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Chapter I. Introduction

A. Purpose and Objectives.

Handbook H-8270-1 combines with Manual Section 8270, "PALEONTOLOGICAL RESOURCE MANAGEMENT" to form the 8270 Manual. The Handbook is intended to enhance the general policy and broad direction contained in the Manual Section by giving practical guidance to Bureau of Land Management (BLM) managers and staff whose duties include coordination of planning, permitting, and other activities related to the management of paleontological resources on BLM public lands. The Handbook does not stand alone; it is incomplete without the Manual Section. The purpose of the whole Manual is to assure adequate and appropriate consideration and protection of paleontological resources on the public lands.

Chapter II. Land-Use Planning and Environmental Review

A. Land-Use Planning for Paleontological Resources.

The BLM'S objectives for paleontological resources are to manage them for their scientific, educational and recreational values, and to mitigate adverse impacts to them. Data on the occurrence of fossils is essential to decision makers for meeting these objectives. Considerable time, money and effort may be saved by considering paleontological data and appropriate uses for fossil localities as early as possible when making land-use decisions at the regional, State and local levels.

For paleontological resources, the land-use planning process includes:

- a. Identifying areas and geological units, i.e., formations, members, etc., containing paleontological resources;
- b. Evaluating the potential of area to contain vertebrate fossils or noteworthy occurrences of invertebrate or plant fossils;
- c. Developing management recommendations (including mitigation measures in specific locations to promote the scientific, educational and recreational uses of fossils on public lands and mitigate resource conflicts; and
- d. Developing strategies to regularly monitor public lands where important paleontological localities have been identified.
- 1. Identifying Paleontological Resources Field Office Level Review.

Fossils are part of the geological units in which they occur and may be extensively distributed both vertically and horizontally throughout the unit. Fossil localities noted to occur within a given geologic unit indicate that the unit may yield fossils throughout its entire areal extent, which may be several hundred or several thousand square miles. Thus knowledge of the outcrop pattern of geologic units, and the kinds of quality of the fossils produced by such units, is a critical management tool for land-use decision making where fossils may be involved.

Locating, evaluating and, classifying paleontological resources, and developing management strategies for them must be based upon the best scientific information available. Management of paleontological resources should emphasize the uniqueness of fossils, their usefulness in deciphering ancient and modern ecosystems, the public benefits and public expectations arising from their scientific, recreational and educational values, the BLM's interest in a need for the continued advancement of science of paleontology, and the importance of minimizing resource conflicts within a multiple use framework.

Paleontological expertise is required and available to help managers address issues involving paleontological resources. While expertise in paleontology is scarce within the BLM, State Office or Regional Paleontologist shall be called upon to provide direct assistance to Field Offices for planning or other activities related to managing paleontological resources, or to help identify other sources of assistance to interdisciplinary planning teams.

During initial scoping for land-use planning, BLM Field Offices should notify and consult with their State Office or Regional Paleontologist when beginning a process of identifying and evaluating lands where paleontological resources may exist. The objective of this initial scoping is to serve as a filtering process for Field Offices to determine whether vertebrate fossils, or noteworthy occurrences of other fossils, are known or are likely to occur in the study area. If such fossils are identified as being present, further analysis and evaluation shall be carried out by qualified paleontologist whenever surface disturbing actions are proposed for such lands. (A qualified paleontologist is one who is qualified to hold a paleontological resource use permit issued by the BLM. Such qualifications can be found in 8270-1 Handbook Chapter IV, C.) Information gained during this preliminary consultation phase should then be used by the Field Office as a basis for gathering additional data on areas identified as likely to produce fossils and to classify areas as set forth in Section 2, Classification, below.

Paleontological data for planning purposes is available from many sources. Among those that should be consulted are internal BLM planning documents and maps, Natural Resource Conservation Service soil maps, aerial photographs, USGS and State produced geologic maps, published and unpublished reports, permit files and locality reports. In addition, many kinds of maps and other data are now available in digital format on the World Wide Web and other sources. Field Office geologist may also provide information on fossil occurrences by networking with colleagues in other offices or organization. Information may also be obtained through technical assistance agreements with other Federal and State agencies, local colleges, universities and museums, as well as with professional societies, State Geological Surveys and the U.S. Geological Survey. Field checks of geological units and areas identified through such preliminary scoping and data collection may also be done at the BLM Field Office level.

2. <u>Classification</u>. Classification is a ranking of areas according to their potential to contain vertebrate fossils, or noteworthy occurrences of invertebrate or plant fossils. These rankings are used in land-use planning, as well as to identify areas that may warrant special management and/or special designation such as Areas of Critical Environmental Concern. Public lands may be classified based on their potential to contain such fossils, using the following criteria:

a. *Condition 1* – Areas that are known to contain vertebrate fossils or noteworthy occurrences of invertebrate or plant fossils. Consideration of paleontological resources will be necessary if the Field Office review of available information indicates that such fossils are present in the area.

- b. Condition 2 Areas with exposures of geological units or settings that have high potential to contain vertebrate fossils or noteworthy occurrences of invertebrate or plan fossils. The presence of geologic units from which such fossils have been recovered elsewhere may require further assessment of these same units where they are exposed in the area of consideration.
- **c.** *Condition 3* Areas that are very unlikely to produce vertebrate fossils or noteworthy occurrences of invertebrate or plant fossils based on their surficial geology, igneous or metamorphic rocks, extremely young alluvium, colluvium, or aeolian deposits or the presence of deep soils. However, if possible it should be noted at what depth bedrock may be expected in order to determine if fossiliferous deposits may be uncovered during surface disturbing activities.

Either Condition 1 or Condition 2 may trigger the initiation of formal analysis of existing data prior to authorizing land-use actions involving surface disturbance or transfer of title. Condition 3 suggests that further paleontological consideration is generally unnecessary. This determination should be recorded in the planning or NEPA document to aid in assessing and mitigating impacts on individual land-use actions occurring within the framework of the land-use plan. Classifications should be developed by the Field Office in consultation with the Regional Paleontologist.

B. Environmental Review

Actions relating to the management and protection of paleontological and other resources are subject to the provisions set forth in 516 DM 6, Appendix 5, and the NEPA HANDBOOK H-1790-1.

