Description of document:	Records describing the current status of the Paleontological Resources Manual/Handbook under development at Bureau of Land Management (BLM), 1998-2016
Requested date:	17-February-2016
Released date:	19-July-2016
Posted date:	12-September-2016
Source of document:	FOIA Request BLM FOIA Officer 1849 C Street NW, Rm 2134LM Washington, DC 20240 Fax: 202-245-0027 Email: BLM_WO_FOIA@blm.gov

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Washington, D.C. 20240
http://www.blm.gov

July 19, 2016

In Reply Refer To:
1278-FOIA (640)
FOIA# 2016-00358

This letter is in response to your Freedom of Information Act (FOIA) request, dated February 11, 2016, and received and perfected in our office on February 17, 2016. The tracking number is 2016-00358. In your letter, you asked for the following:

> "I would like to receive each document or email that describes that current status of the Paleontological Resources Manual/Handbook under development at BLM."

We are providing 224 pages which are being sent as an email attachment to this letter. Of these, 133 pages are being withheld in full, and two pages are withheld in part.

Exemption 5 allows an agency to withhold "inter-agency or intra-agency memorandums or letters which would not be available by law to a party... in litigation with the agency." 5 U.S.C. § 552(b)(5); *see Nat'l Labor Relations Bd. v. Sears Roebuck & Co.*, 421 U.S. 132, 149 (1975). Exemption 5 therefore incorporates the privileges that protect materials from discovery in litigation, including the deliberative process, attorney work-product and attorney-client privileges.

The deliberative process privilege protects the decision-making process of government agencies and encourages the "frank exchange of ideas on legal or policy matters" by ensuring agencies are not "forced to operate in a fish bowl." *Mead Data Cent., Inc. v. United States Dep't of the Air Force*, 566 F.2d 242, 256 (D.C. Cir. 1977) (internal citations omitted). A number of policy purposes have been attributed to the deliberative process privilege. Among the most important are to: (1) "assure that subordinates . . . will feel free to provide the decision maker with their uninhibited opinions and recommendations;" (2) "protect against premature disclosure of proposed policies;" and (3) "protect against confusing the issues and misleading the public." *Coastal States Gas Corp. v. United States Dep't of Energy*, 617 F.2d 854, 866 (D.C. Cir. 1980).

The deliberative process privilege protects materials that are both pre-decisional and deliberative. The privilege covers records that "reflect the give-and-take of the consultative process" and may include "recommendations, draft documents, proposals, suggestions, and other subjective documents which reflect the personal opinions of the writer rather than the policy of the agency." *Id.*

The materials that have been withheld under the deliberative process privilege of Exemption 5 are both pre-decisional and deliberative. They do not contain or represent formal or informal agency policies or decisions. They are the result of frank and open discussions among employees of the Department of the Interior. Their contents have been held confidential by all parties and public dissemination of this information would have a chilling effect on the agency's deliberative processes; expose the agency's decision-making process in such a way as to discourage candid discussion within the agency, and thereby undermine its ability to perform its mandated functions.

Ryan Witt, Bureau of Land Management (BLM) FOIA Officer, is responsible for this partial denial. Elizabeth Carls, Attorney Advisor in the Office of the Solicitor, was consulted.

You may appeal this partial denial to the Department of the Interior's FOIA/Privacy Act Appeals Officer. If you choose to appeal, the FOIA/Privacy Act Appeals Officer must receive all documentation listed below no later than 30 workdays from the date of this letter. Appeals arriving or delivered after 5 p.m. Eastern Time, Monday through Friday, will be deemed received on the next workday.

Your appeal must be made in writing. You may submit your appeal and accompanying materials to the FOIA/Privacy Act Appeals Officer by mail, courier service, fax, or email. All communications concerning your appeal should be clearly marked with the words "FREEDOM OF INFORMATION APPEAL." Send your appeal and accompanying materials to:

Department of the Interior
Office of the Solicitor
1849 C Street, N.W.
MS-6556 MIB
Washington, DC 20240

Attn: FOIA/Privacy Act Appeals Office
Telephone: (202) 208-5339
Fax: (202) 208-6677
Email: FOIA.Appeals@sol.doi.gov

You must include an explanation of why you believe the BLM's response is in error. Please include your name, daytime telephone number (or the name and telephone number of an appropriate contact), email address, and fax number (if available). Your contact information is required in case the FOIA/Privacy Act Appeals Officer needs additional information or

clarification. You must also include copies of all correspondence between you and the BLM concerning your FOIA request, including the original FOIA request and the BLM's response.

