation should be construed as a basis to deny a request for suspension.

E. Access ways and operation sites for either exploratory, developmental, or production activities are subject to the following terms:

(1) Construction of access ways and operational sites will not be permitted in areas of extremely high environmental sensitivity where such construction would cause serious and irreparable environmental damage.

(2) Access way construction will be permitted only where existing access ways or other methods of access are inadequate or impractical.

(3) Access ways will be built to a standard no higher than required for passage of equipment and support personnel, and to protect surface resources.

(4) The access ways and other areas of operation will be reclaimed, as soon as they have served their purpose, to a condition as near as practical to the surface condition existing prior to the authorized use of the lands.

DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY  
CONSERVATION DIVISION

Notice to Lessees and Operators of  
Federal and Indian Onshore Oil and Gas Leases  
(NTL-6)

APPROVAL OF OPERATIONS

In accordance with the National Environmental Policy Act of 1969 (83 Stat. 852), the United States Geological Survey must assure that operations on oil and gas leases under its jurisdiction are conducted with due regard for protection of the environment. All operations which are conducted on onshore Federal and Indian oil and gas leases must conform to the requirements of this Notice as well as those contained in the lease and in the Oil and Gas Operating Regulations, Title 30 CFR Part 221. Operations on Osage Indian oil and gas leases and exploration activities under Title 43 CFR 3045 are not included within the purview of this Notice.

As used in this Notice, the term "District Engineer" means that Officer of the United States Geological Survey who is the head of the District Office supervising operations in the geographic area in which the operation is located. In the State of Alaska, the Area Oil and Gas Supervisor will administer the requirements of this Notice. In some special instances, other Area Oil and Gas Supervisors will act on permit applications.

I. General

In order that the environmental impact of proposed operations may be properly evaluated, all applications to conduct leasehold operations or construction activities must be accompanied by an appropriate surface use plan. As a minimum, such applications and surface use plans must provide a detailed description

of the technical aspects of the proposed operation or activity, the magnitude of surface disturbance involved, and the procedures to be followed in rehabilitating the surface once the operation or construction activity has been completed. Specific requirements in this regard are set forth in Sections II.B., III., and V. hereof. One copy of the surface use plan must be attached to each copy of the application to conduct operations or construction activities.

Applications to conduct operations or construction activities with attached surface use plans should be filed at least 30 days in advance of the contemplated starting date of any operation or construction activity in order to allow sufficient time in which to schedule and conduct, if necessary, a joint field inspection by appropriate personnel of the Geological Survey, the Federal surface management agency, the lessee or operator, and, if practical, the lessee's or operator's contractors and subcontractors who will perform the work. Any interested party who wishes may also attend the field inspection. The early filing of a complete application is no guarantee that approval thereof will be granted within the 30-day period, as environmental considerations or the volume of applications in the affected Federal agencies may result in more than 30-day delay.

All applications will be processed as quickly as possible in all Federal agencies consistent with other work in the offices. In general, the processing of applications will be assigned a high priority and individual applications will be processed according to the date the complete application is filed. A higher priority due to an emergency, such as an imminent lease expiration date, will be duly considered but no special consideration will be given simply because a late filing is made. If it is not possible for Geological Survey action to be taken prior to lease expiration or within 30 days of the filing date, whichever occurs first, the lessee or operator will be advised both orally and in writing. Said advice will detail the reasons for the delay so that the lessee or operator may take such appeal or other recourse as is allowed by law and/or regulation.

Lessees and operators have the responsibility to see that their exploration, development, production, and construction operations are conducted in a manner which (1) results in diligent development and efficient resource recovery; (2) affords adequate safeguards for the environment; (3) results in the proper rehabilitation of disturbed lands; (4) assures the protection of the public health and safety; and, (5) conforms with the best available practice. In that regard, lessees and operators will be held fully accountable for their contractors' and subcontractors' compliance with the requirements of the approved permit and surface use plan.

All approvals of proposed operations as well as subsequent instructions and regulation thereof will be by the District Engineer of the Geological Survey. However, the Federal surface management agency will establish the rehabilitation requirements and will be available for consultation during rehabilitation operations. Names, addresses, and phone numbers of appropriate personnel of the Geological Survey and the Federal surface management agency, as well as approved surface use areas, will be furnished the lessee or operator with its approved copy of the permit and surface use plan.

Lessees and operators, as well as their contractors and subcontractors, must not commence any operation or construction activity on a lease without the prior approval of the appropriate official of the Geological Survey. Said approvals may be oral in emergency situations or in instances such as subsurface plugging programs for newly-drilled dry holes or failures. Any oral approval so received must be followed by a written application and approval thereof for confirmation. Likewise, the terms and conditions of an approved permit and surface use plan may not be altered unless the Geological Survey has approved an amended or supplemental permit and/or plan covering any such modifications. Approval of subsequent operations is addressed in Section V. of this Notice.

## II. Drilling Operations

### A. Preliminary Environmental Review

A preliminary environmental review is required on all future drilling operations prior to entry on the ground for the purpose of staking the location, access roads, and other surface use areas. The lessee or operator, upon finalizing plans to drill but prior to the actual surveying, must file with the Geological Survey's District Engineer and the appropriate office of the involved Federal surface management agency, a topographic map, or such other map as is acceptable to the District Engineer, scale not less than 1 inch = 1 mile which shows the preferred location and the general topographic features in the area. This will permit the Federal surface management agency, prior to the lessee's or operator's expenditure of time and money for surveys, to review its records for any potential conflicts with other resource values. If conflicts are noted, a joint conference or field inspection, as appropriate, by the Geological Survey, the Federal surface management agency, the lessee or operator, and other interested parties may be scheduled to resolve problem areas. If the lessee or operator has not been advised to the contrary within 15 days from the date of submitting the preliminary map, it may assume that there are no objections to entry on the land for the purpose of required surveying and staking and may proceed accordingly. It is anticipated that the need for a joint field conference and/or inspection prior to staking will be very unusual.

### B. Application for Permit to Drill

Drilling operations must not be conducted without a permit which has the prior approval of the District Engineer. Although multiple wells may be covered in a single surface use plan, the application for permit to drill must be submitted on an individual well basis.

The permit application filed for approval will consist of Form 9-331C (Application for Permit to Drill, Deepen, or Plug Back) and a multi-point surface use and operations

plan. Where private surface is involved, it should also include a copy of the written agreement between the lessee or operator and the surface owner, a letter from the lessee or operator setting forth the rehabilitation requirements agreed to with said owner, or a letter stating the reasons why such agreement is not obtainable. The requirements for surface use and operations plans and the rehabilitation of private surface are contained in Sections III. and VI., respectively, of this Notice.

The application for permit to drill must provide information concerning (1) the location, as determined by a registered surveyor, in feet and direction from the nearest section lines of an established public land survey or, in areas where there are no public land surveys, by such other method as is acceptable to the District Engineer; (2) the elevation above sea level of the unprepared ground; (3) the geologic name of the surface formation; (4) the type of drilling tools and associated equipment to be utilized; (5) the proposed drilling depth; (6) the estimated tops of important geologic markers; (7) the estimated depths at which anticipated water, oil, gas, or other mineral bearing formations are expected to be encountered; (8) the proposed casing program including the size, grade, and weight of each string and whether it is new or used; (9) the proposed setting depth of each casing string and the amount and type of cement (including additives) to be used; (10) the lessee's or operator's minimum specifications for pressure control equipment which is to be used, a schematic diagram thereof showing sizes, pressure ratings (or API series), and the testing procedures and testing frequency; (11) the type and characteristics of the proposed circulating medium or mediums to be employed for rotary drilling and the quantities and types of mud and weighting material to be maintained; (12) the testing, logging, and coring programs to be followed with provision made for required flexibility; (13) any anticipated abnormal pressures or temperatures expected to be encountered or potential hazards such as hydrogen sulfide gas, along with plans for mitigating such hazards; (14) the anticipated starting date and duration of the operation; and, (15) any other facets of the proposed operation which the lessee or operator wishes to point out for the Geological Survey's consideration of the application. The District Engineer will require additional information as warranted.

A copy of the approved application for permit to drill and the accompanying surface use and operations plan along with any conditions of approval shall be available to authorized personnel at the drillsite whenever active construction or drilling operations are underway.

### III. Multi-Point Surface Use and Operations Plan

A surface use and operations plan in sufficient detail to permit a complete appraisal of the environmental effects associated with the proposed project must be submitted, in triplicate, to the District Engineer with the application for permit to drill.

The Geological Survey will send a copy of such plan to the Federal surface management agency. When possible, a preliminary field development plan or drilling schedule concerning the lessee's or operator's plans for additional development should also be submitted to allow lead time for evaluating environmental considerations, resource conflicts, and land use planning alternatives.

The surface use and operations plan shall, in its context, provide for adequate protection of surface resources, other environmental components, and include adequate measures for rehabilitation of disturbed lands. The plan shall be developed in conformity with the provisions of the lease, attached stipulations, and the guidelines provided by this Notice. In developing the plan, the lessee or operator will make use of such information as is available from the Federal surface management agency concerning the surface resources, environmental considerations, and local rehabilitation procedures. The plan will be reviewed for adequacy by the Geological Survey and the Federal surface management agency. The Geological Survey will act as the lead agency in assessing the effects of the plan. If the plan is considered inadequate, the Geological Survey will, in consultation with the Federal surface management agency, require modification or amendment of the plan or otherwise set forth such stipulations or conditions of approval as are necessary for the protection of surface resources and environment, including rehabilitation of the disturbed areas.

A. Guidelines for the preparation of surface use and operations plan

In the preparation of surface use and operations plans, lessees and operators should submit maps, facility layouts and narrative descriptions which adhere closely to the following:

1. Existing roads. A legible map (USGS topographic, county road map, or such other map as is acceptable to the District Engineer and the Federal surface management agency) shall be used for locating the proposed well site in relation to a town or other locatable reference point. The proposed route to the location including appropriate distances from the reference point to the point where the access route exits the highway or county road shall be shown. All proposed access roads shall be appropriately labeled or color coded. Additionally, all existing roads within a radius of three miles (including information relative to the type of surface, condition, and load capacity) from the location of a proposed exploratory well should be shown. For the purpose of this Notice, an exploratory well is defined as a well which is located two miles or more from the boundary of a Known Geologic Structure (as such term is defined by USGS) or a producible well. For all other drillsites (development wells), existing roads within a one-mile radius of the location should be shown.

Any plans for the improvement and/or maintenance of existing roads should also be stated.

Information required by item Nos. 2, 3, 4, 5, 6, 7, and 9 of this subsection may also be shown on this map if appropriately labeled.

2. Planned access roads. Information in this regard is to be submitted on a map of suitable scale and shall appropriately identify all permanent and temporary access roads that are to be constructed, or reconstructed in connection with the drilling and production of the proposed well. Width,

maximum grade, turnouts, drainage design, location and size of culverts, and surfacing material, if any, shall be stated. At the time of submittal, the center line location of all proposed new or reconstructed roads shall be staked with the stakes being visible from any one to the next. However, modification of proposed road design may be required after the location is accepted for drilling. If the well is completed for production, final road design and construction will depend on the amount and type of hydrocarbon found by the well. Information should also be furnished to indicate where existing fences will be cut and whether gates or cattleguards will be used. Additionally, the discussion should make reference to any existing gates which are to be replaced by cattleguards. Cattleguards which are installed or replaced must be designed to adequately carry anticipated loads.

3. Location of existing wells. This information should be submitted on a map of suitable scale and include all wells (water, abandoned, temporarily abandoned, disposal, and drilling) within a two-mile radius of the proposed location of an exploratory well and all wells (water, producing, abandoned, temporarily abandoned, shut-in, injection, disposal, and drilling) within a one-mile radius of the proposed location of a development well.
4. Location of tank batteries, production facilities, and production, gathering, and service lines. Existing tank batteries, production facilities, and production, gathering, or service lines within a one-mile radius of the proposed location which are owned or controlled by the lessee or operator should be shown on a map or plat of suitable scale. The type of each present facility and the exact nature of each existing line (oil flow line, gas gathering line, injection line, or water disposal line) should be identified and it should be noted which, if any, of said lines are buried. If new facilities (tank battery, other production equipment, and lines) are contemplated in the event production is

established and those facilities are to be located at other than on the well site itself, the map or plat furnished in this regard must also indicate the location of all proposed new facilities. The dimensions of these facilities, the proposed construction methods and materials, and the protective measures and devices to be employed to minimize hazards to livestock, waterfowl, and other wildlife will be stated. The approximate center locations of all production facility locations and the center lines of proposed gathering and service lines will be staked. A plan for rehabilitation of all disturbed areas no longer needed for operations and maintenance will also be submitted. Future prospects for additional development of the leasehold should be considered in the siting of new facilities. However, final approval to construct such new facilities will not be granted until after detailed plans have been submitted and evaluated pursuant to Section V. hereof.

5. Location and type of water supply (rivers, creeks, lakes, ponds, and wells). This information may be shown by quarter-quarter section on a plat or map of suitable scale or may be a written description. The source of all water to be used in drilling the proposed well must be noted if located on Federal or Indian land or if water is to be used from a Federal or Indian project. The method of transporting the water shall be stated, and any access roads crossing Federal or Indian land needed to haul the water will be described in items Nos. 1 or 2, as appropriate. However, the Survey's approval of the surface use and operations plan does not relieve the lessee or operator from obtaining any other authorization which may be required for the use of such water. Moreover, if a water supply well is to be drilled on the lease, it must be so stated under this item, and the District Engineer may require the filing of a separate application for permit to drill.

6. Source of construction materials. This information may be shown by quarter-quarter section on a plat or map of suitable scale or may be a written description. The proposed source (if located on Federal or Indian land), character, and use of all construction materials such as sand, gravel, stone, and soil material should be stated. Any access roads crossing Federal or Indian land needed to haul such materials should be described in item Nos. 1 or 2, as appropriate.
7. Methods for handling waste disposal. A brief, written description should be given of the methods and location proposed for safe containment and disposal of each type of waste material (cuttings, garbage, salts, chemicals, and sewage) which results from the drilling of the proposed well. Likewise, the narrative should include plans for the eventual disposal of drilling fluids and any produced oil or water recovered during testing operations.
8. Ancillary facilities. The plans or subsequent amendments to such plans shall identify all ancillary facilities such as camps and airstrips as to their location, land area required, and the methods and standards to be employed in their construction. Such facilities shall be shown on a map of suitable scale. The approximate center of proposed camps and the center line of airstrips shall be staked on the ground.
9. Well site layout. A plat of suitable scale (not less than 1 inch = 50 feet) including cross section diagrams of the drill pad showing all cuts and fills and the relation to topography are required. The plat should also include the proposed location of the mud tanks, pits (reserve, burn, and trash), pipe racks, access roads, turnaround areas, parking areas, living facilities, soil material stockpiles, and the orientation of the rig with respect to the pad and other facilities. Plans, if any, to line the reserve pit should be indicated.

Until such time as the location is approved, it will be necessary to stake only the actual location of the well.

After approval and before construction commences, the exterior dimensions of the pad and reserve pit will be staked on the ground. The stakes should be appropriately marked to indicate proper cuts and fills to the dirt contractor.

10. Plans for restoration of the surface. State the proposed program for surface restoration upon completion of the operation such as determination of the reshaped topography, drainage system, segregation of spoils materials, surface manipulations, waste disposal, revegetation methods, soil treatments, and amendments, plus other practices necessary to rehabilitate all disturbed areas including any access roads no longer needed. Such plans will be reviewed for adequacy by the appropriate Federal surface management agency. A proposed timetable for the commencement and completion of rehabilitation operations must be provided.
11. Other information. Include a general description of the topography, soil characteristics, formation lithologies, geologic features, flora, fauna, and other aspects of the area such as other surface use activities. The surface ownership (Federal, Indian, State, or private) at the well location and for all lands which are to be crossed by newly constructed or upgraded roads should be indicated.

Any other available information which is considered by the lessee or operator as being useful to the Geological Survey and Federal surface managing agency in evaluating the environmental impact of the proposed operation, including proximity to steep hillsides and gullies, water wells, ponds, lakes, or streams, occupied dwellings, or other facilities, and archeological, historical, or cultural sites, should be included.

Information concerning required cuts and fills during the construction of roads and the location and all construction practices necessary to accommodate potential geologic hazards should be discussed under the appropriate items of the plan.

12. Lessee's or operator's representative. Include the name, address, and phone number of the lessee's or operator's field representative who is responsible for assuring compliance with the approved surface use and operations plan.

13. Certification. The following statement is to be incorporated in the plan and must be signed by the lessee's or operator's field representative who is identified in item No. 12 of the plan:

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route; that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and, that the work associated with the operations proposed herein will be performed by \_\_\_\_\_

\_\_\_\_\_ and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

\_\_\_\_\_  
Date

\_\_\_\_\_  
Name and Title

#### IV. Environmental Analysis Requirements

If a preliminary inspection was not made prior to staking, an onsite inspection will normally be required following the filing of the application for permit to drill. If made, it will include representatives of the District Engineer, the lessee or operator, the Federal surface management agency, and such other interested parties as the lessee's or operator's dirt contractor. The purpose of this inspection will be to select the most feasible and environmentally acceptable areas for well sites (considering geologic factors and Federal and State regulations), access roads, and other proposed surface use areas. Accordingly, lessees and operators are encouraged to designate their future development or drilling sites so that several locations may be inspected at one time.