Normally, a Survey and Limited Collection Permit (See Handbook Chapter IV) would be considered casual use for the purposes of complying with NEPA. These are small-scale, non-destructive data collection, inventory, and research activities that do not cause surface disturbance beyond 1-square meter. Such activities can be addressed as categorical exclusions under NEPA.

In cases where surface disturbance exceeds the 1-square meter threshold, all internally or externally proposed actions on or affecting public lands or resources under BLM jurisdiction must be reviewed for NEPA compliance.

Chapter III. Assessment & Mitigation

A. Procedures for Assessing and Mitigating Potential Impacts to Paleontological Resources.

Where areas containing fossils (See Chapter II, Classification Conditions 1 or 2) are identified during Field Office environmental (NEPA) review of land-use actions involving all surface disturbance, land-use authorizations or transfer of title, a formal analysis of existing data must be conducted to assess potential impacts to paleontological resources. The standards for any such formal analysis shall be developed in consultation with the BLM Regional Paleontologist.

1. <u>Formal Analysis of Existing Data.</u> The formal analysis of existing data, conducted by a qualified paleontologist, provides a critical, professional assessment and detailed information about areas identified during a Field Office level review to identify where fossils are known or likely to occur in the general area of proposed surface disturbing action (Condition 1 or Condition 2) and indicates where field surveys and/or mitigation measures may be necessary. It should also draw attention to parts of the area under consideration where little or nothing is known of the fossil record so that, if necessary, particular attention may be given to them during the field survey. Fossil bearing geologic units known from outside the project area may indicate the likelihood of similar fossils being present if such geologic units are known or expected to occur within the project area as well.

The formal analysis of data should include a compilation and evaluation of the following:

a. data compiled by the BLM Field Office during its preliminary review;

b. search of library or on-line databases for relevant published and unpublished work on the paleontology of the area or geologic unit(s) to be impacted;

c. search of institutional locality/specimen records to determine whether paleontological resources have been found in the area to be impacted. Often several institutions must be contacted and other sources explored;

d. search of BLM records and inventory data, including permittee reports on the relevant area, and;

e. professional evaluation of the information, and recommendations for further action as needed.

The need for a paleontological field survey will be based upon findings resulting from the above analysis. If no field survey is recommended, the case file shall be so documented and no further paleontological work on that case will be required.

2. <u>Paleontological Field Survey</u>. A paleontological field survey is carried out by a qualified paleontologist whenever a Field Office level analysis of existing planning or other data indicates that vertebrate fossils or not worthy occurrences of invertebrate or plant fossils are, or are likely to be, present in an area proposed for surface disturbance. Its focus is on field work that locates such paleontological resources within the boundary of the project area, and the development of recommendations to prevent or mitigate adverse impacts to them.

Field surveys:

a. are pedestrian surveys performed where fossils occur or are expected;

b. include sampling or collection of diagnostic surface fossils as needed;

c. are used to determine the need for mitigation, and to guide the development of a mitigation plan;

d. are used to provide data for managers in developing and evaluating land-use strategies for managing paleontological resources.

Any requirements respecting the need for such field surveys shall be developed in consultation with the BLM Regional Paleontologist.

3. <u>Report of Findings</u>. Following the completion of the field survey, a report by a qualified paleontologist, including a formal analysis of existing data and the findings of the field survey, shall be prepared. The report of findings should include, at a minimum:

a. brief description of each geological unit that includes a discussion of the paleontological resources;

b. list of institutions contacted for locality data; list/maps of known localities;

c. references consulted. Citations to scientific publications such as journal articles, books, etc., including unpublished materials;

d. locality forms and 7.5' or other appropriate scale maps from permittee reports showing fossil localities identified during the formal analysis of existing data, or during the field survey;

e. recommendations to the BLM for mitigation if determined necessary; and

f. a mitigation plan if mitigation is recommended. Such a plan may include recommendations and procedures for monitoring during the proposed action, including recommendations for handling unanticipated fossil discoveries.

Prior to acceptance of this report by the BLM Authorized Officer (Field Office Manager) it shall be reviewed for sufficiency by the designated Regional Paleontologist. Work on the project may not proceed until the report has been determined acceptable.

NOTE: All reports prepared under this section become the property of the BLM and cannot be released without the permission of the Authorized Officer. Locality information contained in these reports is considered sensitive and should not be included in any public document (See 8270 Manual Section .07, File and Record Maintenance.)

Unless otherwise provided for, project proponents shall bear all costs associated with mitigation activities.

B. Mitigation.

Compliance with NEPA requires consideration of impacts to resources and so may involve mitigation where vertebrate fossils, or noteworthy occurrences of invertebrate or plant fossils, are known. Mitigation may be accomplished, for example, by (1) collection of data and fossil material, (2) by obtaining representative samples of the fossils, (3) by avoidance, or (4) in some cases by no action. In some cases, surface disturbance may have a beneficial impact on paleontological resources where it exposes additional outcrop are for study, or public education/interpretation. Based on the results of the formal analysis of existing data and the field survey, a decision whether or not to mitigate shall be made by the Authorized Officer. Where mitigation is deemed to be necessary, the following standards shall be followed.

1. <u>Mitigation and Monitoring Plan</u>. Such a plan indicates the type of mitigation treatments recommended and the intensity of monitoring, if needed, that will be required for each geological unit or area of the proposed disturbance. A mitigation and monitoring plan must address at least the following:

a. The extent of specimen collection, e.g., total or partial recovery, no action, or avoidance;

b. The specific intensity of monitoring recommended for each geologic unit/area impacted. Monitoring intensity is determined based on findings of the formal analysis of existing data and/or field survey;

c. An agreed upon process for specimen recovery that will have the least impact on the project.

d. An agreement with a repository that will curate specimens collected during the field survey, and during mitigation and/or monitoring. Any cost associated with curation of specimens and associated records will be borne by the project proponent.

2. <u>Completion of Mitigation</u>. When the mitigation plan is implemented and the final report, including any specimen inventory, is accepted by the BLM, this indicates satisfactory completion of mitigation for paleontological resources related to the project.

C. Paleontological Resources on Split Estate.

Split Estate Lands. Split estate lands are those lands where title to the surface and the mineral estate have been severed. Title to the different estates are often held by different parties. In many instances where the surface estate is not owned by the Federal Government, the mineral estate is, and is administered by the BLM. Paleontological resources are considered to be part of the surface estate. If BLM is going to approve an action involving disturbance of the surface estate not owned or administered by BLM, the action should be conditioned with appropriate paleontological mitigation recommendations to protect the interest of the surface owner. In most States, the surface owner may elect to waive these recommendations. Such a waiver shall be documented in the case file.