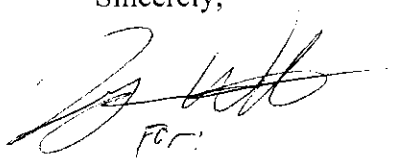
As part of the 2007 FOIA amendments, the Office of Government Information Services (OGIS) was created to offer mediation services to resolve disputes between FOIA requesters and Federal agencies as a non-exclusive alternative to litigation. Using OGIS services does not affect your right to pursue litigation. You may contact OGIS in any of the following ways:

Office of Government Information Services
National Archives and Records Administration
Room 2510
8601 Adelphi Road
College Park, MD 20740-6001
E-mail: ogis@nara.gov
Telephone: 301-837-1996
Facsimile: 301-837-0348
Toll-free: 1-877-684-6448

For your information, Congress excluded three discrete categories of law enforcement and national security records from the requirements of the FOIA. See 5 U.S.C. § 552(c) (2006 & Supp. IV (2010). This response is limited to those records that are subject to the requirements of the FOIA. This is a standard notification that is given to all our requesters and should not be taken as an indication that excluded records do, or do not, exist.

If you have any questions regarding this request, please contact Maritiza Harris, BLM WO FOIA Specialist, at (202) 912-7650 or via email at BLM_WO_FOIA@blm.gov.

Sincerely,



Benjamin E. Gruber, Acting Chief
Division of External Affairs

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Form 1221-2

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

MANUAL TRANSMITTAL SHEET

Release
8-69
Date
07/13/98

Subject

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

1. Explanation of Material Transmitted: This release transmits a handbook section for the BLM Manual Section 8270 - Paleontological Resource Management. It provides the guidelines for implementing the Paleontological Resource Management program.

2. Reports Required: None.

3. Material Superseded: None

4. Filing Instructions: File as directed below.

REMOVE:	INSERT:
None	H-8270-1

(Total: 19 Sheets)

(s)Deputy Director

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

Table of Contents

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 or potential for the occurrence of fossils is essential to decisionmakers 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 areas 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 and quality of the fossils produced by such units, is a critical management tool for land-use decisionmaking 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 and need for the continued advancement of the 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 Paleontologists 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 a 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 geologists may also provide information on fossil occurrences by networking with colleagues in other offices or organizations. 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. Classification. 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 plant 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 a 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. Formal Analysis of Existing Data. 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 a 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 area 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. Paleontological Field Survey. 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 noteworthy occurrences of invertebrate or plant fossils are, or are likely to be, present in a 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. Report of Findings. 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; lists/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 area 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. Mitigation and Monitoring Plan. 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 costs associated with curation of specimens and associated records will be borne by the project proponent.

2. Completion of Mitigation. 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 interests 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 paleontologists 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 Areas 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 is 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 paleontologists on the public lands.
3. Serve as a 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. Vertebrate Fossils. 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) authorize 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 a 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. Invertebrate Fossils. Subject to the provisions 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. Petrified Wood. 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. Consulting Activities. 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. Fossils and Cultural Resources. Paleontological resources are primarily found on bare, unvegetated outcrops which are created as the result of active erosion processes. These erosion processes are of 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. Applying for a Permit. 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 in Appendix 1.

2. Qualifications. 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 a 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. Permit Processing. 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 or 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. Terms and Conditions. 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 individual(s) named in the permit whenever fieldwork under the permit is in progress.

5. Permit Issuance. 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. Repositories. 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. Suspension/Revocation of Permits. 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. Disputes and Appeals. Applicants and permittees have the right to dispute and appeal any adverse decision.

a. Disputes. 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 a permit application, the inclusion of specific terms and conditions in a permit, or the modification, suspension, revocation or non-renewal of a permit.