When such an inspection is made, an Environmental Analysis will usually be prepared by the office of the District Engineer. Said analysis will identify methods for mitigating the potential adverse environmental effects associated with the proposed operation and will be the basis of the approving official's determination as to whether approval of the proposed activity would constitute a major Federal action significantly affecting the quality of the human

environment as defined by Section 102(2)(C) of the National Environmental Policy Act of 1969. Any surface protection and rehabilitation requirements specified by the Federal surface management agency will normally be made a part of any subsequently approved permit and/or the surface use and operations plan.

Due to the probability of an onsite inspection, the required input from other Federal agencies, and the variations in the level of drilling activity, lessees and operators are encouraged to file applications well in advance of the time when it is desired to commence operations.

#### V. Approval of Subsequent Operations

Before repairing, deepening, or conditioning a well, i.e., work that will involve change in the original or plugged back depth, casing arrangement, and/or present producing interval(s) including separation or commingling, a detailed written statement of the plan of work must be filed on Form 9-331A or 9-331C with the District Engineer and approval obtained before the work is started. Any proposed change in any such plan of work must also receive the prior approval of the District Engineer. Routine well work such as pump, rods, tubing and surface production equipment repairs will not require submittal of Form 9-331A unless specifically required by the District Engineer.

Lessees and operators are also required to submit for the approval of the District Engineer a suitable plan prior to undertaking any subsequent new construction, reconstruction, or alteration of existing facilities, including roads, dams, lines or other production facilities on any lease when additional surface disturbance will result. However, emergency repairs may be conducted without prior approval provided that prompt notification is provided to the District Engineer. Sufficient information must be submitted to permit a proper evaluation of the proposed surface disturbing activities as well as any planned accommodations necessary to mitigate potential adverse environmental effects.

The environmental analysis procedures discussed in Section IV. of this Notice will also apply to such subsequent operations which have the potential for significant surface disturbance although these requirements may be somewhat less in established producing areas.

## VI. Agreement - Rehabilitation of Privately-Owned Surface

Where the surface is privately owned or is held in trust for Indian benefit, each application for permit to drill or to conduct other surface disturbance activities, shall contain information concerning the private surface owner's or Indian rehabilitation requirements. A written agreement between the lessee or operator and the surface owner is not necessary if a letter from the lessee or the operator setting forth the surface owner's rehabilitation requirements is furnished. In those cases where it is impossible or impractical to obtain the private surface owner's or Indian rehabilitation requirements, a letter from the lessee or operator describing the situation will be acceptable. Payment of damages in lieu of full restoration will not be an acceptable substitute for a normal cleanup and rehabilitation program.

If no arrangements have been made, or if information concerning such arrangements is not furnished, the District Engineer will request the appropriate Federal agency to recommend the necessary surface restoration requirements. In such cases, the lessee or operator will be expected to comply with these rehabilitation requirements, if any, regardless of the arrangement made with the surface owner. Provided, however, that subsequent reasonable requests by the surface owner that pits, roads, and other facilities be left intact may be honored. If written proof of prior arrangements has been provided, the appropriate Federal agency will be asked to recommend surface rehabilitation requirements to the District Engineer giving full consideration to the preferences of the landowner.

## VII. Well Abandonment

No well abandonment operations may be commenced in the absence of the prior approval of the District Engineer. In the case of newly drilled dry holes or failures and in emergency situations, oral approval may be obtained from the District Engineer subject to confirmation by written application. For existing wells not having an approved surface use plan, a sketch showing the disturbed area and roads to be abandoned along with rehabilitation plans must be submitted with the application. However, the Federal surface management agency may request additional surface rehabilitation measures at abandonment and, these requirements are normally made a part of the Geological Survey's approval of abandonment. Upon completion of the abandonment and rehabilitation operations, the lessee or operator should notify the District Engineer.

that the location is ready for inspection usually via an additional Sundry Notice. Final abandonment will not be approved until the surface rehabilitation work required by the drilling permit or abandonment notice has been completed and the required vegetation is established to the satisfaction of the appropriate Federal surface management agency.

#### VIII. Water Well Conversion

The complete abandonment of a well which has encountered usable fresh water will not be approved if the Federal surface management agency wants to acquire the well. If, at abandonment, the Federal surface management agency elects to assume further responsibility for the well, it will reimburse the lessee or operator for the cost of any recoverable casing or well head equipment which it requests to be left in or on the hole solely because it is to be completed as a water well. The lessee or operator will abandon the well to the base of the deepest fresh water zone of interest as required by the District Engineer and will complete the surface cleanup and rehabilitation as required by the drilling permit or abandonment notice immediately upon completion of the conversion operations.

JUN 1 1976  
Date

E. L. Steyer  
Oil and Gas Supervisor

Mid-Continent Area

Approved:

Russell G. Wayland  
Russell G. Wayland  
Chief, Conservation Division

UNITED STATES DEPARTMENT OF AGRICULTURE  
FOREST SERVICE  
Beaverhead National Forest

REPLY TO: 2820 Leases and Permits  
2630 Habitat

August 2, 1979

SUBJECT: Oil and Gas Leasing

TO: Forest Supervisor



Three endangered, and one threatened species of wildlife occur on the Beaverhead. However, the bald eagle and gray wolf are the only species that might occur within areas currently designated for oil and gas leasing.

The bald eagle occurs in the Lower Ruby River area during the winter season, from about December 1, to March 15. This winter population of bald eagles is transient along the river from approximately the Forest boundary to the town of Twin Bridges. Considering their close association with human activity in this area all winter, no impact on this species as a result of oil and gas leasing, or preliminary exploration, is anticipated.

Regarding wolves, oil and gas leases do not contain wolf rendezvous sites, specific elk calving sites, or elk winter ranges, except in the Maiden Peak area. As such, with the exception of this area, oil and gas leasing and preliminary exploration is expected to not affect this species. In the Maiden Peak area, if oil and gas is discovered in commercial quantities where wildcat drilling is foreseeable, a formal consultation with the U.S. Fish and Wildlife Service may be required.

*Charles Sundstrom*  
CHARLES SUNDSTROM  
Wildlife Biologist

## APPENDIX F

Procedures for Consultation with Fish and Wildlife Service  
on Endangered and Threatened Species<sup>1/</sup>

The consultation procedures for oil and gas leasing and subsequent activities between Region 1 of the Forest Service and Region 6 of the Fish and Wildlife Service are outlined below:

## A. Outside of Identified Essential Habitat

1. The Forest Service completes a competent review (evaluation) of the project's potential to affect a listed species or its habitat.

a. The Fish and Wildlife Service, at the discretion of the Forest involved, may or may not be involved at this stage.

b. The competent review will determine whether or not a listed species or its habitat may be affected and, therefore, whether or not formal consultation should be initiated.

c. The competent review should be documented in the project EA (or files if the EA has been previously completed).

2. The project EA or competent review should state the extent of project actions currently being assessed and the next point at which an EA and/or competent review will be undertaken.

3. If the competent review determines that formal consultation is not required, the project proceeds to the next phase. The lease/permit is granted with appropriate stipulations to safeguard wildlife and other resources.

## B. Within Occupied or Essential Habitat

1. The Forest Service completes a competent review of the project.

a. The Forest Service should engage in informal consultation with the Fish and Wildlife Service and appropriate State agencies during the competent review process.

b. The competent review is documented in the project EA (or files).

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<sup>1/</sup> The source of this procedure is 2630, 2820, R-1 Memo dated July 16, 1979.

2. If the competent review indicates a "may affect" situation does not occur:

- a. Issue the lease/permit with appropriate stipulations to protect wildlife and other resources.
- b. Clearly state in the lease/permit that the area involved (or a portion thereof) is within essential habitat and endangered and threatened species concerns may preclude, modify, or restrict future activities.
- c. Clearly state in the EA, competent review, and lease/permit the project actions authorized and the next checkpoint at which a project EA and/or competent review will occur.

3. If the competent review indicates a "may effect" situation exists:

- a. Initiate formal consultation with the Fish and Wildlife Service.
- b. Pending a biological opinion rendered by the Fish and Wildlife Service, make no irreversible or irretrievable commitment of resources which will foreclose the formulation or implementation of any reasonable and prudent alternatives which would avoid jeopardizing the continued existence of any endangered or threatened species or adverse modification or destruction of its critical (essential) habitat.
- c. Based on the outcome of the biological opinion:
  - (1) Non-jeopardy Biological Opinion--Issue the lease/permit with appropriate stipulations and a clear statement of the potential for future restrictions on subsequent activities in the event conflicts occur with the endangered or threatened species.
  - (2) Jeopardy Biological Opinion--Refuse the lease/permit application with reference to the Biological Opinion:
    - (a) If the Forest Service believes the Biological Opinion is in error, or relative information was not considered, a request for reinitiation of consultation may be made.

(b) If the Forest Service or lease applicant wishes the project to proceed in spite of a Jeopardy Opinion, application for exemption may be made under Section VII(g) of the Endangered Species Act. A Forest Service application for exemption must be made through the Chief's Office.

EDWARD R. SCHNEEGAS  
Director Wildlife and Fisheries

## Broad Application of "Lease Evaluation Procedure"

On the following pages in this appendix are tables showing how lease applications and leases will be affected by some concerns identified in this environmental analysis.

Following is an explanation of the tables.

Column A -- This is the identification number assigned by the Bureau of Land Management to leases and lease applications.

Column B -- Total acres contained by a lease or lease application.

Column C -- The number "22" means that the acreage in Column "B" is in a lease application; the number "23" means the acreage in Column "B" has been leased (with a no-surface occupancy stipulation).

The numbered columns represent the concerns being evaluated. They are numbered in the same sequence as the concerns listed in the Lease Evaluation Procedure. Ratings have been determined in each column opposite each lease. The ratings are expressed as L (light), M (moderate), and E (extensive). "L" means that 1 to 20 percent of the acreage shown in Column "B" have been determined to be affected by the concern being rated. Similarly, "M" means 21 to 50 percent are affected; and "E" means 51 to 100 percent. A blank means no area has been identified as affected. All of the concerns are not represented in the tables in this appendix (when compared with the Lease Evaluation Procedure). The reason for this is explained below along with some explanatory notes for those that are displayed:

1. WILDERNESS -- Not shown on table because there are no leases or applications now on file within wilderness.
2. PROPOSED WILDERNESS -- Shown on table.
3. FURTHER PLANNING -- Shown on table.
4. FISHERIES MANAGEMENT UNIT -- Not shown in table because the concern is localized to a few leases along the Ruby River.
5. ROADLESS MANAGEMENT -- Shown in table.
6. THREATENED AND ENDANGERED SPECIES (T & E Species) -- Shown in table.  
Note: The table shows where a habitat has been identified, but there is a concern on every lease in the sense that each lease will be attended by a special stipulation insuring protection of threatened and endangered species should additional habitat be recognized.
7. BIG GAME WINTER RANGE -- Shown in table.
8. CULTURAL VALUES -- Not shown on table because of the difficulty in making general judgments over extensive areas. Cultural values are

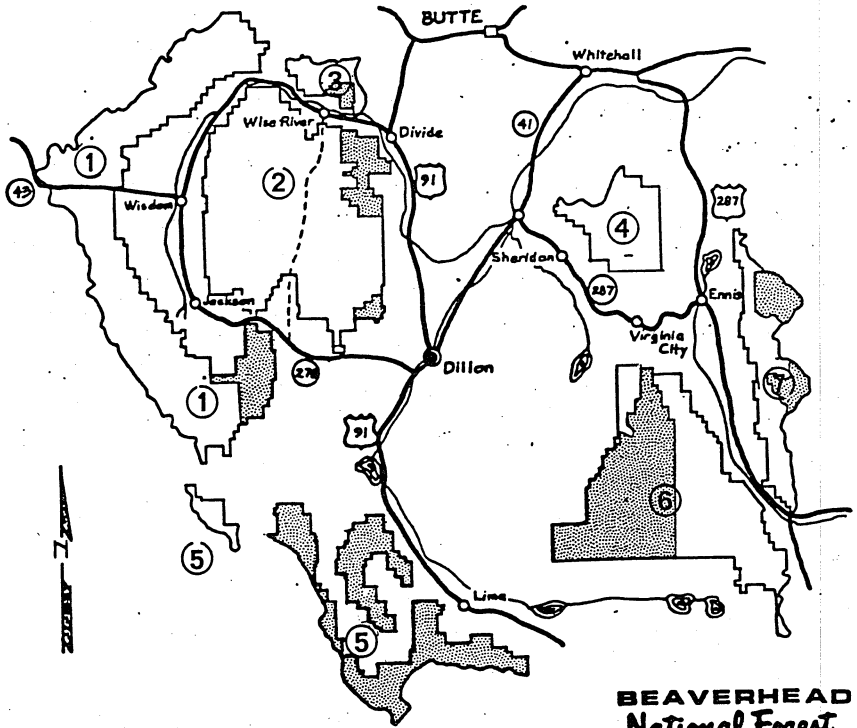
site specific and must be evaluated on a lease-by-lease basis. While many leases may be affected, it is judged that the number of acres affected will be low. Consequently, when the concern is mitigated only a small portion of a given lease is likely to be affected.

#### 9. VISUAL RESOURCE

- a. Roads and trails -- Shown in table.
- b. & c. -- Not shown in table because of the difficulty in making general judgments about the visual resource over extensive areas. These visual resource concerns must be evaluated on a lease-by-lease basis. There are many leases which will be affected, particularly by "9c". It is judged that generally the concern can be mitigated without the use of a no-surface occupancy stipulation (see Lease Evaluation Procedure).
10. WATER -- Not shown in table because of the impracticality of compiling the acreage on a broad scale. Most leases and lease application areas are likely to contain one or more streams or other water bodies. The percentage of a lease affected will vary widely.
11. GRAZING -- Not shown because the standard stipulations will usually provide adequate protection.
12. EXISTING RIGHTS -- Not shown because the standard stipulations will usually provide adequate protection.
13. SOIL RESOURCE -- Shown in table.
14. OTHER CONCERNS -- Not shown in table because the concerns will not be identified until lease-by-lease evaluations are made.

The computer printouts in this appendix are listed by planning units. In order to give the reader a reference to the ground, a map of the planning unit is also displayed.

Note: There are no leases or lease applications in Tobacco Roots Planning Unit No. 4.