D. Paleontological Resources in Wilderness Areas.

Paleontological resources are found in many BLM wilderness study areas and wilderness areas. The Wilderness Act makes it clear that scientific research is an accepted use of the National Wilderness Preservation System. Paleontological values are considered supplemental values as provided for in Section 2(c) of the 1964 Wilderness Act. Research is permitted and encouraged as long as all projects are conducted in such a manner as to preserve the area's wilderness character, and they further the management, scientific, educational, historical, and conservation purposes of the area. The following provisions are recommended for addressing the management of paleontological resources in wilderness areas. All such uses must be approved by the State Director.

1. The BLM will permit, on a case-by-case basis, the survey and limited surface collection of fossils by qualified paleontologist where such resources have important scientific values. Such activities must be carried out in a manner that would not degrade the wilderness character.

2. The use of motorized transportation or mechanized equipment in a wilderness area is prohibited except when approved as the minimum tool necessary to accomplish the work.

3. Salvage, excavation and collection of fossils may only be done on a case-by-case basis where the project will not degrade the overall wilderness character of the area and such activity is needed to preserve the fossil resource.

E. Other Special Management Areas.

A variety of other Special Area designations may be used to enhance the management and/or protection of paleontological resources. Such designations include Research Natural Areas, National Natural Landmarks and Area of Critical Environmental Concern. Such areas are established through the land-use planning process and shall be done in consultation with the BLM Regional Paleontologist.

Chapter IV. Permitting

A. General Provisions.

A paleontological resource use permit is a land-use authorization issued to a qualified applicant to carry out various paleontological activities, such as identification, survey, collection or excavation, where BLM manages the surface estate. On split estate lands, where the surface is privately owned, fossils are the property of the surface owner and no BLM permit necessary. Collectors, however, should be made aware of the need to contact the private landowner.

Paleontological resource use permits are nonexclusive, noncompetitive, minimum impact permits, and are not subject to Notice of Realty Action, filing fees or cost reimbursement. Fossils collected under the provisions of such permits remain the property of the United States Government. Management of such collections is the joint responsibility of the BLM and the repository that agrees to house the collection on behalf of the Government.

The objectives of the paleontological resource use permit process are to:

- 1. Provide for the pro-active management of paleontological resources.
- 2. Facilitate research by qualified paleontologist on the public lands.
- 3. Serve as bridge for communication between BLM managers and paleontological researchers.
- 4. Provide appropriate protection to other resources that may be impacted by permitted collecting activities.
- 5. Provide an administrative structure that minimizes BLM's management effort within the constraints of other obligations.
- 6. Be consistent with BLM's customer-oriented focus.

B. Permits

1. <u>Vertebrate Fossils</u>. Collecting vertebrate fossils requires a permit. BLM issues two types of permits for collecting vertebrate fossils:

a. A Survey and Limited Surface Collection Permit is issued to (1) authorized broad ranging survey/reconnaissance work, and limited surface collecting; (2) to locate vertebrate fossil localities for inventory or planning purposes; or (3) in advance of projects which may threaten such localities. Collecting of fossil material under this type of permit is allowed, providing that such activities result in less than 1-square meter of surface disturbance and can be done with hand tools.

b. An Excavation Permit is issued when surface disturbance exceeds the limits permissible for the Survey and Limited Surface Collection permits.

2. <u>Invertebrate Fossils</u>. Subject to the provision of 43 CFR 8365, invertebrate and plant fossils may be collected in reasonable amounts for noncommercial purposes without a permit. However, in order to protect significant localities, areas may be closed to the collection of

invertebrate and plant fossils except under permit. Such closures shall be established through the land-use planning process and in consultation with the Regional Paleontologist.

3. <u>Petrified Wood.</u> Subject to the provisions of 43 CFR 3622, a person may collect up to 25 pounds plus one piece per person per day, up to a maximum of 250 pounds in one calendar year, of petrified wood for personal, noncommercial purposes without a permit. Quotas may not be pooled to collect single pieces larger than 250 pounds. Collection in excess of these amounts will be handled in accordance with 43 CFR 3621.

4. <u>Consulting Activities</u>. Survey, identification, evaluation, and mitigation may be required for compliance with the National Environmental Policy Act or for land-use planning and paleontological resource management needs. Since these activities require a broad based approach to investigation and management, an individual or organization engaged in such consulting activities shall conduct them under the authority of a survey or excavation paleontological resource use permit as appropriate, and shall meet all the qualifications and other requirements for holding such a permit. (See section C below for qualifications.)

5. <u>Fossils and Cultural Resources</u>. Paleontological resources are primarily found on bare, unvegetated outcrops which are created as the result of active erosion processes. These erosion processes are such a nature that it is unlikely that the minimal level of surface disturbance allowed under a Survey and Limited Surface Collection permit will impact cultural resources.

Paleontological resource use permits do not authorize collecting or disturbing cultural resources, even when those resources are associated with fossils. Such occurrences fall under provisions of the Archaeological Resources Protection Act (ARPA) and the National Historic Preservation Act (NHPA). When archaeological and paleontological materials are discovered in association, all work must stop until the appropriate BLM manager, under the provisions of ARPA and the NHPA, authorizes the work to proceed. The BLM manager, in consultation with their office archaeologist and paleontology program coordinator, and the designated Regional Paleontologist, will evaluate the situation and determine an appropriate course of action to safeguard both the paleontological and archaeological materials.

C. Permitting Procedures.

1. <u>Applying for a Permit</u>. A completed paleontological resource use permit application, form 8270-1 (temporary) should be submitted to the State Director responsible for the public lands on which the proposed work would occur. The form and instructions for completing it are contained Appendix 1.

2. <u>Qualifications</u>. In order to receive a paleontological resource use permit, applicants must be able to demonstrate the following:

a. Professional instruction in a field of paleontology relevant to the work proposed (vertebrate, invertebrate, trace, paleobotany, etc.), obtained through:

(1) Formal education resulting in a graduate degree from an accredited institution in paleontology, or in geology, biology, botany, zoology or anthropology **if** the major emphasis is in paleontology; OR

(2) Equivalent paleontological training and experience including at least 24 months under the guidance of professional paleontologist who meets qualification 2.a(1), that provided increased responsibility leading to professional duties similar to those in qualification (1) above; and

b. Demonstrated experience in collecting, analyzing, and reporting paleontological data, similar to the type and scope of work proposed in the application;

c. Demonstrated experience in planning, equipping, staffing, organizing, and supervising crews performing the work proposed in the application;

d. Demonstrated experience in carrying paleontological projects to completion as evidenced by timely completion and/or publication of theses, research reports, scientific papers and similar documents.