(1) Request for Review. The 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 light of information presented, or may sustain the original decision, in either case providing the disputant with written explanation.

(2) Request for Conference. 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 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 higher 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 State 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 and 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) Record of Review. Record of any reexamination of an Authorized Officer's decision shall be included in the permanent file at the State Office.

b. Appeals.

(1) Initiated by Disputant. 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) Initiated by Other Affected Person. 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. Annual Reports. 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. Final Report. 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 samples 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. Approval of Reports. 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. Extension of Deadlines. 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. Pro-active Management. 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 may involve other Federal or State agencies, museums, universities and colleges, geological surveys, professional and amateur societies, individual permittees and other interested parties. By developing and using such partnerships, BLM can extend the availability of scarce skills and staff in its management of paleontological resources. BLM Regional Paleontologists 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 journalists 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. Law Enforcement. While there are no laws specifically aimed at the management of paleontological resources, an number of laws address paleontology at least partially. For example, the Archaeological 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 ion 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 should be reported to these law enforcement officers. In any incident where paleontological 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 paleontologists 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.

Form 8270-1 (Temporary)
(December 1994)

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

1a. Applicant:	1b. Affiliation:
2. Mailing address: e-mail address: Office: Field party:	3. Telephone number: Office: Fax: Field party: Fax:
4. Nature of paleontological fieldwork proposed: a. Survey and limited surface collection ☐ **OR** b. Excavation ☐	
5. Location of proposed work (attach topo map copy with project boundaries):	
6. Purposes and methodology of proposed work (attach separate sheet):	
7. Dates of proposed work: Start: End:	
8. Name(s) of individual(s) responsible for planning, supervising, and carrying out fieldwork:	
9. Name and address of repository:	
10. Additional materials required: a. Resume for each individual named in Line 1a and Line 8; b. Summary of organizational capabilities; c. Summary of organizational history; d. Written certification signed by a properly authorized official of the repository named in Line 9, attesting to the repository's willingness to accept any collections, and as applicable, records, data, photographs, and other documents generated during the proposed work, and to assume permanent curatorial responsibility for such materials on behalf or the United States Government.	

11. Signatures: 12. Dates:

Applicant (Line 1a)

Co-applicant(s)

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 must 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 the 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 l(a) and on line 8 that demonstrates the following:

A. l.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 a professional paleontologist who meets qualification 1, providing increased responsibility leading to professional duties similar to those in 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 wishes to make a collection but does not meet the criteria above. A permit may be issued to the applicant PROVIDED that there is a co-applicant 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 the 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 a 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 l(a).

Lines 11 and 12: Signature and Date

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

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

Form 8270-2 (Temporary)
(December 1994)

United States
Department of the Interior
Bureau of Land Management

Permit number:

Paleontological Resources Use Permit

A copy of this permit must be carried by the individual(s) named in Line 8 whenever fieldwork is in progress.

1a. Permittee:	1b. Affiliation:
2. Mailing address: e-mail address: Office: Field party:	3. Telephone number: Office: Fax: Field party: Fax:
4. Nature of authorized paleontological fieldwork: a. Survey and limited surface collection ☐ **OR** b. Excavation ☐	
5. Location of authorized paleontological fieldwork:	
6. Authorized start date:	7. Expiration Date:
8. Name(s) of individual(s) responsible for planning, supervising, and carrying out fieldwork:	
9. Repository name and address:	
10. Special conditions are attached and must be adhered to:	

Field Office Manager Date

Field Office Manager Date

State Director Date

Sample Terms and Conditions

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

PALEONTOLOGICAL RESOURCES 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 is 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 all 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 or 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 costs 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 to 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 of 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.

Form 8270-3 (Temporary)
(May 1994)

United States
Department of the Interior
Bureau of Land Management

Paleontological Locality Form

1. Permit #/Permittee:

2. Repository/Accn.#:

3. Locality #: _____ ❑ Plant ❑ Vertebrate ❑ Invertebrate ❑ 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., direction): _____

or: UTM Grid Zone: _____ _____ m E _____ m N

15. Survey (Sec., T & R): _____

16. Taxa Collected/observed: _____

_____

17. Collector: _____ 18. Date: _____

19. Remarks: _____

_____

_____

_____

_____

_____

_____

PALEONTOLOGY LOCALITY FORM INSTRUCTIONS

The data fields required in the Paleontology Locality Form should be recorded as shown in Guidelines and Standards 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.