**BEAVERHEAD**  
*National Forest*  
 montana

### PLANNING UNIT

- 1 WEST BIG HOLE
- 2 PIONEER
- 3 FLEECER
- 4 TOBACCO ROOT
- 5 LIMA
- 6 GRAVELLY
- 7 MADISON

PLANNING UNITS

SOME MAJOR CONCERNS FOR NEST BIG HOLE PLANNING UNIT NUMBER 1

A IDENTIFICATION NUMBER	B ACRES	C STATUS	2 PROPOSED WILDLIFE NEST	3 FURTH RING	5 KNOCKLESS MONT.	6 T & F SPECIES MINTER	7 BIG ON	9a VISUAL RESOURCES -ROADS-	9b VISUAL RESOURCES -TRAILS-	13 Soil Resource		
										a SLOPES 65% TYPES	b LAND SLOPES 35% TYPES	d L.T. LAND SLOPES 35% COMPACTION
153-038110	0640.00	22				E			L.	M	L	
153-038111	1240.00	22				E				L	L	
153-038112	1240.00	22				E				L	L	
153-038113	1077.00	22				E			L	M	L	
153-038114	1077.00	22				E				L	L	
153-038115	2019.00	22			M	E				L	L	
153-038116	2019.00	22				E				M	L	
153-038117	2560.00	22				E				L	L	
153-038118	2560.00	22				E				M	L	
153-038119	2560.00	22				E				M	L	
153-038120	2560.00	22				E				M	L	
153-038121	2560.00	22				E				M	L	
153-038122	2560.00	22				E				M	L	
153-038123	2560.00	22				E				M	L	
153-038124	2560.00	22				E				M	L	
153-038125	2560.00	22				E				M	L	
153-038126	2560.00	22				E				M	L	
153-038127	2560.00	22				E				M	L	
153-038128	2560.00	22				E				M	L	
153-038129	2560.00	22				E				M	L	
153-038130	2560.00	22				E				M	L	
153-038131	2560.00	22				E				M	L	
153-038132	2560.00	22				E				M	L	
153-038133	2560.00	22				E				M	L	
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153-038136	2560.00	22				E				M	L	
153-038137	2560.00	22				E				M	L	
153-038138	2560.00	22				E				M	L	
153-038139	2560.00	22				E				M	L	
153-038140	2560.00	22				E				M	L	
153-038141	2560.00	22				E				M	L	
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153-038148	2560.00	22				E				M	L	
153-038149	2560.00	22				E				M	L	
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153-038151	2560.00	22				E				M	L	
153-038152	2560.00	22				E				M	L	
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153-038163	2560.00	22				E				M	L	
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153-038187	2560.00	22				E				M	L	
153-038188	2560.00	22				E				M	L	
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153-038192	2560.00	22				E				M	L	
153-038193	2560.00	22				E				M	L	
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153-038195	2560.00	22				E				M	L	
153-038196	2560.00	22				E				M	L	
153-038197	2560.00	22				E				M	L	
153-038198	2560.00	22				E				M	L	
153-038199	2560.00	22				E				M	L	
153-038200	2560.00	22				E				M	L	









A	B	C	SOME MAJOR CONCERNS FOR GRAVELLY PLANNING UNIT NUMBER 6					13			
			2	3	4	5	6	7	8	9	
IDENTIFICATION NUMBER	ACRES STATUS		PROPOSED FIFTH WILDERNESS	PLANNING	ROADLESS T & E SPECIES	GAME WINTER	VISUAL RESOURCE -ROADS-	VISUAL RESOURCE -TRAILS-	SOIL Resource	L.I.T. AND SLOPES OVER 35% COMPACT	
153-010729	0.20.00	22							L	L	E
153-010756	0.640.00	22							M		
153-010789	1.308.00	23							M		
153-020760	0.640.00	23							M		
153-031219	1.601.12	23							L	L	
153-031259	1.601.12	23							L	L	
153-031280	2.400.00	23							L	L	
153-031292	0.132.50	22							L	L	
153-033292	0.132.50	22							L	L	
153-033327	2.560.00	23							L	L	
153-033328	2.560.00	23							L	L	
153-033329	2.560.00	23							L	L	
153-033330	2.560.00	23							L	L	
153-033331	2.560.00	23							L	L	
153-033332	2.560.00	23							L	L	
153-033333	2.560.00	23							L	L	
153-033334	2.560.00	23							L	L	
153-033335	2.560.00	23							L	L	
153-033336	2.560.00	23							L	L	
153-033337	2.560.00	23							L	L	
153-033338	2.560.00	23							L	L	
153-033339	2.560.00	23							L	L	
153-033340	2.560.00	23							L	L	
153-033341	2.560.00	23							L	L	
153-033342	2.560.00	23							L	L	
153-033343	2.560.00	23							L	L	
153-033353	1.286.00	23							L	L	
153-033399	1.280.00	23							L	L	
153-033400	1.280.00	23							L	L	
153-033401	1.280.00	23							L	L	
153-033402	1.280.00	23							L	L	
153-033403	1.280.00	23							L	L	
153-033404	1.280.00	23							L	L	
153-033405	1.280.00	23							L	L	
153-033406	1.280.00	23							L	L	
153-033407	1.280.00	23							L	L	
153-033408	1.280.00	23							L	L	
153-033409	1.280.00	23							L	L	
153-033410	1.280.00	23							L	L	
153-033411	1.280.00	23							L	L	
153-033412	1.280.00	23							L	L	
153-033413	1.280.00	23							L	L	
153-033414	1.280.00	23							L	L	
153-033415	1.280.00	23							L	L	
153-033416	1.280.00	23							L	L	
153-033417	1.280.00	23							L	L	
153-033418	1.280.00	23							L	L	
153-033419	1.280.00	23							L	L	
153-033420	1.280.00	23							L	L	
153-033421	1.280.00	23							L	L	
153-033422	1.280.00	23							L	L	
153-033423	1.280.00	23							L	L	
153-033424	1.280.00	23							L	L	
153-033425	1.280.00	23							L	L	
153-033426	1.280.00	23							L	L	
153-033427	1.280.00	23							L	L	
153-033428	1.280.00	23							L	L	
153-033429	1.280.00	23							L	L	
153-033430	1.280.00	23							L	L	
153-033431	1.280.00	23							L	L	
153-033432	1.280.00	23							L	L	
153-033433	1.280.00	23							L	L	
153-033434	1.280.00	23							L	L	
153-033435	1.280.00	23							L	L	
153-033436	1.280.00	23							L	L	
153-033437	1.280.00	23							L	L	
153-033438	1.280.00	23							L	L	
153-033439	1.280.00	23							L	L	
153-033440	1.280.00	23							L	L	
153-033441	1.280.00	23							L	L	
153-033442	1.280.00	23							L	L	
153-033443	1.280.00	23							L	L	
153-033444	1.280.00	23							L	L	
153-033445	1.280.00	23							L	L	
153-033446	1.280.00	23							L	L	
153-033447	1.280.00	23							L	L	
153-033448	1.280.00	23							L	L	
153-033449	1.280.00	23							L	L	
153-033450	1.280.00	23							L	L	
153-033451	1.280.00	23							L	L	
153-033452	1.280.00	23							L	L	
153-033453	1.280.00	23							L	L	
153-033454	1.280.00	23							L	L	
153-033455	1.280.00	23							L	L	
153-033456	1.280.00	23							L	L	
153-033457	1.280.00	23							L	L	
153-033458	1.280.00	23							L	L	
153-033459	1.280.00	23							L	L	
153-033460	1.280.00	23							L	L	
153-033461	1.280.00	23							L	L	
153-033462	1.280.00	23							L	L	
153-033463	1.280.00	23							L	L	
153-033464	1.280.00	23							L	L	
153-033465	1.280.00	23							L	L	
153-033466	1.280.00	23							L	L	
153-033467	1.280.00	23							L	L	
153-033468	1.280.00	23							L	L	
153-033469	1.280.00	23							L	L	
153-033470	1.280.00	23							L	L	
153-033471	1.280.00	23							L	L	
153-033472	1.280.00	23							L	L	
153-033473	1.280.00	23							L	L	
153-033474	1.280.00	23							L	L	
153-033475	1.280.00	23							L	L	
153-033476	1.280.00	23							L	L	
153-033477	1.280.00	23							L	L	
153-033478	1.280.00	23							L	L	
153-033479	1.280.00	23							L	L	
153-033480	1.280.00	23							L	L	
153-033481	1.280.00	23							L	L	
153-033482	1.280.00	23							L	L	
153-033483	1.280.00	23							L	L	
153-033484	1.280.00	23							L	L	
153-033485	1.280.00	23							L	L	
153-033486	1.280.00	23							L	L	
153-033487	1.280.00	23							L	L	
153-033488	1.280.00	23							L	L	
153-033489	1.280.00	23							L	L	
153-033490	1.280.00	23							L	L	
153-033491	1.280.00	23							L	L	
153-033492	1.280.00	23							L	L	
153-033493	1.280.00	23							L	L	
153-033494	1.280.00	23							L	L	
153-033495	1.280.00	23							L	L	
153-033496	1.280.00	23							L	L	
153-033497	1.280.00	23							L	L	
153-033498	1.280.00	23							L	L	
153-033499	1.280.00	23							L	L	
153-033500	1.280.00	23							L	L	
153-033501	1.280.00	23							L	L	
153-033502	1.280.00	23							L	L	
153-033503	1.280.00	23							L	L	
153-033504	1.280.00	23							L	L	
153-033505	1.280.00	23							L	L	
153-033506	1.280.00	23							L	L	
153-033507	1.280.00	23							L	L	
153-033508	1.280.00	23							L	L	
153-033509	1.280.00	23							L	L	
153-033510	1.280.00	23							L	L	
153-033511	1.280.00	23							L	L	
153-033512	1.280.00	23							L	L	
153-033513	1.280.00	23							L	L	
153-033514	1.280.00	23							L	L	
153-033515	1.280.00	23							L	L	
153-033516	1.280.00	23							L	L	
153-033517	1.280.00	23							L	L	
153-033518	1.280.00	23							L	L	
153-033519	1.280.00	23							L	L	
153-033520	1.280.00	23							L	L	
153-033521	1.280.00	23							L	L	
153-033522	1.280.00	23							L	L	
153-033523	1.280.00	23									





## SOME MAJOR CONCERNS FOR MADISON PLANNING UNIT NUMBER 7

A IDENTIFICATION NUMBER	B ACRES	C STATUS	2 PROPOSED WILDER- NESS	3 FURTHER PLANNING	5 ROADLESS MONT.	6 T & E SPECIES	7 BIG GAME WINTER	9 a		13 Soil Resource		
								VISUAL RESOURCE -ROADS-	VISUAL RESOURCE -TRAILS-	SLIPES OVER 65% LAND TYPES	L.T. AND SLOPES 35%	COMPA TIBLE
153-03847	1280.00	22		E					L	L		
153-03848	2540.00	22		E					L	L		
153-03849	1000.00	22		E					L	L		
153-038140	2560.00	22		E					L	L		
153-038141	2560.00	22		E					L	L		
153-038142	2514.46	22		E					L	L		
153-038435	1250.00	22		E				L	L	L		
153-038436	1250.00	22		E				L	L	L		
153-038437	1250.00	22		E				L	L	L		
153-038438	1519.44	22		E				L	L	L		
153-038439	2576.14	22		E				L	L	L		
153-038440	6640.00	22		E					L	L		
153-038441	1280.00	22		E					L	L		
153-038442	6990.00	22		E					L	L		
153-038443	1760.00	22		E					L	L		
153-038445	6746.76	22		E					L	L		



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October 21, 1985

TO : Honorable John Seiberling  
Chairman, Subcommittee on Public Lands  
Attention: Loretta Neumann

FROM : Susan Abbasi  
Specialist in Natural Resources Policy

M. Lynne Corn  
Analyst in Natural Resources Policy  
Environment and Natural Resources Policy Division

SUBJECT : Issues Surrounding the Greater Yellowstone Ecosystem

Enclosed is the report you requested on issues surrounding the Greater Yellowstone Ecosystem. It includes a number of maps and tables which are gathered at the end of the report. A Table of Contents is also included. Please feel free to contact either of us or any of those who worked in the preparation of the report for additional information.



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ISSUES SURROUNDING THE GREATER YELLOWSTONE ECOSYSTEM:  
A BRIEF REVIEW

by  
M. Lynne Corn (Coordinator)  
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Ross Gorte  
Analyst in Natural Resources Policy

and  
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October 17, 1985

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## EXECUTIVE SUMMARY

Yellowstone National Park was created in 1872 to preserve the unique natural resources of the area, but the boundaries were generally established along legal, rather than ecological, lines. As a result, many of the resources, such as wildlife and water, move across Park boundaries onto the surrounding Federal and private lands. This broader area has come to be known as the "Greater Yellowstone Ecosystem," and is loosely defined as the high, mountainous region centered around the Park and surrounded by dry plains.

The National Park Service, the Fish and Wildlife Service, and the Forest Service manage about 90 percent of the lands in the Yellowstone Ecosystem. Each agency manages its lands for differing purposes: National Parks are managed for preservation and recreation; National Wildlife Refuges are managed for wildlife; while National Forests are managed for many uses, including timber, grazing, energy and minerals, recreation, and fish and wildlife. These differing management purposes at times result in conflicts among various resources and users.

Wildlife is part of Yellowstone's charm, and it is the resource most affected by other uses. Conflicts over grizzly bears are perhaps the most publicized, because (1) grizzlies are threatened, (2) human-grizzly interactions may lead to death (mostly for the bear), and (3) because grizzlies generally avoid areas used by humans, increasing recreation and development tend to reduce grizzly habitat. Yellowstone's elk may come into conflict with recreational and other developments if migration routes or winter habitat are restricted; elk can also damage crops and some developments, and can spread disease to livestock. The needs of endangered bald eagles may also conflict with other uses. Much of their prime habitat is private land around Jackson

Hole and the Snake River that is subject to development pressures; siltation resulting from construction can damage spawning areas for cutthroat trout, a major food source for bald eagles.

Recreation is a major industry in the Greater Yellowstone Ecosystem; recent increases are primarily in winter activities. Recreation may conflict with wildlife needs by increasing human presence and development. It can also conflict with other types of development, such as timber harvesting and oil drilling, which can affect the aesthetics of the area. Wilderness designation in the area has protected some resource values while limiting the expansion of others.

Timber harvest in the surrounding National Forests provides for about 900 direct jobs in the area. Timber sale prices range from \$3 to \$50 per thousand board feet (Mbf). Forest Service costs for preparing the sales vary from \$30 to \$70/Mbf.

Confusing geology, expensive mitigation requirements, and congressional restrictions in the Yellowstone Ecosystem have kept interest in developing oil, gas, and geothermal leases low. Geothermal interest is greatest west of the Park; effects of such development on the Park's resources are not clear. The Bureau of Land Management is postponing development until Congress resolves the issue.

## ISSUES SURROUNDING THE GREATER YELLOWSTONE ECOSYSTEM

INTRODUCTION

When Yellowstone National Park was set aside in 1872, it was intended to preserve the unique natural resources of the area. However, the boundaries of the Park follow legal, rather than ecological lines, and very few of its boundaries follow natural demarcations such as ridge tops or rivers. As a result, with growing interest in resources such as wildlife and water that move across the artificial Park boundaries, the physical ecosystem that the plants and animals depend on has come to be known as the "Greater Yellowstone Ecosystem." The Ecosystem (an ecological rather than a legal designation), with Yellowstone National Park at its heart, constitutes an ecological "island" surrounded by areas of lower elevation with less rainfall.

Animals and plants in this Ecosystem have distributions that straddle the boundaries of two National Parks, five or more National Forests, two or more National Wildlife Refuges (NWR), some land managed by the Bureau of Land Management (BLM), and several thousand acres of private land. (See table 1 and map 1.) Because the various species themselves have different distributions, a precise drawing of boundaries for the Ecosystem may not be possible: a person interested primarily in grizzly bears would probably not draw the same Ecosystem boundaries as a person interested primarily in bald eagles. Rather, as more and more distributions become known, consensus may develop on those general areas of significance to a complex of many species. Map 2 shows two different versions of the Ecosystem's boundaries.

This report will outline: (1) the unique features of the area; (2) the roles of the federal land management agencies in the area; (3) wildlife issues;

(4) recreational use; (5) wilderness designation in the area; and (6) commercial use of lands adjacent to the park.

#### UNIQUE CHARACTERISTICS OF THE GREATER YELLOWSTONE AREA

##### Physical Features

The Yellowstone area is an identifiable land form, distinct from the surrounding area. <sup>1/</sup> It is characterized by a high elevation plateau (generally over 7,500 feet), centered in Yellowstone National Park, nearly surrounded by very high, rugged mountains (see map 3). Grand Teton Peak in Grand Teton National Park is the highest mountain in the area, at 13,747 feet, but more than 40 peaks in and around Yellowstone Park exceed 10,000 feet. The area surrounding the Greater Yellowstone Ecosystem is dominated by lower elevation plains (under 6,000 feet), dotted with hills and low mountains. The Greater Yellowstone area is, in effect, an island of mountains in the high, dry plains of the West.

Two high mountain ridges extend south from the Yellowstone area -- the Wind River Range and the Salt River (or Wyoming) Range. These ridges are less important to the Ecosystem because of their distance from the central plateau; further, because these ridges separate river valleys, they are more similar to other western mountain ranges, such as the Bighorns farther east and the Uintas farther south. Thus, descriptions of the Greater Yellowstone Ecosystem typically exclude the Wind River and Salt River Ranges.

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<sup>1/</sup> U.S. Department of the Interior, Geological Survey. The National Atlas of the United States of America. Washington, 1970. p. 62.

### Hydrology

The high plateau and mountains receive more than twice as much precipitation as the surrounding plains. Annual snowfall exceeds 6 feet (about 6 inches of precipitation) throughout most of the area, while the plains generally receive less than 3 feet of snow (3 inches of precipitation) annually. Total precipitation in the area, including snowfall, averages more than 32 inches per year, while the surrounding plains average less than 16 inches of precipitation annually. As a result, the Greater Yellowstone area is the headwaters for the Snake River, the Green River (which flows through Flaming Gorge to the Colorado River), and numerous tributaries of the Missouri River (most notably the Yellowstone River).

The most famous features of Yellowstone are probably the geysers and hot springs in the Park. While other places also have geysers -- notably Iceland and New Zealand -- none can match the size, power, or number of geysers in Yellowstone National Park. The sources of groundwater for Yellowstone's geysers are still under investigation. Recent news reports state that the U.S. Geological Survey laboratory in Menlo Park, California, now suspects that the water comes from aquifers north of the Park, particularly in the Gallatin National Forest. 2/ The valleys of several Missouri River tributaries north of the Park have long been suspected of being recharge areas for groundwater, but there is still no published evidence linking these areas with the Yellowstone geysers.

Red Rock Lakes are often included when the Yellowstone Ecosystem is discussed. These lakes are located about 30 miles west of Yellowstone Park, near the Continental Divide. They are not in the central plateau or the

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2/ James Coates. Mining Projects Tap into Controversy at Yellowstone. Chicago Tribune. August 25, 1985. Section 1, p. 4.

surrounding mountains, but are often included because the warm springs in the area are probably linked to Yellowstone's natural geothermal activity and because the lakes are heavily used by the wildlife of the central plateau.