Students and others who do not meet the qualifications for obtaining a permit may conduct paleontological work under the supervision of an applicant who (a) meets the qualifications and (b) is willing to obtain a permit and be legally responsible for all activities under it. The permit holder must agree to supervise project planning, associated fieldwork, scientific evaluations and recommendations regarding paleontological materials under study, and the writing and submission of reports.

3. <u>Permit Processing</u>. The State Director, through or with the assistance of their delegate, is responsible for receiving, processing, issuing and administering paleontological resource use permits. Completed applications for Survey Permits should be received in the appropriate State Office at least 30 calendar days prior to the anticipated beginning date of fieldwork in order to allow for review and response. Applications for excavation permits may require extra review time for an environmental assessment or other necessary actions and should be received by the appropriate State Office at least 60 days prior to the anticipated beginning of fieldwork. In keeping with the Bureau's commitment to customer service, State and Field Offices should make every effort to have permits issued as quickly as possible, or at least within 30 to 60 days if more intense review is needed. However, applications for permits on specially designated lands, for work under other special circumstances, or that require public participation in the decision process, may take significantly longer (6 months or more) to process. If a permit cannot be processed within 30 to 60 days as appropriate, the applicant should be informed as soon as possible as to the reason for the delay and when the permit might be issued.

The State Director will evaluate applications for (1) completeness, (2) to determine whether the applicant is qualified and (3) to assess the adequacy of the applicant's performance under other paleontological resource use permits. Consultation with the effected Field Office(s) and the Regional Paleontologist is a necessary part of this evaluation process.

During this review period, Field Office Managers shall attach, as needed, any terms and conditions to address their concerns relative to other resources, such as protecting special areas, management constraints, camping, road use, etc. Additional terms, conditions, and limitations may be added by the Field Office Manager at any time.

4. <u>Terms and Conditions</u>. Permits are generally issued for 1-year or less but may be extended for up to a 3-year total per permit. Individuals may instead apply for a permit with a more limited term. If the permittee wishes to continue work beyond the expiration date of the permit, the permit may be extended by the BLM State Director following consultation with the appropriate Field Office, or renewed by re-application.

The permittee may request, in writing, that permits be extended or modified. No changes may be made to a permit without approval of the State Director.

Appendix 3 is an example of standard terms and conditions for a Paleontological Resource Use Permit. There may be different or additional terms and conditions applied in each State or Field Office in order to accommodate local needs or requirements.

In accepting the permit, the permittee agrees to all terms and conditions contained in the permit. A copy of the permit must be carried by the individuals(s) named in the permit whenever fieldwork under the permit is in progress.

5. <u>Permit Issuance</u>. Following all reviews, the State Director will either issue the permit or provide the applicant with written notification of denial and appeal procedures. Stipulations to the permittee regarding Field Office contacts, for writing and submitting required reports, and for any other purpose will be attached to the permit. The State Director will send copies of all permits to the appropriate Field Office(s) and to the Director, WO 240. (See Appendix 5 for a sample Permit transmittal letter.)

The State Director may elect to stipulate that no permit will be valid unless co-signed by the appropriate Field Office Manager(s) or their designee at the beginning of each field season. However, the State Director may choose to meet this requirement by determining that a phone contact between the permittee and the effected Field Office(s) is sufficient. The Field Office Manager or their designee will notify the State Office when such contact has taken place so that it may be noted in the permit file.

6. <u>Repositories</u>. Applications for paleontological resource use permits must include written certification from a repository willing to accept the collections and other materials resulting from work done on public lands. Pending development of Federal standards specifically for paleontological repositories, the State Director may identify reputable and recognized public institutions proposed to house collections, records, data, photographs, and other documents derived from permitted work, as generally meeting the DOI requirements of DM 411 or the considerations set out below. All fossils collected under a paleontological resource use permit remain the property of the United States Government. They may not be sold, traded, bartered, or disposed of in any way without the prior consent of the United States Government.

In general, the repository receiving materials collected from public lands must provide evidence of its capability of providing adequate long-term curatorial services, such as a physically secure environment and a professional staff qualified to catalog, care for, preserve, retrieve, and loan, where appropriate, these materials and associated records. By agreeing to accept the collections, the repository agrees to bear the costs of these curatorial requirements, and to make the materials and records available to qualified researchers. The repository also agrees to make the locality data and associated records available to the BLM upon request. Appropriate repositories for Federal specimens include public museums, universities, colleges, State geological surveys, and other Federal agencies engaged in geological or paleontological studies.

7. <u>Suspension/Revocation of Permits</u>. The State Director may suspend or revoke a permit at any time that any term or condition of the permit has not been met. Instances of non-compliance shall be documented in the permit file. The permittee shall be notified in writing of instances of non-compliance and of any action taken, i.e., warning, suspension, revocation. Each notice or adverse action will include dispute and appeal options.

8. <u>Disputes and Appeals</u>. Applicants and permittees have the right to dispute and appeal any adverse decision.

a. <u>Disputes</u>. Any applicant or permittee may question the decision of the Authorized Officer (i.e., State Director or Field Office Manager, as applicable) with respect to the denial of permit application, the inclusion of specific terms and conditions in a permit, or the modification, suspension, revocation or non-renewal of a permit.

(1) <u>Request for Review</u>. This disputant may file a written request to the State Director for review of his or her decision, setting out reasons for believing that the decision should be reconsidered. The State Director may modify the original decision in the light of information presented, or may sustain the original decision, in either case providing the disputant with written explanation.

(2) <u>Request for Conference</u>. Either the disputant or the State Director may request a conference to discuss the original decision and its basis. The State Director may modify the original decision in the light of information presented, or may sustain the original decision, in either case providing the disputant with written explanation.

(3) Review at Higher Organizational Level.

(a) The disputant, if unsatisfied with the outcome of a review or conference addressing the State Director's decision, may request in writing, that the decision be reviewed at the next high organizational level. The disputant's written request should set out the procedural or substantive basis for thinking that the State Director's decision is in error. The States Director's decision shall stand during the course of any higher level review.