3. 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 of 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, oreodont, Hyracodon.

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.

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 lands 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 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)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

MANUAL TRANSMITTAL SHEET

Release
8-68
Date
07/13/98

Subject

8270 - PALEONTOLOGICAL RESOURCE MANAGEMENT

1. Explanation of Material Transmitted: This release transmits BLM Manual Section 8270, Paleontological Resource Management.

2. Reports Required: None.

3. Material Superseded: None.

4. Filing Instructions: File as directed below.

REMOVE:	INSERT:
None to Remove	8270 (Rel. 8-)
	(Total: 6 Sheets)

Deputy Director

8270 - PALEONTOLOGICAL RESOURCE MANAGEMENT

Table of Contents

Attachments

8270 - PALEONTOLOGICAL RESOURCE MANAGEMENT

.01 Purpose. This Manual Section provides uniform policy and direction for the Bureau of Land Management's Paleontological Resource Management Program. This Manual Section is supplemented by Paleontological Resources Handbook 8270-1. The Handbook contains detailed procedures and standards for implementing this Manual Section.

.02 Objectives. The overall objective of BLM's Paleontological Resource Management Program is to provide a consistent and comprehensive approach in all aspects relating to the management of paleontological resources including identification, evaluation, protection and use. The specific objectives of this program are to:

A. Locate, evaluate, manage and protect, where appropriate, paleontological resources on the public lands.

B. Facilitate the appropriate scientific, educational, and recreational uses of paleontological resources, such as research and interpretation.

C. Ensure that proposed land uses, initiated or authorized by BLM, do not inadvertently damage or destroy important paleontological resources on public lands.

D. Foster public awareness and appreciation of our Nation's rich paleontological heritage.

.03 Authority. BLM manages paleontological resources principally under the following authorities:

A. Federal Land Policy and Management Act of 1976 (P.L. 94-579) requires that the public lands be managed in a manner that protects the ". . . quality of scientific . . ." and other values. The Act also requires the public lands to be inventoried and provides that permits may be required for the use, occupancy and development of the public lands.

B. National Environmental Policy Act of 1969 (P.L. 91-190) requires that ". . . important historic, cultural and natural aspects of our national heritage . . ." be protected, and that ". . . a systematic, interdisciplinary approach which will insure the integrated use of the natural and social sciences . . . in planning and decision making. . . ." be followed.

C. Title 43 CFR, Subpart 8365 addresses the collection of invertebrate fossils and, by administrative extension, fossil plants.

D. Title 43 CFR, Subpart 3622 addresses the free use collection of petrified wood as a mineral material for non-commercial purposes.

E. Title 43 CFR Subpart 3621 addresses collection of petrified wood for specimens exceeding 250 pounds in weight.

F. Title 43 CFR, Subpart 3610 addresses the sale of petrified wood as a mineral material for commercial purposes.

G. Title 43 CFR, Subparts 3802 and 3809 address protection of paleontological resources from operations authorized under the mining laws.

H. Title 43 CFR, Subpart 8200 addresses procedures and practices for the management of lands that have outstanding natural history values, such as fossils, which are of scientific interest.

I. Title 43 CFR, Subpart 1610.7-2 addresses the establishment of Areas of Critical Environmental Concern for the management and protection of significant natural resources, such as paleontological localities.

J Title 43 CFR Subpart 8364 addresses the use of closure or restriction of public lands to protect resources. Such closures or restrictions may be used to protect important fossil localities.

K. Title 43 CFR Subpart 8365.1-5 addresses the willful disturbance, removal and destruction of scientific resources or natural objects and 8360.0-7 identifies the penalties for such violations.

L. Title 36 CFR, Subpart 62 addresses procedures to identify, designate and recognize National Natural Landmarks, which include fossil areas.

M. 18 USC Section 641 addresses the unauthorized collection of fossils as a type of Government property.

N. Secretarial Order 3104 grants to BLM the authority to issue paleontological resource use permits for lands under its jurisdiction.