### Vegetation

The higher elevations and greater precipitation in the central plateau and surrounding mountains cause the vegetation in the Greater Yellowstone Ecosystem to differ from that of the nearby plains. At middle elevations, lodgepole pine is the dominant tree species; in fact, the 4 million acres of lodgepole pine in the Ecosystem are the largest continuous expanse of the species in the United States. At the lower elevations (in many of the canyons of the surrounding mountains), Douglas-fir replaces lodgepole pine as the dominant tree species, while at higher elevations (near the tops of mountains and ridges), Engelmann spruce and subalpine fir, interspersed with alpine meadows, are more common. The plains to the west of the area are covered with sagebrush and grasses, while the plains to the east are dominated by needlegrass-wheatgrass prairie.

### FEDERAL AGENCIES

The various Federal agencies in the area meet periodically at the regional, as well as local, level in order to discuss problems relating to the Greater Yellowstone Ecosystem. 3/ These meetings are held regularly, but vary in membership, depending on the subject matter and the likelihood that a given Federal agency would be affected by the issue. State officials may also be invited, when appropriate.

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3/ Forest Service briefing for staff of Interior Committee, October 2, 1985.

A special independent Interagency Grizzly Bear Committee (IGBC) has been formed to deal with the problems of bear management. Its members represent the Fish and Wildlife Service, the Forest Service, the National Park Service, and a representative from the States of Idaho, Wyoming, and Montana. The IGBC deals with grizzlies throughout the 48 states; a Yellowstone Ecosystem Management Subcommittee deals with the bears of that area particularly.

Each of the major Federal agencies and their roles are discussed below.

#### National Park Service

Yellowstone and Grand Teton National Parks are the core of the Greater Yellowstone Ecosystem. (References to "the Park" in this report are references to Yellowstone, unless otherwise indicated.) Yellowstone was the world's first National Park when it was created in 1872. At 2.2 million acres, it remained the nation's largest until the signing of the Alaska National Interest Lands Conservation Act in 1980. Yellowstone is famous for its geothermal activity, and also possesses impressive canyons, waterfalls, remnants of volcanic activity, and abundant meadows, forests, and mountain vistas. The Park is home for abundant wildlife. Grand Teton National Park (310,500 acres) to the south contains spectacular mountains which rise over 7000 feet from the surrounding plain. Grand Teton is likewise home to abundant wildlife. There was a combined total of about 3.6 million visits to both Parks in 1984.

Generally, Park Service policy provides the most protection for resource preservation of all Federal land managing agencies: one of the purposes of the National Park System is to preserve outstanding natural resource values. However, the Park Service faces the sometimes contradictory demand to provide for public enjoyment. The conflicts can become serious when visitor use is high, as it is in many places at Yellowstone.

The Park Service is responsible for managing wildlife in the Parks. Within Yellowstone, several actions to reduce confrontations between grizzlies and visitors have been taken or proposed. Certain remote areas have been closed in the wake of bear attacks or where grizzly usage was high. To date, these closures have had minimal negative impact on recreation.

Closure of an area called Fishing Bridge has been proposed because the area is popular with both people and bears for fishing. Residents of Cody, Wyoming, feared that closure of the Fishing Bridge Campground would reduce tourism. The Park Service has indicated that an environmental impact statement (EIS) on the closure will be prepared, and a draft should be available for public review in mid or late 1986. 4/

#### Fish and Wildlife Service

The Fish and Wildlife Service manages six National Wildlife Refuges (NWR) in the tri-state area (see map 1), but only two of these are usually considered part of the Greater Yellowstone Ecosystem. The 24,300-acre National Elk Refuge provides winter range for the Jackson Hole elk herd which uses the two National Parks and the Teton National Forest in summer; this herd is the second largest of the Park's seven herds, with about 5,000 animals. Red Rock Lakes NWR, with 32,500 acres, is also typically included in the Ecosystem, because it is used by many of the animals, including bald eagles and trumpeter swans, which also use the Park. The Refuge also has a feeding program for overwintering birds.

The Grays Lake NWR (16,200 acres) is not normally considered part of the Greater Yellowstone Ecosystem, but deserves mention since it is the site of a new flock of whooping cranes, an endangered species. The whoopers are being

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4/ Tim Doherty, Office of Environmental Compliance, National Park Service. Personal communication. October 16, 1985.

raised by sandhill cranes acting as foster parents. The sandhills of the Grays Lake NWR have used the Park and Red Rock Lakes NWR in the past. The first juvenile whooper was seen this summer in the Park. 5/ It seems likely that the whoopers' use of the Greater Yellowstone Ecosystem will increase as the number of birds increases.

#### U.S. Forest Service

The Greater Yellowstone Ecosystem includes lands from at least five National Forests, as shown in map 1. Most of the Gallatin National Forest and about 40 percent of the Custer National Forest are included in the area; these forests are in the Forest Service's Northern Region (Region 1). The Ecosystem also includes most of the Shoshone National Forest, in the Rocky Mountain Region (Region 2). About half of the Targhee National Forest and all of the Teton National Forest, in the Intermountain Region (Region 4), are part of the Ecosystem. Depending on the specific boundaries of the Ecosystem, small portions of the Beaverhead National Forest (in Region 1) and the Bridger National Forest (in Region 4) may be included. 6/ These National Forests are heavily used for recreation and provide some of the habitat for the wildlife which help make the Yellowstone area famous, but they also produce timber and many areas are leased for energy or mineral exploration.

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5/ Personal communication with Wendy Brown, Research Biologist, University of Idaho. October 7, 1985.

6/ The Bridger and the Teton National Forests are distinct National Forests, but they are managed as a single administrative unit and are typically referred to as the Bridger-Teton National Forest.

### Bureau of Land Management

The Bureau of Land Management (BLM) manages very little land in the Greater Yellowstone Ecosystem, although the exact acreage in the area depends on the specific boundaries proposed. The BLM is significant in another way, however: the BLM issues and administers oil, gas, and geothermal leases on the National Forests. However, on Forest Service land, the Forest Service can stipulate the restrictions on surface disturbance. The extent of these activities is discussed below, under Development Issues.

### WILDLIFE ISSUES

Animals generally establish home ranges in accordance with their resource needs. These home ranges may be congruent with the distribution of favored food sources, resting areas, prey species, or other requirements. Animals may move seasonally or even daily, depending on the species or on changes in the distribution of necessary resources. In many cases, these movements take the animals across Park, Forest, and Refuge boundaries, or onto private land. Their movements may bring them into conflict with humans. The animals of greatest concern are elk, bison, trumpeter swans, bald eagles, and especially grizzly bears.

### Grizzly bears

Grizzlies (*Ursus arctos horribilis*) are listed as threatened in the 48 coterminous states under the Endangered Species Act. Estimates indicate that the Park's bear population has declined to about 200 animals over the last several years. Their distribution covers all of Yellowstone National Park, and portions of Grand Teton National Park as well as portions of all of the

contiguous National Forests. Because of their prominence in the Ecosystem, boundaries defining the Ecosystem are usually chosen so as to include all of their known distribution. (Compare map 2, and map 4, which shows distribution of grizzlies.) A recent paper estimates that "a minimum of 125 bears should be maintained to ensure high probability of a viable grizzly bear population for 100 years in the Yellowstone ecosystem." 1/

The low reproductive rate of bears has hampered recovery efforts. Females do not breed until age five, and then tend to have only one or two cubs every three to four years. There are an estimated 32 female bears of reproductive age in the Park. 2/ Consequently, the expected reproductive rate is from 8 to 22 bears annually.

Statistics on the unnatural deaths of bears are hard to obtain, since many kills are illegal. The only legal kill is a controversial hunt in Montana.3/ The state places a limit of 25 dead bears from all man-caused sources annually, including road kills, known poaching, hunting, and so on. In practice, this leaves about 10 or so bears annually for hunters in the entire state. This hunt occurs only around Glacier National Park where is a substantial population of grizzlies; hunting of grizzlies is not legal in or near the Yellowstone Ecosystem.

Unnatural deaths can also arise from poaching, clashes with hunters or ranchers, and deliberate removal. Poachers can obtain \$700 for a hide, \$500

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1/ Suchy, Willy J., Lyman L. McDonald, M. Dale Strickland, and Stanley H. Anderson. New estimates of minimum viable population size for grizzly bears of the Yellowstone ecosystem. Wildlife Society Bulletin, v. 13.(3), 1985: 223-228.

2/ Turbak, Gary. Grizzly on the ropes. American Forests, February, 1984: 22-23, 48-49.

3/ U.S. Congress. Senate. Grizzly bear management in the Yellowstone ecosystem. Hearing, 98th Congress, 1st session. Aug. 11, 1983. Washington, U.S. Govt. Print. Off., 1984. 130 p.

for feet, and \$100 for gall bladders. <sup>10/</sup> Hunters outside the parks occasionally kill bears that are attracted to their camps by game carcasses. Bears are sometimes shot by sheep ranchers who blame bears for taking sheep. Finally, some bears die in government-sanctioned killing of problem bears. As few eight kills of these types can exceed the annual birth rate of the population. Natural mortality would cause further losses.

Some problems of bear management arise inside the Park. In the late 1960's, the National Park Service eliminated the bears' open access to garbage dumps, in an effort to reduce unnatural concentrations of bears around these dumps. The bears lost a reliable food source, and bears, needing new food sources, spread more widely in the Park. Some may have died. How many died and how many were simply harder to count is still open to question. Bears turned to garbage outside of the Park, particularly around the northern edge. This use of external dumps by bears habituated to human contacts has led to aggressive confrontations between people and bears. High levels of Park use increase the chance of bear-human conflicts. Certain areas have been closed temporarily to human access in order to let bears feed without interference. These closures amounted to less than 10% of the Park's land, but serious protests resulted from this policy. These came in part from businessmen outside the Park who stated that they feared a loss of sales.

Outside the park, human-bear conflicts arise over logging, roads, oil and gas leasing, geothermal leasing, home and condominium development around Jackson Hole and the Snake River, and a proposed major ski resort called "Ski Yellowstone" a few miles west of the Park in Gallatin National Forest. Gold,

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<sup>10/</sup> Turbak, Gary. Grizzly on the ropes. American Forests, February, 1984: 22-23, 48-49.

silver, and chromium mining on the north side also raise possibilities for conflicts with bears.

### Elk

About 30,000 elk (Cervus elaphus) live in Yellowstone Park for at least part of the year, but only one of nine herds has a winter range almost entirely in the park. <sup>11/</sup> Use is heaviest in the summer, when elk browse in the higher elevations. In the winter, elk generally leave the Park for lower canyons and other sheltered areas. Distributions of these herds are shown in map 5.

This seasonal migration represents the most obvious and observable dependence of any species on lands both in and out of the Park. At lower elevations outside the Park, they may encounter summer homes, fences, roads, mineral leasing, and ski developments. Any of these developments may restrict migration or destroy suitable foraging sites; they may also be damaged by the elk. The animals may reach ranching and farming areas where they may damage crops or spread disease. A major concern in the last two years has been the construction of an elk-proof fence on the west side of the Yellowstone River north of the Park. Intended to protect crops, the fence has prevented the largest of Yellowstone's herds (16-18,000 animals) from reaching a substantial portion of its winter range. Since the elk herds are known to carry brucellosis, there is concern among ranchers about contamination of cattle herds. Ranchers avoid running cattle in areas where elk have calved in order to prevent spread of the disease. Vaccination of the elk is not considered feasible.

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<sup>11/</sup> Personal communication concerning elk biology with Frank Singer, Wildlife biologist, Yellowstone National Park. October 7, 1985.

An existing ski development -- Big Sky in Montana -- causes some disruption of another herd which passes through the area during its migration. A park biologist judged the effects as minor, if the size of the development does not increase. However, the Ski Yellowstone development, a proposed ski resort, would occupy an area currently used for both summer and winter range, and its effects could be more serious.

### Bison

There are about 2000 bison (Bison bison) in the Park. <sup>12/</sup> The majority of the herd remains in the Park throughout the year, but roughly 3 to 4 percent of the herd use the areas adjacent to the Park during part of the year, particularly in winter. Their distribution is shown in map 6. These areas of "leakage" are along the northern border near Gardiner, on the eastern border in the Shoshone National Forest, and on the southwestern border in the Targhee and Gallatin National Forests. Each of these areas provides potential conflicts with human usage, mineral development, or timber harvest. Bison also carry brucellosis. However, since the bulk of the herd remains in the Park, conflicts regarding disease or other problems have been rare.

### Trumpeter Swans

Trumpeter swans (Cygnus buccinator) are not listed as endangered. However, in 1932, the species was thought to be very depleted, and the population in the Greater Yellowstone Ecosystem was only about 57 resident

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<sup>12/</sup> Personal communication on bison with John Varley, Chief of Research, Yellowstone National Park. October 8, 1985.

pairs. <sup>13/</sup> The Yellowstone Ecosystem represents an extremely crucial area for the species in both the U.S. and Canada. <sup>14/</sup> The population has two components: resident birds, and those that only winter in the area.

The larger component consists of overwintering birds. This winter population includes about 95% of the Canadian population of trumpeter swans. The swans feed on submerged aquatic vegetation. The geothermal activity throughout the area results in many streams that do not freeze over during the winter, and the swans are dependent on this open water for food. Swans also rely on an artificial feeding program at Red Rock Lakes National Wildlife Refuge. The birds' winter range is shown in map 7.

The smaller component is made up of 300-400 resident birds. These birds breed on small ponds in and around the Park. The population of resident swans in the tri-state area has not been doing well, according to Gale. The number of nesting pairs inside the Park has dropped from 20 to 10 in the last six years, due to human interference at lakeshore nesting sites.

Gale argues that the swans' reproductive success could be improved substantially by creating very small artificial nesting islands in preferred lakes, at locations only a few yards from shore. <sup>15/</sup> The Park Service has a policy of avoiding further manipulation of the environment inside the Park. Gale argues that such islands could be construed as a mitigation of human disturbance of these areas, and therefore within Park Service guidelines.

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<sup>13/</sup> Frank C. Bellrose. Ducks, Geese, and Swans of North America. 1976. Harrisburg, Penn. Stackpole Books. 544p.

<sup>14/</sup> Personal communication on trumpeter swans with Ruth Gale, Biologist, Montana Cooperative Wildlife Research Unit. October 7, 1985.

<sup>15/</sup> Ibid.

Bald Eagles

Bald eagles (Haliaeetus leucocephalus) are endangered throughout the region, although their populations rose substantially since the ban on DDT. There are now 55 nesting pairs in the area, including 12 pairs which nest in the Park. The distribution of the birds is shown in map 8. The Ecosystem is home to a substantial portion of the bald eagles in the Rocky Mountain States. The population growth of the last few years is largely attributable to only six pairs nesting along unusually rich rivers and streams south of the Park, where the birds feed on trout and Utah suckers. <sup>16/</sup> Much of this prime fishing and nesting habitat around Jackson Hole and the Snake River is threatened by housing development and by construction of levees. Such construction could produce enough damage to the watershed to destroy the spawning areas of cutthroat trout, on which the eagles are heavily dependent. Thus, this species is distinguished from other species considered here, in that areas likely to be altered by human activities may be the best available habitat in the Ecosystem, rather than one of many equally suitable habitats.

RECREATIONAL USE

Recreational activity in the Parks includes viewing and photographing the wildlife and scenery, as well as hiking, backpacking, bicycling, camping, boating, and fishing. The number of visitors to the Parks has been fairly constant over the last few years at 2.2 million visitors in Yellowstone and 1.4 million in Grand Teton. However, Yellowstone Superintendent Barbee recently reported to the Wyoming Governor's Recreation Action Team that the winter use

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<sup>16/</sup> Personal communication on bald eagles with Robert Oakley, Wyoming Fish and Game Department. October 4, 1985.

of Yellowstone is increasing rapidly. He cited an increase in snowmobile on park roads from 6 in 1964 to over 31,000 in 1982-83. Over 38,000 people used these machines in 1982, and an additional 8,000 people toured the park in snowcoaches operated by a concessionnaire. Park personnel indicate that wildlife seem to adjust to snowmobiles.

Barbee also noted an "explosion" in cross-country skiing, but did not cite numbers. This skiing takes place both on roads and in off-road areas, though some skiers ski their own courses. Park personnel report that cross-country skiers tend to make the animals more wary. Otherwise, there appear to be no adverse impacts on the park from expanded winter use.