(b) Decisions of a Field Office Manager may be reviewed by the State Director, and those of a State Director may be reviewed by the Director.

(c) Upon receiving a request for higher level review, the Authorized Officer shall transmit the request and the pertinent file(s) to the reviewing official, i.e., the State Director or Director, as appropriate.

(d) The reviewing official should begin review within five working days. If it appears that the review will take more than 10 working days, the disputant should be informed of the estimated time required by mail (copy to the Authorized Officer).

(e) If the reviewing official determines that the Authorized Officer's decision is procedurally or substantively correct and should stand unchanged, the reviewing official shall notify the disputant by mail (return receipt requested).

(f) If the reviewing official determines that the Authorized Officer's decision is procedurally or substantively incorrect, the reviewing official shall consult with the Authorized Officer, establish a course for correcting the decision, and notify the disputant by mail (return receipt requested).

(g) Upon concluding the review, the reviewing official shall return the pertinent file(s) to the Authorized Officer (i.e., the State Director will return a temporary file to the Field Office Manager; the Director will return any file(s) reviewed to the State Director).

(h) The Authorized Officer shall immediately take any corrective actions determined under the above.

(4) <u>Record of Review</u>. Record of any reexamination of Authorized Officer's decision shall be included in the permanent file at the State Office.

b. Appeals.

(1) <u>Initiated by Disputant</u>. After the dispute opportunities above have been exhausted, the disputant may file a formal appeal with the Interior Board of Land Appeals by following the procedures in 43 CFR Part 4, Subpart E. When the Authorized Officer finds that suspension of the decision in accordance with 43 CFR 4.21(a) would cause harmful effects to paleontological resources, the Authorized Officer shall apply to the Board for a determination that the decision being appealed, or pertinent parts of the decision, shall stand in full force and effect during the appeal period in the public interest.

(2) <u>Initiated by Other Affected Person</u>. Other affected persons wishing to appeal a decision connected with a permit may file a formal appeal with the Interior Board of Land Appeals by following the procedures in 43 CFR Part 4, Subpart E. As necessary, the Authorized Officer shall apply to the Board for a determination that the decision being appealed shall stand during the appeal period.

9. Reports.

a. <u>Annual Reports</u>. The annual report provides a summary of any work carried out during the year. Permittees shall be required to submit two copies of the report describing all work done under the authority of a permit to the appropriate State Director at the end of each calendar year. The State Office shall provide copies to the appropriate Field Office(s) as necessary. If no work is done under the authority of a permit, the permittee shall be required to send a letter to that effect in lieu of an annual report.

The annual report shall include, but not be limited to:

(1) Permit Number;

(2) Name of the permittee and repository;

(3) The names of all field personnel;

(4) Dates of all fieldwork;

(5) A brief description of the work completed, and any new information gained during the year;

(6) Legal description of any area studied, or where collections were made.

(7) A 7.5' topographic map, or other map of appropriate scale acceptable to the BLM, delineating boundaries of the area(s) actually studied or collected.

(8) A completed locality form 8270-3 (temporary) (Appendix 4) for each locality where fossils were collected or recorded. The BLM Paleontology Locality form OR the repository's locality form (if it includes **ALL** the data fields required on the BLM form) must be submitted. **Each locality form should correspond to a locality identified on a copy of a 7.5' topographic map or other map of appropriate scale.**

(9) Areas where paleontological resources appear to be especially noteworthy, or where these resources appear to be threatened, should also be identified in this report.

b. <u>Final Report</u>. The final report provides a more detailed analysis and assessment of the work done and collections made during the term of the permit. Permittees shall be required to submit two copies of a final report to the appropriate State Director by the end of the calendar year in which the permit expires. The State Office should provide copies to the appropriate Field Office as necessary.

The final report shall include, at a minimum, all data required for the annual report, plus:

(1) Discussion of the research or interpretive design.

(2) Description of field methods, such as intensity of survey, sampling efforts, screen washing, etc.

(3) A general statement of what work was accomplished, including the results of research and public display/interpretation. In this context, new information gained from the permitted activity should be compared to the previous level of knowledge about the area or taxa involved.

(4) Two copies of any publications resulting from the permitted work. In any published or unpublished documents, the author should identify the work as having been done under a BLM Paleontological Resource Use Permit.

(5) A catalog list of specimens and sample collected under the permit and curated at the repository named in the application. Specimens from a single locality may be batch cataloged under a single specimen number, with the understanding that they will be individually cataloged as soon as practicable.

In cases involving a permit of one year or less, a final report (2 copies) may be submitted in lieu of an annual report. For multi-year permits, the final report constitutes the annual report for the year in which the permit expires.

c. <u>Approval of Reports</u>. Annual and final reports will be reviewed by the appropriate BLM Field Office(s) in consultation with the BLM State Office Paleontologist or Regional Paleontologist. If the report satisfies the above requirements, it may be approved and the permittee considered to be in compliance with the terms and conditions of the permit. The State Director shall notify the permittee as to whether the report has been approved or not, and such notification will be documented in the permit file.

State Directors are responsible for ensuring that all collections, as well as field notes, photographs, and other documents related to work done under a permit are deposited with the repository named in the permit before approval of the final report by the BLM State Office Paleontologist or designated Regional Paleontologist. Such deposition shall be acknowledged and documented by the repository in writing, and included with the final report.

d. <u>Extension of Deadlines</u>. In cases where curation of specimens and/or submission of reports or other documents within the time limits specified in the permit proves impractical, the State Director may extend the deadline in response to a written request from the permittee. Any extensions granted must be documented in the permit file.

Chapter V. Pro-active Management – Partnerships

A. <u>Pro-active Management</u>. Management of paleontological resources on BLM public lands will benefit from seeking out opportunities and implementing strategies for pro-active and collaborative management partnerships. Through the use of paleontological networking and training, both inside and outside BLM, bureau staff can increase their effectiveness in the management of paleontological resources for their scientific, educational and recreational values. Strategic Planning for paleontological resources management, and pursuit of the Government Performance Requirement Act (GPRA) goals and results, are but two examples of pro-active tools for consistent paleontological resources protection and management.