O. Onshore Oil and Gas Order No. 1 and 43 CFR Title 3162 provide for the protection of natural resources and other environmental concerns and can be used to protect paleontological resources where appropriate.

8270 - PALEONTOLOGICAL RESOURCE MANAGEMENT

P. Offer to Lease and Lease for Oil and Gas Form 3100-11 provides for inventories and other short term studies to protect objects of scientific interest, such as significant fossil occurrences, and requires that operations conducted under oil and gas leases minimize adverse impacts to natural and cultural resources.

Q. Federal Cave Resources Protection Act of 1988 (P.L. 100-691) and Title 43 CFR Subpart 37 address protection of significant caves and cave resources, including paleontological resources.

.04 Responsibility.

A. The Director, through the Assistant Director, Renewable Resources and Planning, and the Group Manager, Cultural Heritage, Wilderness, Special Areas and Paleontology is responsible for overall direction, leadership and coordination of BLM's paleontology program. This is accomplished through the development of program policies, strategies, procedures and directives, and in coordination with other Headquarters Groups as appropriate. This responsibility also includes coordination with other Federal agencies and Departments at the National Headquarters level.

B. State Directors, within their respective geographical jurisdictions, are responsible for the implementation of Bureau policies respecting paleontological resources, and for monitoring and evaluating the effectiveness of the paleontology program within their State.

C. Field Office Managers are responsible for the local management and oversight of paleontological resources within their geographical jurisdictions by ensuring that Bureau policies are implemented and coordinated, and that established program technical standards are met.

D. Regional Paleontologists provide professional expertise in paleontology. They serve as program coordinators for all States in their respective regions, and as the program interface between field offices and the Washington Office. In some cases, the Regional Paleontologist also serves as the State Office Paleontologist.

8270 - PALEONTOLOGICAL RESOURCE MANAGEMENT

E. Paleontology Program Contacts are responsible for working and coordinating with BLM Regional Paleontologists to assure implementation of paleontology program policies, identification and resolution of program needs, and to carry out other day-to-day activities associated with the management of paleontological resources. BLM State Offices and Field Offices shall identify such a paleontology program contact from their staff. While the Cultural Heritage Program is responsible for the providing base funding for paleontology, such office contacts may be selected from any disciplinary background, but should be chosen for their technical background in a related discipline, e.g. geology, biology, botany, archaeology, paleontological training, availability and their personal interest in supporting the goals of the paleontology program.

F. Other BLM staff are responsible within their normal duties for helping to ensure that the Bureau's goals for the management and protection of paleontological resources are met.

.05 References.

A. Departmental Manual 411 DM 1-3, Policies and Standards for Managing Museum Collections, 1997.

B. Departmental Manual 516 DM, National Environmental Policy Act of 1969.

C. 44 L.D. 325, August 6, 1915, affirmed that fossils are not minerals within the meaning of the mining laws of the United States and are not locatable under such laws.

.06 Policy.

A. The paleontological resources found on the public lands are recognized by the BLM as constituting a fragile and nonrenewable scientific record of the history of life on earth, and so represent an important and critical component of America's natural heritage. BLM will exercise stewardship of these resources as a part of its public land management responsibility. In meeting this responsibility, it shall be BLM's policy to:

1. Actively work with other Federal, State and Local Government Agencies, professional organizations, private landowners, educational institutions and other interested parties to enhance and further the Bureau’s and the American public’s needs and objectives for paleontological resources.

2. Consider paleontological resource management a distinct BLM program, to be given full and equal consideration in all its land use planning and decision making actions.

3. Maintain a staff of professional paleontologists to provide BLM decision makers with the most current and scientifically sound paleontological resource data and advice.

4. Mitigate adverse impacts to paleontological resources as necessary.

5. Facilitate appropriate public and scientific use of and interest in paleontological resources.

6. Utilize the additional skills and resources of the Bureau's recreation and minerals programs to develop and implement interpretation strategies and products to enhance public understanding, appreciation and enjoyment of paleontological resources.

7. Vigorously pursue the protection of paleontological resources from theft, destruction and other illegal or unauthorized uses.