Surrounding National Forests support similar recreation and also allow hunting and off-road vehicles (ORVs) in some areas. The five principle National Forests in the Ecosystem reported nearly 7.5 million recreation visitor days (RVDs) in 1984, including almost 1.8 million RVDs of camping by individuals, 447,900 RVDs of big game hunting, and 413,700 RVDs of hiking. <sup>17/</sup>

#### Downhill Ski Areas

There are numerous developments for downhill skiing in the high mountains surrounding Yellowstone National Park. The most famous area is Jackson Hole, in the Teton National Forest, west of Jackson, Wyoming. The Grand Teton Park area also has the Grand Targhee Ski Area, due west of Grand Teton Peak, and Snow King, on private land outside Jackson. There are two ski areas north of Yellowstone: Big Sky of Montana, in the Gallatin National Forest, and Red Lodge Mountain, in the Custer National Forest. The Sleeping Giant Ski Area is

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<sup>17/</sup> Unpublished Forest Service data. The number of visitors may substantially differ from the number of RVDs, because RVDs estimate the number of hours spent by visitors, measured in 12-hour blocks.

located east of Yellowstone, on the Shoshone National Forest. Finally, a new ski area, "Ski Yellowstone", has been proposed near West Yellowstone, Montana, partly in the Gallatin National Forest.

Ski developments can affect several other resources. Ski areas attract numerous visitors; the six areas listed above provide about 300,000 recreation visitor days (RVDs) of use annually. <sup>18/</sup> The location of a ski development determines its potential conflicts with wildlife. For example, a ski area near elk wintering grounds or across elk migration routes (especially if migration occurs when the snow is deep enough for skiing) could disturb elk populations. Similarly, since grizzly bears generally avoid areas with human presence, a ski development in areas used by grizzlies would likely displace the bears. Ski areas could also conflict with other resources, such as timber or oil and gas; because skiers are concerned about the beauty of the areas (a major attraction of Jackson Hole, for example), timber harvesting or oil drilling could disrupt the recreational experience.

New ski developments are likely to have incremental effects; wildlife and other resource users have, for the most part, already adapted to the existing ski areas. Thus, the proposed "Ski Yellowstone" could have additional impacts that could create a need to assess cumulative effects of such developments. In 1977 and again in 1984, Fish and Wildlife Service findings of "no jeopardy" to grizzly bears from this proposal were issued, but according to National Parks magazine, "new information documents the existence of . . . grizzlies in the area." <sup>19/</sup> The Forest Service has issued a special-use permit for the Gallatin National Forest to allow development to proceed.

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<sup>18/</sup> Unpublished Forest Service data.

<sup>19/</sup> "Ski Yellowstone" Plans Add to Grizzly Threats. National Parks, v. 58 (Sept./Oct. 1984): 36-37.

WILDERNESS DESIGNATIONS

A substantial amount of Federal land in the Greater Yellowstone area has been designated or proposed for wilderness, as shown in table 2. Wilderness area management differs from management of other Federal lands, since logging, roads, new energy or mineral leasing, and motorized vehicles are generally prohibited from wilderness areas. These human activities are restricted to areas outside wilderness boundaries, thus leaving wilderness areas relatively undisturbed by development. In the Greater Yellowstone Ecosystem, more than half of the Federal land has been recommended for or has been designated wilderness, and thus is protected from development.

More than 90 percent of Yellowstone Park and nearly half of Grand Teton National Park were recommended for wilderness by the Secretary of the Interior in 1972. Congress has not yet added these lands to the National Wilderness Preservation System, but they are being managed, in the interim, to protect the values which led to the wilderness recommendation. National Parks typically prohibit timber harvesting and energy development, but wilderness designations would also restrict road construction and recreation developments, such as campgrounds. Most of Red Rock Lakes National Wildlife Refuge was included in the Wilderness System in 1976.

Nearly half of the National Forest System lands in the Greater Yellowstone Ecosystem are designated as wilderness or proposed for designation. Major wilderness designations were enacted in the Wyoming Wilderness Act of 1984 and the Lee Metcalf Wilderness Act of 1983, but wilderness recommendations are still pending in the Targhee National Forest in Idaho and in the Gallatin National Forest in Montana. Additional National Forest lands are still being considered for possible wilderness designation, including three Wilderness Study Areas in Wyoming (180,540 acres) and four RARE II Further Planning areas

(162,300 acres, mostly in the Gallatin National Forest). Finally, many roadless areas have not been "released", thus requiring wilderness consideration in the ongoing National Forest planning; this includes 188,160 acres in the Gallatin National Forest, 90,440 acres in the Custer National Forest, and 79,640 acres in the Targhee National forest.

#### DEVELOPMENT ISSUES

##### Timber Harvests

A substantial amount of timber is sold from the national forests in the Greater Yellowstone Ecosystem. The primary species harvested from these forests is lodgepole pine, although Douglas-fir, Engelmann spruce, and subalpine fir are also cut. The six national forests sell about 130 million board feet annually, with more than half coming from the Targhee National Forest. At the Idaho average of 7 employees per million board feet of timber harvested 20/, about 900 jobs would result from timber sales in these six national forests. However, direct timber-dependent jobs accounted for less than 10 percent of total employment in the counties around Yellowstone in 1970. 21/ These jobs are not entirely dependent on timber from the Greater Yellowstone Ecosystem, because many of the timber sales in these national forests are outside the Ecosystem; about 40 percent of the available commercial forest land in these forests is outside the Greater Yellowstone Ecosystem.

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20/ Bell, Enoch F. Estimating Effect of Timber Harvesting Levels on Employment in Western United States. Forest Service Research Note INT-237. Ogden, UT, U.S. Dept. of Agriculture, Nov. 1977. p. 4.

21/ Ibid. p. 3.

Timber sales generate revenues for the Federal Government; since 1980, these six forests have yielded revenues exceeding \$2 million annually. Prices have averaged nearly \$17 per thousand board feet, but have ranged from less than \$3 on the Shoshone in 1980 to more than \$50 on the Bridger-Teton in the same year. The Forest Service also incurs costs to prepare and administer the timber sales; in 1982, direct timber sale costs on these six forests averaged nearly \$40 per thousand board feet, although the average costs on individual forests ranged from less than \$30 on the Bridger-Teton to more than \$70 on the Custer. It seems likely that many (though certainly not all) of the national forest timber sales in the Greater Yellowstone Ecosystem have direct costs that exceed the receipts.

Timber sales have impacts other than forest industry employment and Federal cash flows. Timber harvesting clearly changes the local environment, thus affecting wildlife habitat by altering the amount and relationship between food and cover. Timber harvesting is also accompanied by road construction. Roads can be beneficial for some forest users, by improving access for certain types of recreation and for forest fire suppression. However, improved access can be detrimental for other purposes; road construction occasionally results in stream sedimentation and temperature changes, thus affecting fish habitat, and as noted above, wildlife such as grizzly bears are particularly susceptible to disturbance by human activity. Increased human activity, as typically results from timber harvesting and road construction, may be desirable for some users, but can have unintended harmful effects as well.

#### Energy and Mineral Leasing

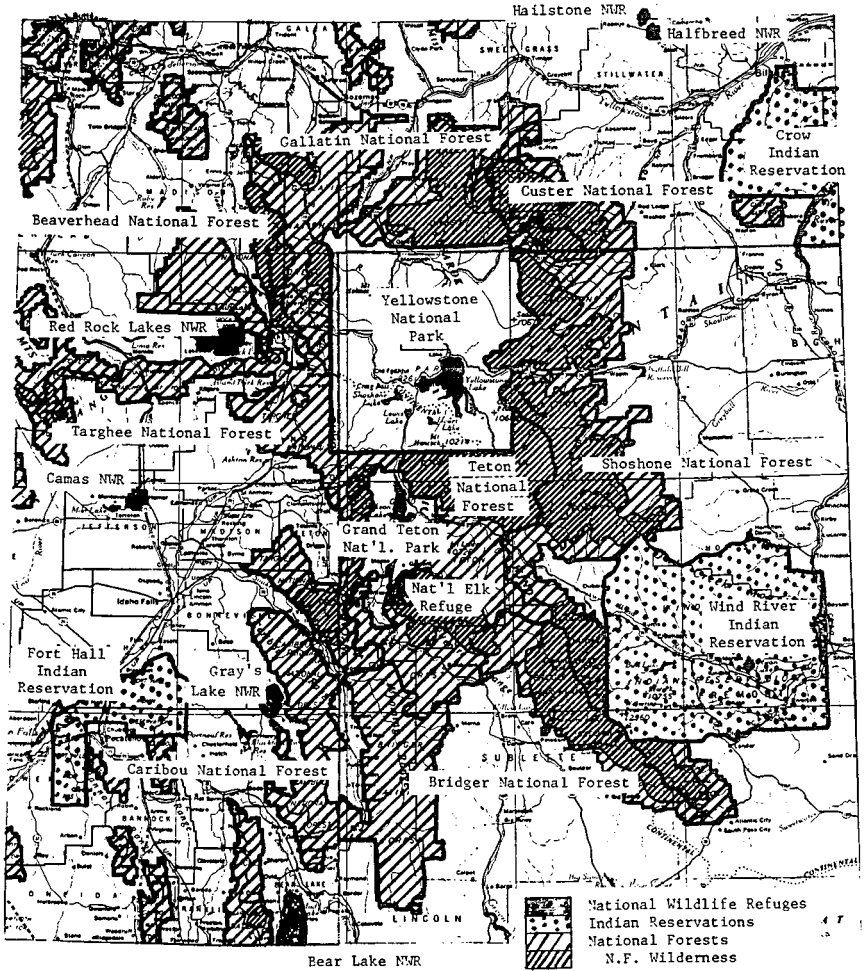
Much of the interest in underground resources of the Yellowstone area has focused on the potential for geothermal energy development. Geothermal

interest has, to date, been concentrated in the Island Park Known Geothermal Resource Area, south of Red Rock Lakes, in and around the Targhee National Forest, adjacent to the Ecosystem; more than 125 lease applications have been filed for geothermal energy development this area. Some are concerned that the suspected geothermal potential of the area is related to the geysers and hot springs in Yellowstone, and that development might affect these phenomena in the Park. The leasing authority of the Secretary of the Interior for this area was restricted for FY85 by the 1985 Continuing Appropriations for the Department of the Interior and Related Agencies (Public Law 98-473); the restriction has since expired, but the BLM has chosen not to issue any geothermal leases in the area until final congressional resolution of the controversy.

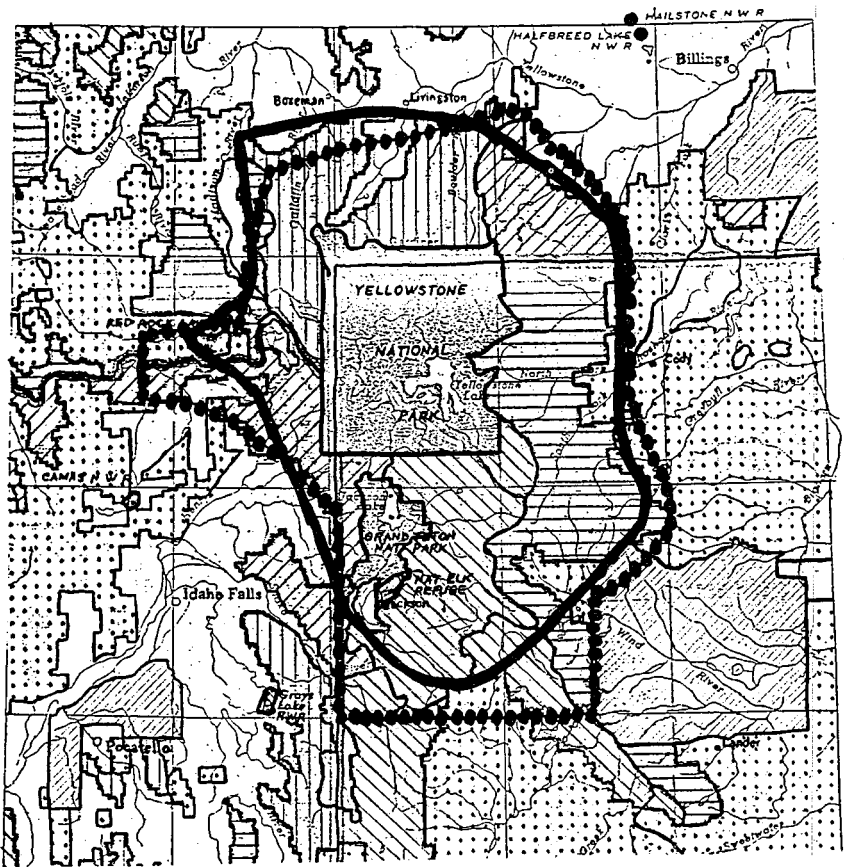
Oil and gas exploration in the Greater Yellowstone Ecosystem has been rather limited. The Bighorn Basin has some development, but is generally located east of the area, toward the Bighorn Mountains. The Overthrust Belt, which has been the focus of much exploration activity, skirts Yellowstone on the west, and is generally outside the Ecosystem. There is active drilling in two areas bordering the Ecosystem: in the Targhee National Forest in Idaho, southwest of Jackson, Wyoming, and in the area of Dubois, Wyoming, between the Shoshone National Forest and the Wind River Indian Reservation. There has been little or no oil and gas development in the Ecosystem, although substantial acreage has been leased and might be developed in the future.

There is very little mining and other mineral activity in the Yellowstone area, despite the fact that the area is generally mineralized, containing scattered deposits of gold, silver, copper, and other metals. The only commercial mining operation is a bentonite mine in the Shoshone National Forest near Cody, Wyoming. There is also a gold mine on private land near Jardine, Montana, near the north border of Yellowstone Park, which is almost in production.

Map 1. Public lands in the Greater Yellowstone Ecosystem



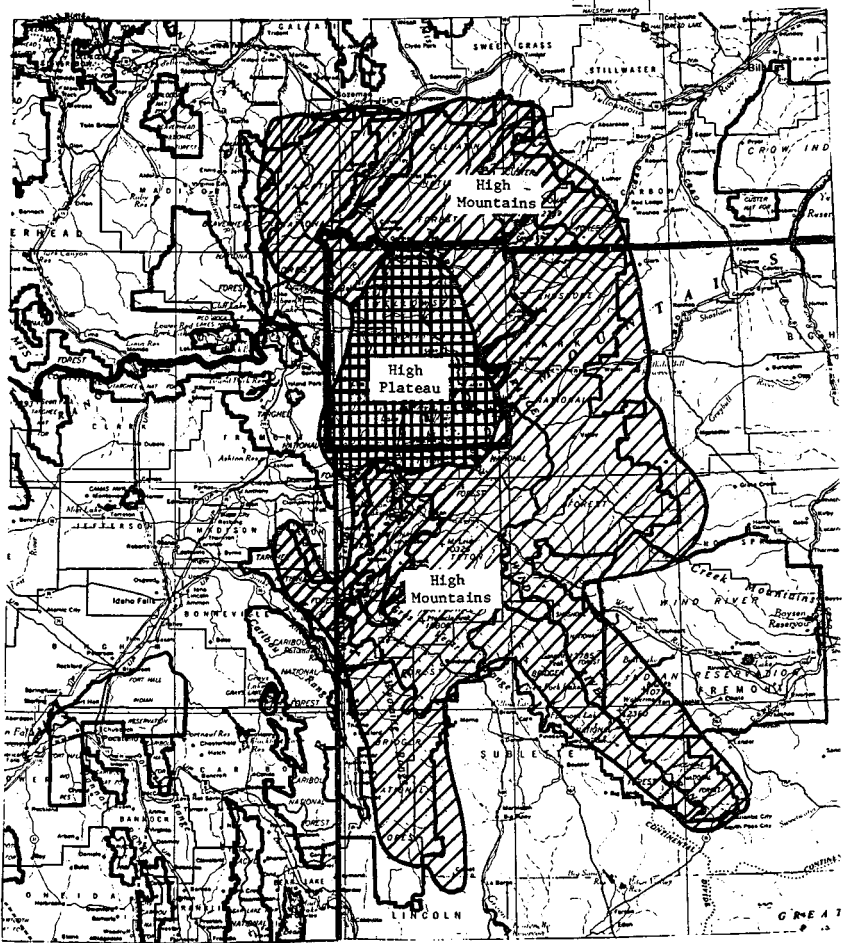
Map 2. Two versions of boundaries of a Greater Yellowstone Ecosystem



Greater Yellowstone Coalition's Ecosystem boundary:

———— as adapted by the Washington Post, June 23, 1985  
 ..... as adapted by the Chicago Tribune, August 25, 1985

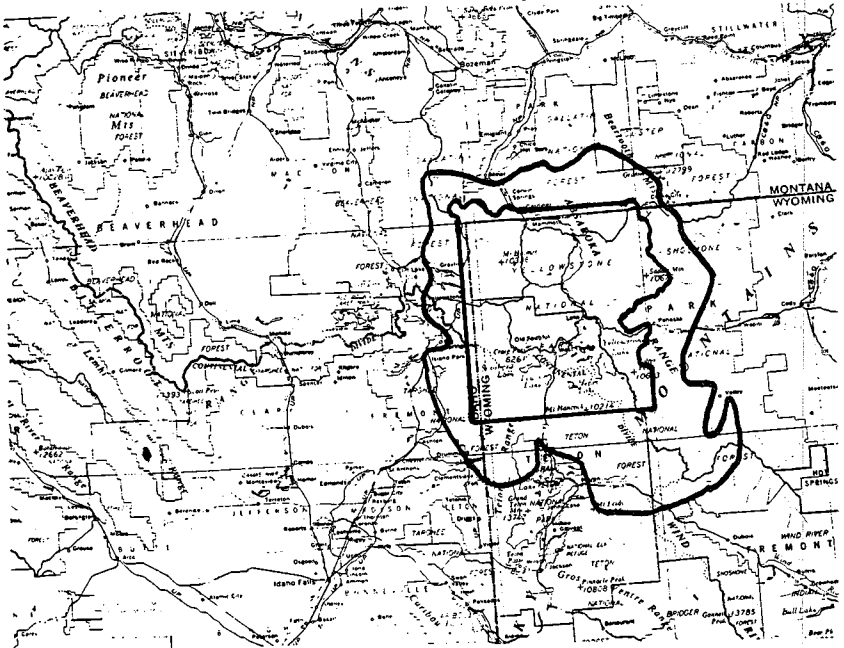
Map 3. Landforms in the Yellowstone area. Based on National Atlas of the United States. U.S. Geological Survey, 1970. p. 62.