One of the best ways of implementing Pro-active management strategies is through the use of mutually beneficial paleontological partnerships. Such activities may be carried out informally or through formal instruments, such as Memoranda of Understanding or Cooperative Agreements. It is desirable for BLM staff in Field, State, and Washington Offices to seek out and form partnerships, both internally and externally. Such partnerships surveys, professional and amateur societies, individual permittees and other interested scarce skills and staff in its management of paleontological resources. BLM Regional Paleontologist should be consulted for ideas on identifying and developing workable paleontological partnerships.

Partnerships can also be used to capitalize on the great public interest and enthusiasm for paleontology, thus expanding the appropriate recreational and economic uses of paleontological resources. Private commercial tour groups, museum sponsored field trips and collecting activities, science teacher skills enhancement programs and collaboration with responsible journalist can produce many direct and indirect benefits leading to better management of paleontological resources, such as the discovery of new localities, enriched science curricula at the primary and secondary school levels, an increased public appreciation and respect of these resources, and less vandalism.

B. <u>Law Enforcement</u>. While there are no laws specifically aimed at the management of paleontological resources, a number of laws address paleontology at least partially. For example, the Archeological Resource Protection Act of 1979 (16 U.S.C. 470ee) prohibits the unauthorized removal of fossils that are in an archaeological context. The Federal Cave Resources Act of 1988 (16 U.S.C. 4306) prohibits the removal of paleontological resources when they are taken without authorization from a designated significant cave.

The BLM utilizes other more general laws and authorities to protect paleontological resources. These laws include: Theft of Government Property (18 U.S.C. 641), Damage to Government Property (18 U.S.C. 1361), and the FLPMA (43 U.S.C. 1733). Pursuant to the FLPMA, the BLM has issued regulations that provide additional protection. Section 8365.1-5 of Title 43 of the code of Federal Regulations prohibits the removal of any scientific resource or natural object without authorization. This section provides that the exceptions to this prohibition are common invertebrate fossils and petrified wood as allowed under section 3622. Further authorities provided under sections 8364.1 and 8365.1-6 may be used to close areas or provide further restrictions on the removal and taking of paleontological resources. BLM criminal investigators and law enforcement rangers have been authorized to enforce these laws through

conducting investigations, issuing citations, or making arrests when necessary. Any unauthorized removal, damage, or taking of paleontological resources resource values exceed \$1,000 (felony threshold under 18 U.S.C. 641 and 1361), such cases must be investigated and referred to the appropriate U.S. Attorney's Office for prosecution determination. Law enforcement officers may need the assistance of professional paleontologist in conducting paleontological resource use investigations. Consideration should also be given to law enforcement rangers to patrol areas containing significant paleontological resources pursuant to field office law enforcement planning efforts.

INSTRUCTIONS TO APPLICANTS

The following instructions are provided to assist applicants in completing the Paleontological Resource Use Permit Application.

Line 1: Name of Applicant

Identify the individual(s) obligated to carry out all terms and conditions of the-permit. Enter on this line the name of the applicants and their affiliation or organizational background.

Lines 2 and 3: Addresses and Telephone Numbers

Enter a mailing address, email address, and phone and fax numbers for both the applicant's permanent office and for the field party (if possible). A field telephone number may be a cellular phone or one located at a ranch, campground, or business near the field camp and is useful so that, the local BLM office can make contact with the field crew about permit matters and emergency situations.

Line 4: Nature of Paleontological Fieldwork Proposed

Check either box (a) or (b), depending on what kind of permit is being applied for. Survey and limited surface collection permits allow for survey work and limited collection over broad areas within a State. Collections may be made, but surface disturbance may not exceed one square meter at any one location. Should work exceeding that allowable under such a permit be necessary, an excavation permit will be required.

Separate application forms 8270-1 (temporary) must be submitted, if more than one type fieldwork is anticipated.

Line 5: Location of Proposed Work

Define the limits of the project area in terms of section, township, range, and meridian. Attach a copy of the appropriate topographic map(s) showing these boundaries. Applications for survey and limited collection permits should be as specific as possible. Applications for excavation permits much indicate the specific locality or localities where work is anticipated.

Line 6: Purposes and Methodology of Proposed Work

On a separate sheet, describe the proposed project and the methods to be used in carrying it out. List the taxa and/or geologic units that you propose to study or survey. For an excavation permit, applicants explain why the excavation will be necessary, what will be excavated and in what manner (hand tools, mechanized equipment, etc.), and what kind of information is being sought. The permit application should include an outline or schedule for publishing or otherwise reporting results of the work.

Line 7: Dates of Proposed Work (start and stop)

Enter the anticipated beginning and ending dates for all planned field work.

Line 8: Name of Individual(s) Responsible for Planning, Supervising, and Carrying Out Field work.

This individual may be the applicant named on line 1, or another individual. Each individual named on this line must meet all of the individual qualifications in line 10(A).

Line 9: Name and Address of Repository

The repository named must meet the minimum repository standards in this handbook and be acceptable to the BLM. The applicant shall provide written confirmation that the proposed facility has agreed in writing to accept and house all collections resulting from permitted work.

Line 10: Additional Materials Required

Applications shall include a resume for each individual named on line 1(a) and on line 8 that demonstrates the following:

A. 1.a. Professional instruction in paleontology, obtained through:

1. Formal education resulting in a graduate degree from an accredited institution in paleontology, or in geology, anthropology, biology, botany, or zoology **if** the major emphasis is in paleontology; **OR**

2. Equivalent paleontological training and experience including at least 24 months under the guidance of professional paleontologist who meets qualification 1, providing increased responsibility leading to professional duties similar to those on qualification 1; and

b. Demonstrated experience in collecting, analyzing, and reporting paleontological data, similar to the type and scope of work proposed in the application;

c. Demonstrated experience in planning, equipping, staffing, organizing, and supervising crews performing the work proposed in the application;

d. Demonstrated experience in carrying paleontological projects to completion or publication of theses, research reports, scientific papers and similar document

There may be cases in which an applicant wished to make a collection but does not meet the criteria above. A permit may be issued to the applicant PROVIDED that there is a coapplicant who does meet these criteria and who is willing to co-sign the application, thereby agreeing to supervise project planning, associated fieldwork, scientific evaluations and recommendations regarding paleontological materials under study, and the writing and submission of reports.