8. Authorize land tenure adjustments, when appropriate, as means to protect paleontological localities.

.07 File and Records Maintenance.

A. Paleontological locality information is non-public information listed under Category 3 of the Bureau's Record Access Category Listing and may be withheld if the following Freedom of Information Act (FOIA) exemptions apply.

1. Exemption 2 covers records related solely to the internal practices of an agency which are of a more substantial internal matter, the disclosure of which would risk circumvention of a legal requirement.

2. Exemption 3 provides for the withholding of information prohibited from disclosure by another statute. Paleontological resources located within significant caves, for example, are thus protected by the confidentially requirements of the Federal Cave Resources Protection Act.

3. Exemption 4 protects trade secrets and other privileged or confidential information. The release of paleontological locality information for areas where consultants or others, such as educational institutions, are permitted, for example, could severely jeopardize their work.

B. Locality data and reports associated with permits, mitigation work or other paleontology projects shall be maintained as permanent records.

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.08 Relationships to other Bureau Programs.

A. Resource Protection/Mitigation. All BLM programs that may have an adverse impact on paleontological resources through their actions or authorizations are responsible as benefiting activities for funding any necessary resource inventories, evaluations or other work needed to avoid or mitigate adverse impacts on paleontological resources.

B. Cultural Resources. In rare instances, paleontological resources may be found in association with cultural resources. Such occurrences fall under the provisions of the Archeological Resources Protection Act. In the event of such an occurrence, the authorized BLM Manager, in consultation with the State Office or Regional Paleontologist and the Cultural Resource Specialist will evaluate the discovery and determine an appropriate course of action that will safeguard both the paleontological and archaeological materials. The Cultural Resource Program also provides the Paleontological Resource Management Program with its linkage to the Bureau's budget system. Therefore, these program personnel are responsible for identifying and addressing funding needs for paleontology in the BLM's annual budget process.

C. Recreation. Paleontological resources have high public education and recreation values. Such values can be enhanced by publishing guides to selected collecting areas and developing interpretive trails. Working collaboratively, BLM Paleontologists and Recreation Specialists can develop responsible and outstanding recreational and educational opportunities involving paleontological resources that will enhance public understanding of fossils and the science of paleontology, and showcase BLM's stewardship role.

D. Minerals Management. Minerals management can have both positive and negative effects on paleontological resources. Mineral development, and related activities such as road building, can expose new fossil localities to scientific research or recreained in 43 CFR 3809 and 43 CFR 3162.5, as implemented and supplemented by Onshore Oil and Gas Order No. 1, provide means, where necessary, to protect paleontological resources which may be adversely impacted by mineral development. BLM geologists can also provide valuable assistance in helping identify fossil localities, and develop interpretive and educational material related to paleontology. Fossils are not locatable under the mining laws.

E. Land Use Planning and Environmental Review. The management of paleontological resources shall be guided by and be in accordance with approved BLM land use plans.

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1. Paleontological resources constitute a fragile and non-renewable scientific record of the history of life on earth. Once damaged, destroyed, or improperly collected, their scientific and educational value may be greatly reduced or lost forever. In addition to their scientific, educational and recreational values, paleontological resources can be used to inform land managers about interrelationships between the biological and geological components of ecosystems over long periods of time. It is the policy of BLM, therefore, to manage paleontological resources for these values, and to mitigate adverse impacts to them. To accomplish this goal, paleontological resources must be professionally identified and evaluated. Their values should be adequately addressed and integrated fully into the Bureau's planning system and environmental analysis documents. Generally, considerable time, money and effort may be saved by considering paleontological data as early as possible in the decision making process.

2. Paleontological Data Collection and Analysis for Planning. Locating, evaluating and classifying paleontological resources, and developing management strategies for them, must be based on the best scientific information available. Paleontological expertise is necessary to help managers and decision makers resolve issues involving paleontological resources. Because paleontological expertise is scarce within BLM, State Office or Regional Paleontologists are available and should be called upon to provide direct assistance or to identify other appropriate sources of assistance. (Detailed procedures and standards for planning for paleontological resources are contained in Handbook 8270-1 Chapter II.)