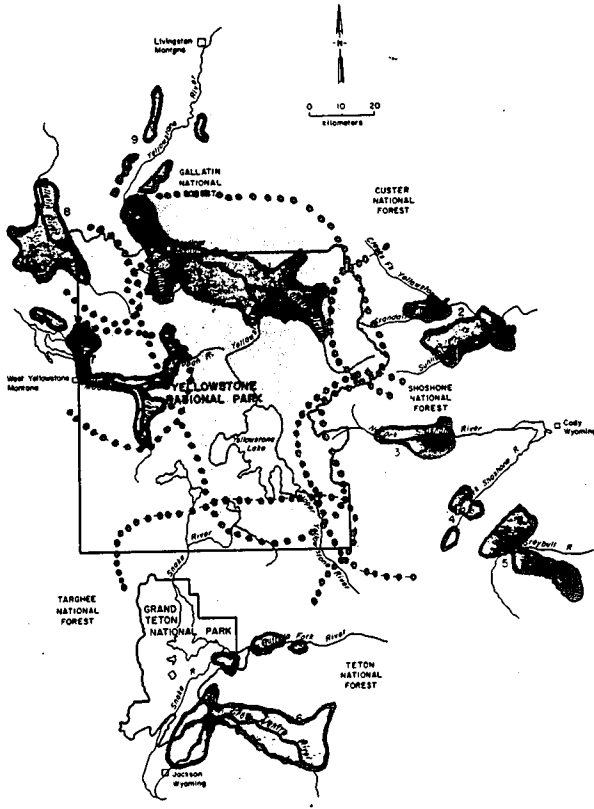
Map 4. Distribution of grizzly bears in the Greater Yellowstone Ecosystem.

Based on Grizzly Bear Recovery Plan. U.S. Fish and Wildlife Service. 1982.

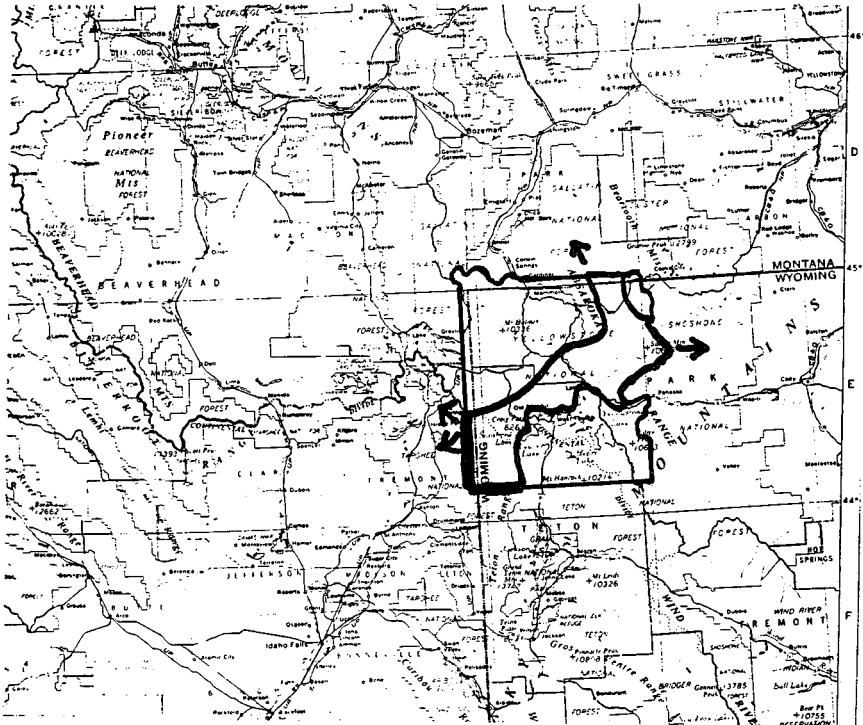
Redrawn from Fig. 3.



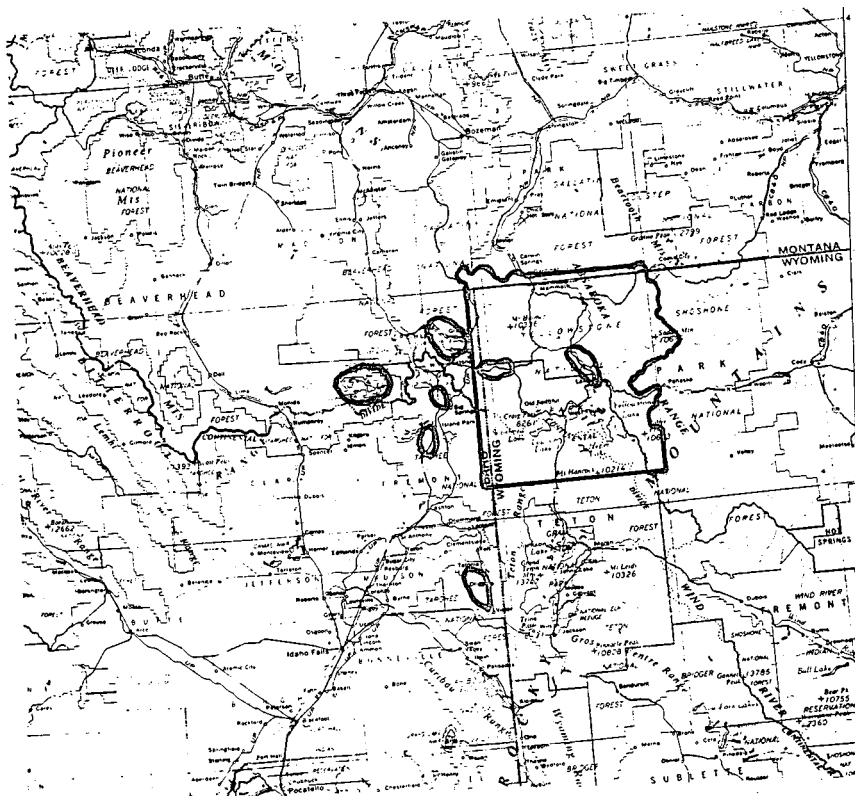
Map 5. Distribution of elk in the Greater Yellowstone Ecosystem. Taken from D. B. Houston. The Northern Yellowstone Elk. New York. MacMillan Publishing Co. 1982. Taken from Figure 4.2. Below, solid lines indicate winter ranges; dotted lines show the herds' overlapping summer ranges in the Park only.



Map 6. Distribution of bison in the Greater Yellowstone Ecosystem, with arrows showing where small numbers of bison leave Park boundaries. Based on M. M. Meagher. Yellowstone's Bison: A Unique Wild Heritage. National Parks and Conservation Magazine. 48(5) (May 1974): 9-14.



Map 7. Distribution of trumpeter swans in the Greater Yellowstone Ecosystem, showing principle winter habitats. From Ruth Gale, Montana Cooperative Wildlife Research Unit. Personal Communication.



Map 8. Distribution of bald eagles in the Greater Yellowstone Ecosystem, showing three bald eagle population units. Wyoming Fish and Game Department. A Bald Eagle Management Plan for the Greater Yellowstone Ecosystem. 1983. Taken from Figure 2, p. 3.

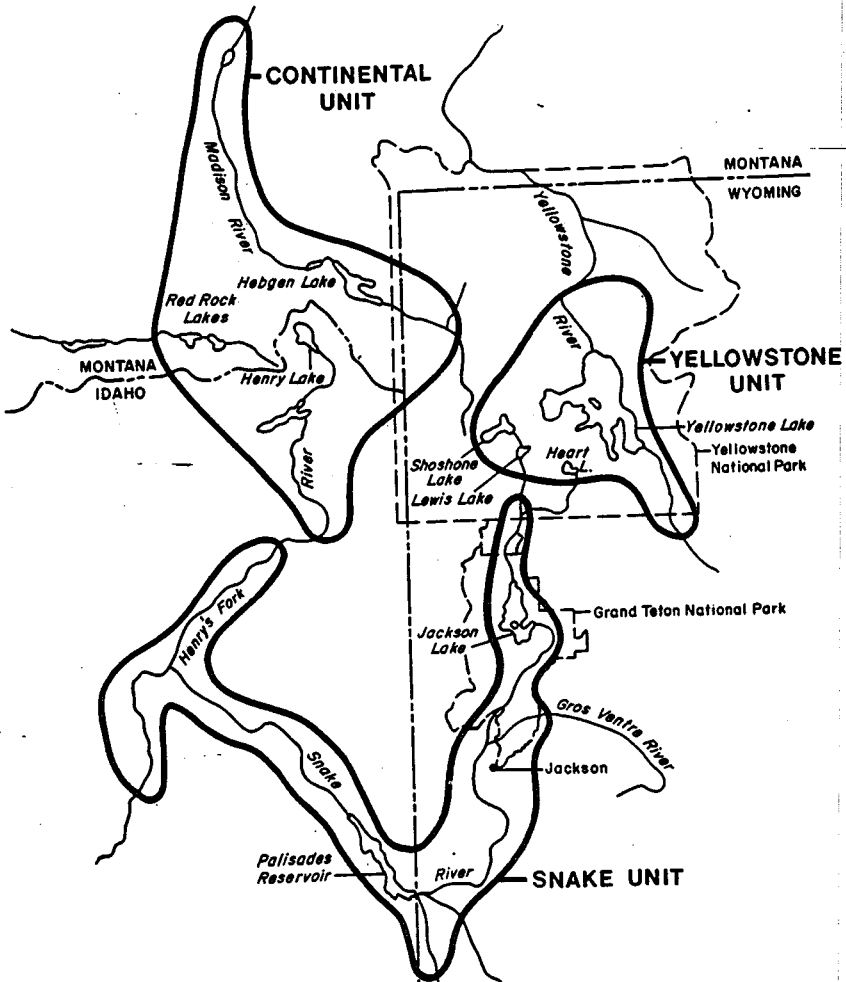


TABLE 1. Acreage, by Ownership, in the Greater Yellowstone Ecosystem.

	Gross Area	Area In Ecosystem		Private Inholdings		Net Area In Ecosystem
Yellowstone N.P.	2,219,800	2,219,800	100%	0	0%	2,219,800
Grand Teton N.P.	310,500	310,500	100%	2,300	1%	308,200
Subtotal	2,530,300	2,530,300	100%	2,300	0%	2,528,000
National Elk Refuge	25,300	25,300	100%	1,000	4%	24,300
Red Rock Lakes N.W.R.	60,500	60,500	100%	28,000	46%	32,500
Subtotal	85,800	85,800	100%	29,000	34%	56,800
Beaverhead N.F.	2,199,400	196,900	9%	7,000	4%	189,900
Bridger-Teton N.F.	3,439,700	1,695,100	49%	28,400	2%	1,666,700
Custer N.F.	1,278,200	510,900	40%	37,300	7%	473,600
Gallatin N.F.	2,150,700	1,795,800	83%	347,000	19%	1,448,800
Shoshone N.F.	2,466,600	2,034,900	82%	27,700	1%	2,007,200
Targhee N.F.	1,688,600	980,600	58%	23,300	2%	957,300
Subtotal	13,223,200	7,214,200	55%	470,700	7%	6,743,500
Bureau of Land Mgmt.	n/a	20,000		n/a		20,000
TOTAL FEDERAL LAND	15,839,300	9,850,300		502,000	5%	9,348,300
Private Land Blocks						340,000
TOTAL PRIVATE LAND						342,010

SOURCES: Congressional Research Service estimates from:  
 U.S. Department of Agriculture, Forest Service. Land Areas of the National Forest System, As of September 30, 1983. Report No. FS-363. Washington, U.S. Govt. Print. Off., 1983.  
 U.S. Department of the Interior. Index: National Park System and Related Areas, As of June 1, 1982. Washington, U.S. Govt. Print. Off., 1982.  
 U.S. Department of the Interior, Fish and Wildlife Service, Division of Realty. Annual Report of Lands Under Control of the U.S. Fish and Wildlife Service, As of September 30, 1984.  
 numerous different maps.

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TOTAL FEDERAL LAND	15,839,300	9,850,300		502,000	5%	9,348,300
Private Land Blocks						340,000
TOTAL PRIVATE LAND						842,015

## SOURCES: Congressional Research Service estimates from:

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U.S. Department of the Interior. Index: National Park System and Related Areas, As of June 1, 1982. Washington, U.S. Govt. Print. Off., 1982.

U.S. Department of the Interior, Fish and Wildlife Service, Division of Realty. Annual Report of Lands Under Control of the U.S. Fish and Wildlife Service, As of September 30, 1984.

numerous different maps.

TABLE 2. Federal Wilderness in the Greater Yellowstone Ecosystem.

	Ecosystem Net Area	Designated Wilderness	Proposed Wilderness	Total	
Yellowstone N.P.	2,219,900	0	2,032,720	2,032,720	91.6%
Grand Teton N.P.	308,200	0	143,650	143,650	46.7%
Subtotal	2,528,000	0	2,176,370	2,176,370	86.1%
National Elk Refuge	24,300	0	0	0	0.0%
Red Rock Lakes N.W.R.	32,300	32,350	0	32,350	99.5%
Subtotal	56,600	32,350	0	32,350	57.0%
Beaverhead N.F.	189,900	90,375	0	90,375	47.6%
Bridger-Teton N.F.	1,566,700	863,300	0	863,300	54.8%
Custer N.F.	473,600	345,695	0	345,695	73.0%
Gallatin N.F.	1,448,800	704,190	23,900	728,090	50.3%
Shoshone N.F.	2,007,200	1,071,985	0	1,071,985	53.4%
Targhee N.F.	957,300	116,535	14,400	130,935	13.7%
Subtotal	6,743,500	3,192,000	38,300	3,230,300	47.9%
Bureau of Land Mgmt.	20,000	0	0	0	0.0%
TOTAL FEDERAL LAND	9,348,300	3,224,400	2,214,370	5,439,300	58.2%



United States Department of the Interior  
NATIONAL PARK SERVICE  
YELLOWSTONE NATIONAL PARK  
WYOMING 82190

IN REPLY REFER TO:

K5415(YELL)

APR 04 1985

Dear Friends of Yellowstone:

The purpose of this letter is to provide a summary of current issues, the status of development projects, and other actions occurring in Yellowstone that will be of interest to you as well as members of the various publics that we serve and impact.

PLANNING AND DEVELOPMENT ACTIONS

GRANT VILLAGE

In July of 1984, new visitor facilities went into operation at the Grant Village area on the shore of Lake Yellowstone. TW Services and Hamilton Stores have made major investments in this area in accordance with their contracts. TW Services' facilities include 300 lodging units, restaurant, and registration office/gift shop. Hamilton Stores placed in operation a new general store with food service.

These facilities are in addition to the existing National Park Service (NPS) facilities located at Grant Village including a 433 site NPS campground, ranger station, visitor center, and laundry/shower building. Full automobile service is also available.

These new facilities represent the first stage of the development of the Grant Village complex as a major overnight accommodation center in the park. This action at Grant Village will enable us to accomplish other resource management actions in the park to ensure the preservation of the natural resources which the park was established to protect.

WEST THUMB

Over the next three years, the Hamilton general store, mini-store, and gas station will be phased out of the area. These facilities have been replaced by the new facilities at Grant Village. The gas station will be removed this spring, the general store in 1986, and the mini-store in 1987. This plan allows us to remove visitor service facilities from the midst of primary park features and replace them with new facilities just a few miles away.

OLD FAITHFUL

The Development Concept Plan has been completed for the Old Faithful area. This plan has been the subject of extensive public review, the last of which

was the review of the draft Development Concept Plan (DCP). We expect the final DCP to be ready for distribution within the next month. The main components of the plan are removal of a significant number of the Old Faithful Lodge and Snowlodge visitor cabins; improved access circulation and parking into the area; improved pedestrian circulation throughout the area, and removal of unnecessary support facilities from such close proximity to the geyser basin, such as concessioner laundry and employee housing. I would like to emphasize that the Old Faithful Inn and Snowlodge will continue as overnight lodging facilities, providing accommodations for 1,100.