B. In addition, applications must show the capability of the applicant's organization to support work of the type and scope proposed. An organizational resume or summary of organizational experience shall be submitted with the following minimum information:

1. Description and location('s) of facilities and equipment;

2. Organizational structure and staffing;

3. Specification of which, and to what extent, facilities, equipment and staff listed would be involved in the proposed work.

- C. Applications must include a statement of applicants/organization's history of completing the type of work proposed, including:
 - 1. Similar past projects;

2. Past government contracts;

3. Selected bibliography of project or contract reports and/or publications resulting from the above;

4. Previous Federal permits held, effective dates of permits currently in force and applications pending or planned;

5. Their pertinent experience, such as research and special studies.

If applicant's organization is newly formed entity, individual capabilities of personnel will carry greater weight than evaluation of organizational qualifications. Lack of an organizational history will not be the principal factor in evaluating an application.

D. Each application must include written certification signed by a properly authorized official of the repository named in line 9, of its willingness to accept and curate any collections, records, data, photographs, and other documents derived from permitted work, and to assume permanent curatorial responsibility for such materials on behalf of the United States Government. The official may be the person named in line 1(a).

Lines 11 and 12: Signature and Date

The individuals named in line 1(a) must sign and date the application here.

Sample Terms and Conditions

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT WYOMING STATE OFFICE

PALEONTOLOGICAL RESURCES USE PERMIT TERMS AND CONDITIONS

1. This permit may not be assigned to others. Any changes must be requested in writing from the State Director.

2. This permit if for the period specified. It may be suspended for management purposes or for cause, at the discretion of the State Director, upon written notice.

3. All terms and conditions of this permit, including reporting requirements, shall remain in effect until outstanding obligations have been satisfied, whether or not the term of the permit has expired.

4. This permit shall not be exclusive in character, and there is hereby reserved unto the Federal Government the right to use, lease or permit the use of said land or any part thereof for any purpose.

5. The Department of the Interior, including its bureaus and employees and the landowners and their grantees, shall be held blameless for any and all events, deeds and mishaps, regardless of whether or not they arise from operations under this permit.

6. Other permittees may be engaged in paleontological work in the general area covered by this permit, and in case there should be conflict with respect to areas of interest, the parties shall reach agreement between themselves as to which shall work there.

7. All cost shall be borne by the permittee.

8. All excavated areas shall be restored by filling in the excavations and otherwise leaving the area in as near the original condition as is practicable. Disturbed areas shall be kept to a minimum size consistent with the purpose of this study and the type of permit.

9. Fieldwork conducted under authority of this permit shall be carried out in such a way as not to impede other legitimate uses of the public lands, except when special provision has been made by the District Manager or his representative. Work performed under this permit must be consistent with the announced policies of the BLM.

10. During the course of Activities conducted under this permit, the BLM Field Office manager or his representative shall have access to the study area of this permit, and during or after completion <u>of</u> fieldwork shall have the right to inspect all materials removed.

11. The exploration, disturbance, or excavation of any historic or prehistoric archaeological properties including Indian burial sites and/or human remains on lands under the jurisdiction of the BLM is strictly prohibited. In the event cultural artifacts (including human remains) are discovered, the permit holder must immediately notify the nearest BLM office and the site must not be disturbed.

12. Collections of paleontological resources and other material acquired from public lands under the provisions of this permit remain the property of the United States Government and may be recalled at any time for use by the BLM or other agencies of the Government. Any recall of material will be made in consultation with the concerned repository.

13. Any stakes, flagging, or other temporary materials used to identify localities shall be removed upon completion of field activity. No permanent monuments or survey markers shall be removed or disturbed during the course of fieldwork.

14. The Bureau of Land Management shall be cited in any report of work done under this permit, including publications such as books, news articles, and scientific publications, as well as oral reports, films, television programs, and presentations in other media.

15. A copy of this permit must be carried by the individual in charge of fieldwork during the term of fieldwork.

16. The permit itself is for noncommercial purposes only. Should the permittee wish to engage in such things as outfitting and guiding, he/she must get a Special Use permit for that purpose.

[Field Offices shall attach any terms and conditions relating to resource protection, special management areas, vehicle use restrictions, camping/water use instructions, etc. These conditions will be attached to the completed when the permit is sent to the permittee. The BLM may modify or add terms and conditions at any time.

PALEONTOLOGY LOCALITY FORM INSTRUCTIONS

The data fields required in the Paleontology Locality Form should be recorded as sown in <u>Guidelines and Standards</u> for Fossil Vertebrate Databases;

- 1. Enter the number of the permit under which work was done and name of permittee.
- 2. Enter the name of the repository and accession number of this collection.
- Enter the repository locality number for this site.
 Indicate what kind(s) of fossils were found by checking the appropriate space(s).

4. Enter the name of the formation and any known subdivision (such as member, horizon, etc.). If the formation's name is not known, enter the group name.

5. This field should include, at a minimum, the epoch. If the stage/age or North American Land Mammal Age is known, enter this data.

6, 7, 8. Self-explanatory.

9. Enter the exact name of the 7.51 or other appropriate topographic map used in the field. Submit with each, locality form a clear copy of the map showing the locality. Multiple localities may be shown on a single map.

- 10. Either the publisher of the map, e.g., USGS.
- 11. Enter the map scale as a fraction, e.g., 1/24000 or 1/62500, without commas or other punctuation.
- 12. Enter the date the map was published and/or revised.
- 13, 14. Enter the data as calculated or graphically determined (not estimated). If the locality is not a single point, enter the number of seconds of variance from the central point (e.g., 2'N, 3'W). The UTM Grid data may be used in place latitude/longitude, or in addition.

15. Enter the Section (and as many subdivisions as can reasonably be determined), Township (N or S), and Range (E or W).

16. Make a general statement about taxa observed or collected at this locality, e.g., fish turtle, <u>creodont</u>, <u>Hyracodon</u>.

17. Enter the name(s) of the individual(s) who collected at this locality. This links the collection to a set of field notes.

18. Enter the date (or dates) when material was collected from this locality.

19. Describe the locality in relation to geologic, geographic, and topographic features. Do not include information on how to get to the locality. If this locality is in need of further work or mitigation, enter suggestions here.

Because this locality report is specific to BLM-administered lands, it is not necessary to indicate land status. However, institutions should indicate land status of localities in their records to facilitate searching for and retrieving particular data sets.