3. Mitigation. Adverse impacts to paleontological resources shall be mitigated as necessary. Any field surveys and/or inventories intended to protect paleontological resources will be targeted to specific areas or be issue driven as needed. Unless other arrangements have been made by the local manager, project proponents shall bear all costs associated with this activity. In keeping with the historical policies adopted by the Department of the Interior and the BLM, these mitigation requirements apply primarily to vertebrate fossils. However, where noteworthy occurrences of invertebrate or plant fossils are known or expected, the same planning and mitigation policies and procedures shall be followed. (See 8270-1 Handbook Chapter III for mitigation standards and procedures.)

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.09 Paleontological Resource Use. The desired outcome of managing paleontological resources is to ensure their availability for scientific, educational and recreational uses. Such uses include collection, site interpretation, study and exhibition. Collection may or may not require a permit (See B. below). In cases where permits are required, the permitting process fulfills several important functions. Permits provide for the pro-active management of paleontological resources by alerting managers to the presence of noteworthy occurrences of paleontological resources, their condition and vulnerability. When needed, permits facilitate research by qualified paleontologists and serve as a bridge for communication between land managers and researchers. The permitting process provides appropriate protection to other resources that may be impacted by permitted collecting activities, and provides a consistent administrative structure for BLM's management effort. An efficient and uniform permitting process is also essential to and consistent with BLM's customer-oriented focus.

A. A Paleontological Resource Use Permit is a land use authorization issued to a qualified applicant for the purpose of carrying out various paleontological activities, such as identification, survey, collection or excavation, on lands managed by BLM. Such permits are nonexclusive, noncompetitive, minimum impact permits, and are not subject to Notice of Realty Action, filing fees or cost reimbursement. State Offices are responsible for processing and issuing such permits in consultation with the appropriate Field Office and Regional Paleontologist.

B. Determining the need for a Paleontological Resource Use Permit

1. Invertebrate Fossils, Plant Fossils and Petrified Wood. In accordance with existing regulations, the public lands, except where otherwise posted or prohibited, are open for the collection of invertebrates, plant fossils and petrified wood. (See Section .03, Authority) Permits are not normally required for such collection. (See 8270-1 Handbook for collecting standards.) However, in some situations, localities containing noteworthy occurrences of such fossils may be closed to collection except under permit. Such closures shall be established through the land use planning process, and shall be carried out in consultation with the BLM Regional Paleontologist.

2. Vertebrate Fossils. Unregulated collection of vertebrate fossils is not allowed in 43 CFR 8365.1-5. Therefore, permits are required for the collection of vertebrate fossils, including their trace fossils, such as trackways and coprolites. Refer to 8270-1 Handbook for permit procedures.

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C. BLM issues two types of Paleontological Resource Use Permits.

1. Survey and Limited Surface Collection Permits are issued to expedite broad ranging survey/reconnaissance work in order to identify vertebrate fossil localities for scientific research, inventory or planning purposes, or in advance of projects which may threaten such localities. Collection of material for carrying out locality (site) investigations and evaluation/characterization studies, and where the use of such small sites as temporary field work stations will be restored to their natural condition within the same work season, is allowed, providing that such activities can ordinarily be expected to result in only negligible surface disturbance, i.e., less than 1 square meter, and can be done with hand tools. Such non-destructive paleontological data collection, inventory, research or monitoring activities are generally deemed to meet the provisions of Chapters 2 and 6, Appendices 1 and 5 respectively, of Departmental MS 516, Categorical Exclusions.

2. Excavation Permits are issued for the collection of vertebrate fossils where surface disturbance exceeds the limits permissible for the survey and limited surface collection work stated in C.1 above.

D. Permit Administration. Permittee qualifications and other matters relating to the administration of Paleontological Resource Use Permits may be found in the 8270-1 Handbook Chapter IV.

E. Commercial Collection. BLM does not authorize the commercial use of fossils collected on public lands. Petrified Wood may be purchased as a mineral material under procedures described in 43 CFR Subpart 3610.