#### FISHING BRIDGE

The future of facilities at Fishing Bridge is the focus of considerable attention by those interested in Yellowstone National Park.

Because of the great interest surrounding this issue, Russell Dickenson, Director of the National Park Service, requested a thorough review of the biological basis for the original decision to remove facilities and to restore the area to its natural state. The review has been undertaken and the final report is now available. Director Dickenson reaffirmed the longstanding direction to remove existing visitor facilities from the area. This was based upon compelling evidence that the Fishing Bridge area is of transcending biological importance as a significant grizzly bear habitat and for other natural resource attributes. In reaffirming this objective, the Director recognized the controversial nature of the issues and stressed the NPS's concern for continuing the long tradition of camping and other services that are offered in the park.

In response to a request by the Wyoming congressional delegation, the Park Service is preparing an Environmental Impact Statement (EIS) for the Development Concept Plan (DCP). The EIS will address the proposed relocation of visitor use facilities from the Fishing Bridge area to other locations within Yellowstone National Park. Socioeconomic effects on gateway communities resulting from the proposed relocation will be analyzed and documented. Cumulative environmental effects concerning relocation of facilities within the park will also be analyzed and documented.

Analysis and alternative studies, currently underway, will continue. Alternatives will be developed as part of a future public scoping package. To receive a scoping package, contact me by writing, Yellowstone National Park, P.O. Box 168, Yellowstone National Park, Wyoming 82190.

#### WINTER USE

Work on a comprehensive Winter Use Plan has been ongoing since last fall. This document will supplement the Master Plan in guiding our growing winter operation. Alternatives for dealing with various aspects of winter use will be considered in the framework of a draft plan/environmental assessment. The document will describe existing conditions, identify issues, and propose solutions. All aspects of the park's winter operation will be examined, and a plan for all future winter facilities and services will be developed.

The following list of objectives for winter use in Yellowstone have been developed as basic guidelines for the planning effort.

- To preserve the opportunity for public enjoyment of the unique winter environment and solitude of Yellowstone.
- To preserve park resources for the enjoyment of future generations.
- To provide a range of visitor experiences within resource constraints.
- To provide for adequate visitor safety.
- To provide access to park resources at reasonable cost to the visitor, including the handicapped.
- To provide a range of accommodations, including low cost accommodations, in proportion to demand.
- To provide for appropriate commercial uses of the park in winter.
- To provide adequate visitor information and interpretation of park resources.
- To establish reasonably predictable opening and closing dates for the winter and summer seasons, and to provide adequate visitor information and services during the off seasons.

A draft plan/environmental assessment is expected to be released this summer. Following a public review of the draft, a final plan will be formulated. The final plan is scheduled for completion prior to the 1985-86 winter season.

#### RESOURCE MANAGEMENT

##### BEAR MANAGEMENT AREAS

Legislation creating Yellowstone National Park and the Threatened and Endangered Species Act requires the commitment of the National Park Service to the preservation of the grizzly bear. Management of Yellowstone's bears is frequently the source of controversy, but scientists agree that the population has declined and needs immediate attention to effect recovery.

The bear management program in the park continues with a high level of effort in preserving and maintaining populations of bears as part of the park's native fauna, and providing for visitor safety. The primary objectives are: 1) An informed public, with appreciation of the ecological and aesthetic value of bears, and an awareness that exposing bears to unnatural food sources may lead to human injury or to the bear's destruction. 2) Bears must be able to use important habitat with minimum human interaction. 3) To eliminate unnatural attractants to bears before control actions are required and before contacts occur. 4) To effect prompt removal of bears from

developed areas when elimination of attracting food sources has not deterred their entry.

The limitation or restriction of human use in some portions of the park is an attempt to give grizzly bears preference in the use of certain key areas of important habitat. The park's bear management areas are designed with the flexibility to accommodate both short-range changes in bear activity and year to year changes, with the goal of restricting no more of the park than is necessary at any time to give the bears the room that they need. As the use limits are tested and studied, additional information will no doubt come to light that will further modify and refine the few necessary adjustments.

The Interagency Grizzly Bear Committee has appointed a special panel of public and private sector individuals who will review the Yellowstone closures and restrictions and will offer recommendations regarding this policy.

#### BISON

Yellowstone's bison are unique in the United States. Only here have wild bison survived since primitive times, long before establishment of the park in 1872. The Yellowstone herd provides cultural, scenic, educational, and scientific values which cannot be duplicated with bison herds elsewhere in the United States. The present population derives from two bloodlines: the original population of mountain bison, and the plains bison introduced in 1902.

Yellowstone bison are wild, free-ranging, unrestricted by boundary fences, and subject to minimal interference by man. The total population numbers about 2,000 at present. This population winters in three general areas: Lamar and Pelican Valleys and Mary Mountain (Hayden Valley-Firehole). None of these segments are geographically isolated at all seasons from the other; intermixing occurs to varying degrees.

Bison management in Yellowstone National Park has a goal of maintaining a truly wild, free-ranging population subject only to the influences of natural regulatory processes. This objective is unique in the United States. Nearly all other populations of bison are controlled by hunting or cropping, and are fenced; many are domesticated to some degree. However, the bison management objective for Yellowstone has been challenged because Yellowstone bison have brucellosis, apparently of the Brucella abortus type. The organism apparently does not affect the bison population adversely and is not regarded as a problem; indeed, the organism may be native to bison in North America.

Yellowstone bison appear to be a most unlikely source from which brucellosis can be passed to cattle in this area. There are no data to indicate a case of transmission between wild bison and cattle, nor between either of these bovids and wild elk, among which a low incidence of brucellosis can be found.

Herd groups, including cows and calves, have approached/crossed the boundary in the vicinity of the North and West Entrances. The State of Montana views

Yellowstone bison as carriers of brucellosis and as an inherent threat to domestic livestock whenever they leave the park. Therefore, we have developed a program of boundary control to ensure that those bison that do leave the park will not contact domestic livestock. Records compiled for a number of years generally indicate where and when such movement might occur. Bison that move beyond the park boundaries will be herded back by park personnel in cooperation with the state. Bison that do manage to evade such measures and move out of the park may be eliminated by state personnel.

#### ELK

The elk of Yellowstone National Park, together with the five other ungulate species, provide a large mammal viewing opportunity which is unparalleled in the contiguous United States. With a summer population estimate of between 25,000-30,000, the elk are the most abundant ungulate in the park. Elk distribution varies greatly by season. In the summer, elk use suitable range throughout the park and some of the herds intermix to some degree. Wintering areas are more limited and distinct.

The elk of the park are grouped into five major herds and one minor herd according to their winter ranges. However, Yellowstone National Park does not represent a complete habitat for the elk herds or portions of herds which are ecologically linked to winter ranges outside park boundaries. These animals are hunted on lands outside the park without seriously altering basic ecological relationships in the Yellowstone ecosystem or reducing the opportunities of visitors to see and photograph elk and other associated wildlife.

The major elk management issue has been population size and habitat relationships, particularly with regard to the northern Yellowstone herd. There has been no hunting or other artificial control of elk within the park since the winter of 1967-68. Thus, for 17 years, management of elk numbers has relied on natural regulation within Yellowstone combined with human predation on those population segments which winter outside the park.

The Northern Yellowstone Herd and its winter range has been the focus of controversy and research since the turn of the century. The herd was limited to 4,000-5,000 between about 1965-68 by control actions. A moratorium on reductions went into effect in 1969, and numbers have since increased to the present level of about 16,000. The most intensive research effort, spanning the years 1967-79 has shown that fire suppression, geology and climate outweigh elk numbers as influences on the vegetative condition on the northern range. For this reason, we do not allow human interference with those animals of the northern herd wintering within the park. The numbers wintering outside the park vary each year depending on winter severity, with the result that sport hunting does not take a consistent number of animals or portion of the herd annually.

With the present level of the elk population on the northern range, variable numbers of wintering elk move each year to portions of the herd's traditional winter range which are privately owned. Some landowners have expressed

concern that elk numbers are excessive and that damage to their property, especially hay and pasture, is occurring. However, local resident groups of elk also utilize some of these private lands. These concerns have been accompanied by requests that the park resume artificial control measures. However, wild animals that leave park boundaries become subject to state, rather than federal, legal jurisdiction.

#### HAZARD TREE REMOVAL

Many campgrounds and most roads in Yellowstone National Park were constructed under a canopy of old growth lodgepole pine. Age, insects, disease, and soil compaction, make the trees highly susceptible to windfall, and thus present a real safety hazard to the camper and traveler. There are five major campgrounds (Madison, Indian Creek, Bridge Bay, Norris, and Grant Village) and 190 miles of roads where tree hazards are a serious threat to visitors and their property.

Tens of thousands of trees along a twenty-two mile strip were felled by a windstorm on July 8, 1984, demonstrating the hazard posed to visitors by large lodgepole pines.

All lodgepole pine trees over five inches in diameter have been removed from Bridge Bay Campground and the resulting stumps ground off. Roadside hazard trees have been removed from the South Entrance, Craig Pass, and Lake-West Thumb highways. This was accomplished by a private contractor.

The removal of beetle-killed trees from Madison Campground was completed. Permits were sold to members of the public to remove the trees for firewood. This fall, we plan to remove the dead trees from Norris Campground in the same manner. No major removal is contemplated for 1985.

#### PHYSICAL SCIENCE ISSUES

##### EARTH SCIENCES

Currently basic research is a healthy mix of programs and individual investigations conducted by university, U.S. Geological Survey (USGS), and NPS scientists. These studies, largely supported by interim funding from NPS and USGS, are gradually refining our knowledge of important processes and systems within the largest and potentially most hazardous volcanic system in North America. For example:

- Rapid uplift within the Yellowstone Caldera: When did it start? Is the rate changing? Is it a precursor to increased volcanic activity? How is it affecting ecosystems?
- Seismic activity: How is it related to uplift? Does it signify emplacement of magma? How does it regulate geothermal activity? Can we forecast large earthquakes such as the M 7.5 event in 1959?

- Geothermal systems: How do the waters circulate? Are there connections across the boundary with areas of geothermal leasing? How are changes related to uplift and earthquake activity? How can we forecast hydrothermal explosions?

#### ISLAND PARK GEOTHERMAL AREA (IPGA)

Leasing activity is constrained by the IPGA EIS of 1980, which states that Federal leasing must wait until the Secretaries of Interior and Agriculture concur that there would be no adverse impacts on Yellowstone's unique thermal features. The Melcher Amendment of 1984 may offer some additional protection on approximately 28,000 acres in scattered tracts more than 2.5 miles from the boundary. It states that "Notwithstanding any other provision of law, the Secretary shall not issue any geothermal lease pursuant to the Geothermal Steam Act of 1970 in the Island Park.(sic) Known Geothermal Resource Area adjacent to Yellowstone National Park." The amendment does not relieve the pressure on Island Park. Leasing has already occurred on over 24,000 acres of private and state lands, and other federal lands on the boundary within the IPGA are still open to lease application.

#### OIL AND GAS LEASING

More than 30,000 acres of federal land in the Gallatin National Forest are under lease for oil and gas along the park boundary near West Yellowstone. Even larger areas are under lease application in the Washakie Wilderness and the Targhee National Forest. Leases issued during the past four years lie on the park boundary, contain no stipulations protecting resources in Yellowstone National Park, are located within an area of the highest earthquake risk category, and if developed will extract hydrocarbons from park lands. Baseline ecosystems studies are needed all along the boundary in advance of drilling.

#### YELLOWSTONE RIVER TURBIDITY

In 1985, NPS will carry out a study of suspended sediment and turbidity in the Yellowstone River between the headwaters in the Lamar River drainage and Livingston, Montana. The goals of the study are to identify sources and amounts of sediment carried by the river and to learn the mechanisms of sediment input. The study is in response to concerns expressed by the Livingston Chapter of Trout Unlimited, who have stated their willingness to partially fund the work.

#### MINING

Mining activity has increased near the park in recent years with the anticipated reopening of the Jardine Mine by Homestake Mining Company and renewed interest in open pit mining at Daisy Pass near Cooke City. When mining was in full operation in the 1930's and 1940's, Bear Creek and Soda Butte Creek were severely impacted by acid mine drainage. Although some baseline studies have been done, additional studies are needed in these and other drainages potentially affected by mining activity.

## ACID DEPOSITION

Since June 1980, NPS has operated a National Atmospheric Deposition Program station in Yellowstone at Tower Ranger Station. The mean value of precipitation acidity has remained near pH 5.6 over the years, but episodes as low as pH 4.4 have occurred. Some high country lakes in Yellowstone may be susceptible to episodes of low pH.

## NPS CONSTRUCTION

### FEDERAL LAND HIGHWAY PROGRAM (FLHP)

Many of the roads in Yellowstone are in a deteriorated condition and are scheduled to be rehabilitated over the next ten years under FLHP. There are two projects which will have an impact on the visitors over the next few years.

Construction began on the South Entrance road during the summer of 1983 with repairs to the base and drainage structures along the road. The construction continued into the 1984 visitor season and will be completed in 1985. Only minor delays are expected to complete the road shoulder, striping, and guardrail. In addition to the normal Federal Highways roadwork, Fishing Bridge intersection will be realigned to provide left turn lanes and improve traffic flow by the National Park Service.

The next major road section which will be worked on will be Craig Pass, from the West Thumb Junction over to Old Faithful. The design work began in 1984 with the construction expected to be after the 1986 fiscal year.

### NPS ROAD PROGRAM

In addition to the FLHP program, the National Park Service expends approximately \$900,000 on road rehabilitation yearly with NPS crews. This year's construction will be concentrated in the north end of the park with a three mile section of road between Mammoth and Tower Junction. This road construction will cause minor delays to traffic throughout the summer.

### PARK RESTORATION AND IMPROVEMENT PROGRAM (PRIP)

The National Park Service will expend \$1.5 million on PRIP projects this year in Yellowstone. Projects include rewiring of quarters and historic structures, reroofing, historic structure rehabilitation and painting, as well as miscellaneous roadside and bridge work. This program, over the past four years, has gone a long way toward correcting many of the health/life safety deficiencies facing us.

### CONCESSION FACILITY UPGRADE

Since 1980, the National Park Service and TW Services have been involved in a major facility rehabilitation program. The projects are generally directed

toward correcting health and life safety deficiencies, code violations, sanitation problems and deterioration of historic buildings. The types of projects that have been completed to date include extensive rehabilitation of four major kitchens, two new dorms and rehabilitation of eleven existing dorms, structural rehabilitation to various buildings, fire detection/suppression systems as well as a variety of other projects too numerous to list here. Two of the more obvious projects are the new lobby/dining improvements at the Lake Hotel and reshingling of the Old Faithful Inn. Through 1985, the National Park Service has expended over \$27 million and TW Services over \$13 million on these improvements.

More recently under a contract with Edsall Construction of Bozeman, Montana, the NPS is spending \$7.8 million to replace five major boiler plants and construct a new centralized laundry facility. This project began in the fall of 1984 with completion scheduled for the spring of 1986; and will greatly improve heating plant efficiency, reduce air pollution, and allow us to remove intense service functions from the center of visitor accommodations. In the fall of 1985 work will begin on the rehabilitation of the Old Faithful Lodge and Roosevelt Lodge kitchens at a cost of \$2 million.

This summer work will begin on improvements to the North Entrance and Gardiner, Montana, water system to provide additional fire protection and service to the new laundry facility.

Hamilton Stores will be constructing a new employee dorm at the Tower Fall area this summer.

#### VISITOR USE

During the summer season we operate six visitor centers seven days a week. Through these visitor centers, we provide information to over 1.2 million visitors annually. We also contact over 400,000 visitors through guided walks and evening programs. We have virtually completed a plan that outlines various improvements for the future regarding visitor centers, wayside exhibits, and other interpretive activities. The objective of the plan is to greatly improve the education opportunity for the park visitor regarding the remarkable ecosystem of Yellowstone.

Yellowstone will continue to honor Grand Teton's entrance receipt with permits valid for 7 days.

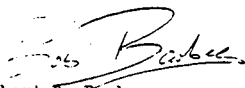
Registration systems will vary throughout the park's campgrounds during the coming season as we move toward personal fee collection systems. Camping fees will remain \$6.00 or \$5.00 depending on the services available with the exception of group and hiker/biker rates increasing from \$1.00 to \$2.00 per person, per night.

The charge for boat permits will remain the same: \$10 for motorized vessels and \$5 for non-motorized vessels. We will honor Grand Teton National Park's permit and issue a non-fee tab.

The annual Commercial Use License fee will be \$50 instead of \$25.

We hope this summary will prove helpful. Detailed information can be obtained on any issue upon request.

Sincerely,

  
Robert D. Barbee  
Superintendent

STATEMENT OF  
R. MAX PETERSON, CHIEF  
FOREST SERVICE  
UNITED STATES DEPARTMENT OF AGRICULTURE

At An Oversight Hearing Before The  
Subcommittee on Public Lands, and  
Subcommittee on National Parks and Recreation  
Committee on Interior and Insular Affairs  
United States House of Representatives

Concerning Management Issues Relating to the  
"Greater Yellowstone Ecosystem"

October 24, 1985

MR. CHAIRMEN AND MEMBERS OF THE SUBCOMMITTEES:

I appreciate the opportunity to participate in this hearing on management issues relating to the "Greater Yellowstone Ecosystem." We are well aware of the high degree of public interest in the management of the outstanding natural resources and features of this area. We believe the interagency cooperative management in this area has been successful.