BLM MANUAL

Rel. 8-69 07/13/98

In Reply Refer To: 8270 (930)

Dear

:

We are pleased to forward your Paleontological Resources Use Permit #_____. We hope that your work may not only contribute to the advancement of science, but also provide important information that will help us to better manage the public lands and resources.

Please read the attached material and become familiar with it. If you have had previous permits, you may notice some changes to the instructions. Permittees are now required to meet with the Area Manager(s) in any Resource Area(s) where fieldwork will be done. You should arrange well in advance to meet with the Area Manager(s) before starting work each field season. Annual reports are now required on or before December 31 of any year in which you have a permit in effect; if you do no fieldwork, a letter will be sufficient. Also, in any written documents or oral presentations where work done on BLM-administered land is cited, you must acknowledge this agency's part in your research. Should you want to change any details on the permit, you must notify the BLM Wyoming State Office in writing. Detailed instructions on all requirements are attached to your permit.

When you meet with the Area manager prior to beginning fieldwork, please provide a list of all people in your party. This will enable BLM to be of assistance in locating members of your group if there is an accident or other incident on public lands.

xx Wilderness Study Areas (WSAs) are included in your permit area. I have attached maps and descriptions that show the locations of these WSAs. Some special rules apply to the use of WSAs, as summarized below.

Wilderness Study Areas are those areas that have been recommended to Congress for designation as Wilderness Areas. Although Congress has not yet acted on this recommendation, it is BLM policy that until WSAs are either designated or rejected, they must be treated as if they were Wilderness Areas. Therefore, although you may enter these areas and prospect for fossils, you may not drive any vehicle off the major roads and trails that form the boundary of the WSAs. You may not dig holes or otherwise disturb the wilderness values of these areas. Generally, the land must be left as you found it. I have attached a copy of some relevant sections of our handbook H-8550-1 which deals with the treatment of WSAs, and a pamphlet on Wilderness Areas.

BLM rangers are available to help in emergencies and can be contacted through the District Offices or the 24-hour Wyoming law enforcement hotline at 1-800-442-2767. District Rangers must complete accident forms for any collisions or mishaps that occur on public lands. The Rangers are there for your benefit and assistance.

If you or anyone in your party is aware of possible unauthorized removal of fossil resources from the public lands, the District Ranger and Area Manager should be notified immediately. For your own safety, please make no contact with any individuals you may observe engaged in such activities.

Remember that your permit is valid only on the lands administered by the Bureau of Land Management and authorizes only the collection of paleontological resources. A separate permit is required for the collection of cultural resources. Other federal agencies such as the Bureau of Reclamation and U.S. Forest Service may also require permits for paleontological work on lands they administer. If you wish to work on private or State Lands, you must obtain permission from landowners or the Wyoming Board of Land Commissioners before beginning fieldwork.

We welcome the opportunity to work with you. Please contact me at 307-261-7731 if you have any questions concerning your permit or any of the attached material.

Sincerely,

Deputy State Director Resource Policy and Management

8 Attachments: Paleontological Resources Use Permit (1p) Terms and conditions (1p) Permitting Procedures (5pp) Paleontological Locality form and instructions (2pp) BLM Offices in Wyoming (1p) Wilderness map Wilderness Study Areas (pamphlet) Handbook H-8550-1 (4pp)

CC: WO-340 Area Managers (as applicable) District Ranger(s)

Appendix 1, Page 1

H-8270-1 - GENERAL PROCEDURAL GUIDANCE FOR PALEONTOLOGICAL RESOURCE MANAGEMENT

Form 8270-1 (Temporary) Unit: (December 1954) Departmen

United States Department of the Interior Bureau of Land Management Office use only

Application Number:

Paleontological Resources Use Permit Application

Sec. 302(b) of PL 94-579, October 21, 1976, 43 U.S.C. 1732

the second se		
1a. Applicant:		1b. Affiliation:
2 Mailing address: Office:	e-mail acdress	3 Telephone number: Office:
-		Fax:
Field party:		Field party:
		Fax:
4. Nature of paleontological fie	dwork proposed:	
a. Survey and Emited surface	collection 🗆 OR	b. Excavation
5 Location of proposed work (attach topo map copy with proj	ect boundaries):
6 Purposes and methodology	of proposed work (altach sepa	rale sheel):
7 Dates of proposed work. Start	End:	
8. Name(s) of individual(s) resp	consible for planning, supervisi	ng, and carrying out fieldwork:
9. Name and address of reposi	tory:	
 Summary of organization Summary of organization Written certification signing repository's willingness to documents generated directions 	ual named in Line 1a and Line ral capabilities; ral history; ad by a property sufficienced off o accept any collections, and a	8; icial of the repository named in Line 9, altesting to the as applicable, records, data, photographs, and other b assume permanent curstonial responsibility for such
11. Signalures:		12. Datos:
Applicant (Li	re ta)	
Cc-applica	nt(a)	
BLM MANUAL		Rcf. 8-69
CTATE OF CALLER AND A DECK	8	07/13/98

Paleontological Resources A copy of this permit mus named in Line 8 where	t be carried by the Individ	
	ver fieldwork is in progre	ual(s) Is.
1a. Permittee:	1b. Affiliation:	
2. Mailing address: e-mail address Office:	3. Telephone number: Office:	
Field party:	Fax: Field party: Fax:	
a. Survey and limited surface collection OR OR OR S. Location of authorized paleontolog call fic dwork:	b. Excavation	
5. Authorized start date:	7. Expiration Date:	
8. Name(s) of individual(s) responsible for planning, superv	rising, and carrying out fieldwo	я:
9. Repository name and address		
10. Special conditions are attached and must be adhered to	5:	
Field Office Manager		Date
Field Office Manager	-01 -02	Date
State Director	<u></u>	Date

1Vay 1994) United State Department of the Bureau of Land Mana	Interior			
Paleontological Locality Form				
1. Permit #/Permittee:				
2. Repository/Acon.#:				
3. Locality #:	Plant Vertebrate Invortobrate Other			
4. Formation (and subdivision, if known):				
5. Age:	6. Country:			
7. BLM District:	8. Resource Area:			
9. Map name:	_ 10. Map source:			
11. Map size:	12. Map edition:			
13. Latitude (deg., min., sec., direction): _				
14. Longitude (deg., min., sec., cirection):				
or: UTM Grid Zone:	m E m N			
15. Survey (Sec., T & R):				
16. Taxa Collected/observed:				
17. Collector:	18. Date:			
19. Remarks:				