The many and special values of the Yellowstone area became well known to early trappers and prospectors. Their enthusiastic and colorful accounts of the area's resources led to a detailed Federal survey in the mid-1800's. A great amount of national publicity followed, and in 1872, Yellowstone was established as the Nation's first National Park, representing the initial Federal management presence in the Yellowstone area. This was followed in 1891 by the establishment of the Yellowstone Timber Land Reserve, created for the production of timber products and the protection of watershed resources. The Reserve was the forerunner of the Nation's first National Forests--the Teton, Shoshone, and Targhee in the late 1800's.

Portions of seven National Forests, established during the period 1897 to 1908, are located within the Yellowstone area. These include the Gallatin, Custer and Beaverhead National Forests in southeastern Montana; the Shoshone, Bridger, and Teton National Forests of western Wyoming; and the Caribou and Targhee National Forests in eastern Idaho. These National Forests are managed according to multiple-use and

sustained-yield principles which provide for the use and protection of the land and resources.

In addition to Yellowstone National Park and the seven National Forests, the Yellowstone area also includes the National Elk Refuge in Jackson Hole, Wyoming, which was created in 1912 as a result of public interest in the survival of the resident elk herd; the Red Rock Lakes National Wildlife Refuge which was established in 1935 for the protection of trumpeter swans; the Grand Teton National Park; and the John D. Rockefeller Memorial Parkway.

#### Land Ownership Patterns

Land ownership within the Yellowstone area is largely Federal. This includes lands administered by the Forest Service, National Park System, Bureau of Land Management, U.S. Fish and Wildlife Service, and Bureau of Reclamation.

Some State and privately owned lands are interspersed among Federal lands, but most are along the periphery or are located along major roads and drainages. The limited amount of private land has resulted in an economy that is heavily dependent upon uses and resources from Federal lands.

- Local residents use Federal lands as well as State lands almost exclusively for most of their outdoor recreation.

- The livestock industry utilizes forage from National Forests to support viable year-round operations.

- Local lumber mills and many small family-owned operations that supply posts, poles, mine props, house logs, and fuelwood are dependent upon National Forests as a source of timber.

- Commercial outfitters and guides use federally managed land and water for a large portion of their operations.

#### Natural Resources, Their Management and Use

The Forest Service recognizes and is sensitive to the outstanding natural

resources within the Yellowstone area. The area is rich in natural, cultural, and recreational resources.

The National Forests have spectacular scenery. Perennial snowfields, numerous green meadows, alpine and glacial lakes, and a very diversified vegetation mosaic are some of the many visual attractions.

National Forests offer a wide range of recreational opportunities, particularly those associated with undeveloped recreational qualities. Developed recreation in the private sector, including ski resorts, lodges and other facilities, is of national importance. A number of outfitters and guides offer services for day and overnight trips for hunting and fishing, whitewater rafting and boating.

Designated wilderness on National Forests totals over 4 million acres, or 30% of the National Forest System lands involved. Wilderness areas are used for hunting, pack trips, fishing, horseback trips, mountain climbing and day hiking. The objective of wilderness management is to protect wilderness values.

National Forests in the Yellowstone area support large and varied fish and wildlife populations including such wildlife species as the Rocky Mountain Elk and Rocky Mountain Bighorn Sheep. Major populations of moose, mule deer, bear and pronghorn antelope, in addition to hundreds of species of small and nongame animals, also occur here. Loss of big game habitat and winter range on some private lands and the high economic value of big game hunting have increased the importance of the National Forest in supporting wildlife populations. The National Forests also contain significant acreages of riparian and aquatic habitat which are highly productive and have diverse lifeforms, including several blue ribbon trout streams. Wildlife species on these lands which are listed as endangered or threatened include the northern bald eagle, peregrine falcon, Kendall Warm Springs dace, grizzly bear, and whooping crane.

A comprehensive program is necessary for the management of essential habitats for these threatened and endangered species. Survival of many, including the grizzly bear, is contingent upon habitat from Yellowstone National Park and the

adjacent National Forests. To further the grizzly bear recovery effort, some 1.6 million acres of the Bridger-Teton, Shoshone, Gallatin, Custer and Targhee National Forests have been designated as Situation I Grizzly Habitat, where highest management priority is given to maintenance and improvement of grizzly habitat and grizzly-human conflict minimization. Approximately 16% of the total National Forest lands in the area are in Situation I. An additional 2.3 million acres of Yellowstone and Grand Teton National Parks have likewise been designated Situation I Habitat, making a total of almost 4 million acres of Federal Situation I Grizzly habitat.

Livestock grazing is among the oldest of historical land uses on the National Forests. Most of the social and economic structure of the area is tied directly to ranching and farming. Many of the surrounding communities were built on that economic base. A majority of the local livestock ranches depend upon National Forest ranges for livestock summer range to round out their operations. Other industries such as tourism, mining, timber, oil and gas exploration, and recreation have added to that base.

National forests of the Yellowstone area contain important commercial forest lands. These forests produce timber products for the local timber industry and are, at the same time, managed for diversity of habitat. The presence of damaging insects and disease has been a major concern in managing the forest resource and threatens the natural beauty of the forests and parks. Mountain pine beetle has historically inflicted extensive damage in mature and overmature stands of lodgepole and whitebark pine. There are also serious infestations of spruce budworm in stands of Douglas fir, and dwarf mistletoe is common in lodgepole pine. Silvicultural activities offer one of the best long term solutions to minimize damage from such insect epidemics.

The Forests also contain the headwater tributaries of three major river systems that flow into three major drainages (Pacific Ocean, Gulf of California, and Gulf of Mexico). The National Forest watersheds contribute to the Yellowstone, Gallatin, and Madison Rivers on the north, and the Clarks Fork of the Yellowstone, the Shoshone and Grey Bull

Rivers on the east which are tributaries of the Missouri River system. To the south and west originate the Snake and Henrys Fork Rivers of the Columbia River system. Flowing to the south, the Green River begins its journey to the Colorado. These waters have been found to be nearly pristine in quality and are utilized to meet a variety of demands including downstream agricultural use, campground water supplies, and recreation boating. The lakes and streams on the National Forests offer outstanding fishing.

Mining claims are concentrated on the north and east portions of the Yellowstone area where gold, silver, platinum, palladium, copper, sulphur, lead, and molybdenum are found. Geothermal energy potential may exist to the west and north of the Park. Concern has focused on the potential effects that geothermal development might have on the geysers and other thermal features of Yellowstone Park.

Large areas of the National Forests have geologic formations and structures with potential for the production of oil and gas. National Forests on the southern portion of the Yellowstone area lie within the overthrust belt, a geologic region of folded and faulted rock strata which may contain nationally important quantities of oil and gas.

Socioeconomically, one of the most significant aspects of the Yellowstone area is its recent growth in response to tourism and energy development. Increases in the tourism, mining, and energy industries have produced an economic expansion in the region with the regional population growing faster than the national average. Although the population is growing, the overall character of the region remains much the same. The density of the population remains sparse with a large percentage of personal income supplied by agriculture.

Three separate economic regions exist within the Yellowstone area, and they display sharply divergent economic characteristics. The Wyoming portion of the

area enjoys more economic activity from recreational travelers because of its location and access routes to popular attractions in Yellowstone and Grand Teton National Parks and the adjacent National Forest lands. Although tourism and ranching have historically been the major industry, energy development is becoming increasingly important to the region's economy. Logging and wood processing have historically contributed to the area's economic stability.

The Idaho portion also receives some benefit from recreational travelers; however, farming and food processing are more important industries. Less favorable access to the area's recreational attractions and the dominance of agriculture have kept the Idaho counties' tourist-serving industries from gaining in economic significance. Logging is also important in this area due partially to timber salvage programs implemented to combat the mountain pine beetle infestation.

The Montana portion has a somewhat depressed agricultural economy similar to other areas of the Nation. An exception is Gallatin County which has a significant recreational industry. Most of this economic region does not share the level of prosperity from tourism or agriculture which is enjoyed in either of the other two socioeconomic portions of the Yellowstone area.

#### Complementary Nature of Some Resource Uses and Potential Conflicts Among Others

It should be recognized that the Federal land management agencies represented in the Yellowstone area have distinctive missions designed to provide varying goods and services as mandated by Congress. However, activities and policies of the various land management agencies are often complementary. For example, big game hunting is of great importance to the area both from a recreational and economic perspective. The ability to hunt on National Forest lands helps maintain big game populations at levels in balance with the carrying capacity of the area. Stable big game populations promote stable local economies which are dependent upon recreational use such as outfitting and guiding. In addition to hunting, National Forests provide habitat and forage to support and

complement big game herds that migrate from other lands, particularly Yellowstone and Grand Teton National Parks. The multiple-use philosophy, under which the National Forests are administered, provides considerable flexibility to manage wildlife habitats in a manner which enhances the big game population of the Yellowstone area. National Forest management plans have management prescriptions designed to maintain or improve wildlife habitat in these areas. These plans tie to allotment management plans on areas open to livestock and include provisions for meeting the forage needs of the indicated levels of wildlife.

National Forest Wilderness Fire Management Plans also complement the natural ecological process by allowing wildfire to assume its natural role, where this can be done without jeopardizing safety, private property and important multiple-use values. These plans are coordinated with National Park objectives so that prescribed or natural fires that remain within prescription may cross jurisdictional lines to meet the same ecological goals. These cooperative ventures have been in effect for several years. Future applications will include the use of fire for natural ecosystem maintenance in some nonwilderness areas.

Developed campgrounds on National Forests help meet overall public demand for recreation sites within the area by satisfying the needs of the public traveling to destinations outside the area and by providing campground space to overflow users from the National Parks. Information and education programs are multi-agency and supported through local Chamber of Commerce centers.

While many resource uses are in harmony and mutually supportive, other uses can potentially conflict. Activities that sometimes conflict include timber harvest, energy exploration and development, recreational camping, and grizzly bear activities. Problems are also sometimes created by transient animals and plants such as buffalo, noxious weeds, and insects.

Timber harvest may conflict with other agency management objectives from a visual perspective or in an ecological sense. Most significant is roading associated with

the removal of timber products. Roads provide access to previously undeveloped areas and may affect wildlife populations, hunting, fishing, migration corridors, or outfitter operations. Mitigation measures, such as effective road closures, normally minimize these potential effects.

Energy exploration has many of the same potential conflicts as roads and timber harvests. Development may include high density well drilling, access roads, utility and pipeline corridors, and numerous other facilities for shipping the product.

Grizzly bear conflicts with other uses and activities are of high concern. These conflicts may result in the death of the bear or curtailing of its habitat. These conflicts may occur because of recreational use, mistaken identity with black bears during the hunting season, poaching, or improper care or storage of food and garbage at small towns and campsites. Conflicts may also be associated with livestock grazing, timber harvesting, and associated activities in essential habitat.

Transient plants and animals cross administrative boundaries into which the control or management of that organism may differ. Buffalo, and to some extent elk, may carry brucellosis and infect livestock on adjacent areas requiring State quarantines. Noxious weeds and exotic plants or animals may not be treated by one jurisdiction, creating problems for other jurisdictions where control efforts are undertaken. Endemic populations of insects such as the mountain pine beetle may reach epidemic proportions which, if not promptly treated, can spread throughout the area, and exceed the capability of localized attempts at control.

#### Coordination and Cooperation Among Federal Land Managers

During the 1950's, it became increasingly apparent to Federal land managers that an effective coordination mechanism was needed for the Yellowstone area. The Greater Yellowstone Coordinating Committee was established in the early 1960's to meet this need. Committee membership includes the Regional Foresters of the Northern, Rocky Mountain, and Intermountain Regions of the Forest Service; the Rocky Mountain Regional Director of the National Park Service; the Superintendents of Yellowstone and Grand

Teton National Parks; and the Supervisors of the Gallatin, Targhee, Beaverhead, Custer, Shoshone and Bridger-Teton National Forests. The entire Committee meets during the fall of each year while the Forest Supervisors and Park Superintendents hold an additional winter meeting. Other units of Federal, State and local governments are invited to interact with the Committee on matters of mutual interest and concern. Field coordination trips are also held annually. Results of these trips include: agreements on exchanging trail maintenance, uniform signing adjacent to Park lands and National Forest Wilderness, procedures for either agency to issue camping permits, and unified approach to solving trespass and violations.

The Committee has provided the framework for the identification and successful resolution of a wide range of coordination needs over the past two decades. Some examples include:

- Development of the Greater Yellowstone Grizzly Bear Guidelines in 1974 which have been universally accepted as the primary source for management considerations involving the grizzly bear.
- Development of the "Bear Us in Mind" grizzly bear educational campaign in 1982 which was designed to minimize the potential for grizzly bear/human conflict and raise the public's awareness of the special grizzly areas. We plan to implement phase II of "Bear Us In Mind" which has been identified by the Interagency Grizzly Bear Committee as a high priority program.
- Development of an "Outfitter Policy for the Greater Yellowstone Area" which established guidelines for dealing with outfitters, guides and organized group activities in the Yellowstone area.
- Completion of Elk Management Studies which are directed towards the establishment and maintenance of healthy elk populations in the Yellowstone area.
- The Greater Yellowstone Regional Cooperative Transportation Study in 1978 which examined the existing and projected regional transportation system.

Other coordination needs addressed by the Committee over the years include such diverse matters as snowmobiling policy, off-road travel policy, locations of gravel pits for road construction and management, maintenance of visual qualities, development of public accommodations, land use planning, an avalanche warning system, wilderness management and air quality monitoring. In addition to the numerous coordination efforts successfully initiated through the formal mechanism of the Coordination Committee, there are many other instances of interagency cooperative efforts to meet specific program needs within the Yellowstone area. Examples of this cooperation include:

- Development of the Bald Eagle Management Plan for the Greater Yellowstone Ecosystem to promote recovery of the bald eagle.
- Completion of the Island Park Geothermal Environmental Impact Statement in 1980 which concluded that the Secretary of Agriculture would not consent to geothermal leasing on National Forest lands until the Secretary of the Interior determined that geothermal development would not adversely affect the unique thermal features of Yellowstone National Park.
- Development of the Whiskey Mountain Bighorn Sheep Management Program for the management of the largest herd of Bighorn Sheep in the lower 48 States.
- Interagency Cooperative Law Enforcement Program to control poaching of grizzly bear on the National Forests and National Parks.

We plan to continue our participation in the Greater Yellowstone Coordinating Committee and recommend to the Committee that the membership be expanded to include representation from each State. In addition, the Department of Agriculture will continue working with the Department of the Interior on the Park Protection Working Group.

The past several years have seen increased concern and activity related to the recovery of the grizzly bear which is listed as a threatened species in the 48 conterminous States. This led to a revision and expansion of the Interagency Grizzly Bear Committee (IGBC) through a 1984 Memorandum of Agreement between the Secretary of Agriculture and the Secretary of the Interior. This agreement recognized

the need for all Federal and State agencies with responsibilities for the grizzly bear to coordinate their management and research actions.

The ten member Interagency Grizzly Bear Committee includes three Regional Foresters, Forest Service; a Regional Director, National Park Service; a Regional Director, U. S. Fish and Wildlife Service; the Bureau of Land Management State Director for Montana; and representatives of the States of Idaho, Montana, Wyoming, and Washington as named by the appropriate governor. A Subcommittee of the IGBC has been named to deal specifically with recovery efforts in the Yellowstone area. Representation on this subcommittee includes the five Forest Supervisors, Yellowstone and Grand Teton Park Superintendents; and State representatives from Wyoming, Montana and Idaho and the U.S. Fish and Wildlife Service. The Subcommittee focuses its attention on the implementation of management actions in a coordinated fashion within the ecosystem as well as identifying research needs and financial needs for management. Efforts of this type look at specific issues and their relationships to the entire Yellowstone area. We are proud of the accomplishments of this group and will continue to be an active participant.

The Grizzly Bear Cumulative Effect Model for the Yellowstone area is in its second year of development under the leadership of the Interagency Grizzly Bear Committee. Once completed, it will be utilized on all Forests in the Yellowstone area to provide the land managers with better data on grizzly bear habitat and to assess the potential effects of proposed activities. This will provide land managers better information upon which management decisions can be made.

#### Initiatives to Be Undertaken/Anticipated Results of Proposed Management

Extensive coordination efforts have been and are underway in conjunction with the development of Forest Plans for the seven National Forests in the Yellowstone area. This involves frequent and ongoing contacts with the National Park Service, Fish and Wildlife Service, Bureau of Land Management, State agencies such as Fish and Game Departments, and a wide range of interested organizations and private citizens. As a result of these coordination and public involvement activities, we are confident that the plans will be responsive to the high level of interest and concern for the special