F. Paleontological Resources in Special Areas.

1. Wilderness and Wilderness Study Areas. Paleontological resources may be found in designated Wilderness or Wilderness Study Areas. Scientific research involving collection and removal of paleontological resources is not considered incompatible with the concept of wilderness preservation as provided for in Section 4(b) of the 1964 Wilderness Act. Additionally, paleontological resources are considered to be supplemental values, as provided for in Section 2(c) of the Act. The following provisions are recommended for addressing the management of paleontological resources in such areas:

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

b. 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. Such use must be approved by the State Director.

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

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

G. Collection Management. Fossils collected under a Paleontological Resources Use Permit remain the property of the Federal Government and shall be curated in an approved repository in conformance with the provisions of Departmental Manual 411. BLM managers shall select repositories which can appropriately maintain such collections from public lands and their associated records, and make this information available to BLM upon request. Repositories should be encouraged, if they have not already done so, to establish and maintain electronic databases of specimen, locality and other associated data.

H. Split Estate Lands. Split estate lands are those lands where title to the surface and 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 the mineral estate that may affect the paleontological resources, the action should be conditioned with appropriate paleontological mitigation recommendations to protect the interests of the surface owner. In most States the owner may elect to waive these recommendations. Such a waiver shall be documented in

Foss, Scott <sfoss@blm.gov>

Draft updated paleontology policy - PFYC

1 message

Foss, Scott <sfoss@blm.gov> Mon, Feb 29, 2016 at 9:53 AM
To: "Melvin (Joe) Tague" <jtague@blm.gov>, Stephen Small <ssmall@blm.gov>, "Carl (Andy) Tenney" <atenney@blm.gov>, Miyoshi Stith <mstith@blm.gov>, Dean Bolstad <dbolstad@blm.gov>, Brent Ralston <bralston@blm.gov>, Lori Wood <lwood@blm.gov>
Cc: Byron Loosle <bloosle@blm.gov>, Emily Palus <epalus@blm.gov>, Leah Baker <lbaker@blm.gov>, Fariba Hamedani <fhamedani@blm.gov>, Udom Hong <uhong@blm.gov>

Hello Resources and Planning,

The paleontology team has developed an update to the Potential Fossil Yield Classification (PFYC) and would like to invite your comments and thoughts. The policy will update and replace the original guidance that was introduced in WO IM2008-009. We expect this updated and streamlined guidance, coupled with PFYC assignments and maps, will provide a useful starting point for addressing paleontological resources when planning land uses.

Please share with your colleagues and field personnel as appropriate. **Assemble any comments by March 31** and send them to me. We will also share this proposed guidance with our colleagues in energy, minerals, and realty management.

After comments are addressed, we hope to send this back to you for surname in April.

Thank you,
Scott

Scott E. Foss, PhD
BLM Senior Paleontologist
20 M St. SE, Suite 2134, Washington, DC 20003
sfoss@blm.gov, 202-912-7253

Potential Fossil Yield Classification, PFYC - draft 022916.doc
56K

Foss, Scott <sfoss@blm.gov>

proposed MOU and proposed policy for repository partners on replicas, consumptive use, and sharing of site data.

1 message

Foss, Scott <sfoss@blm.gov> Thu, May 1, 2014 at 3:48 PM
To: Alice Hart <ahart@blm.gov>
Cc: Emily Palus <epalus@blm.gov>, Byron Loosle <bloosle@blm.gov>

Hi Alice,

I have revised the proposed MOU and guidance documents to address a few recent concerns. A DOI SOL proofread the documents and didn't see a problem, but we did not do a formal vetting. I have also sent documents to Terry for comment.

We have shared these documents before, but I'm ready to share this version with Robin and the state leads if you think it is appropriate.

Thanks,
S

2 attachments

Proposed guidance - replication, consumptive use, & site information DRAFT 050114.docx
40K

Proposed MOU for musuem repositories DRAFT - 050114.docx
41K

Foss, Scott <sfoss@blm.gov>

paleo program history

1 message

Foss, Scott <sfoss@blm.gov> Tue, May 6, 2014 at 11:10 AM
To: "Liggett, Gregory A" <gliggett@blm.gov>

I am trying to revise this in time for the 10CFR, but doubt I will be able to get much done before Friday. I'll let you know if I do. This version is still a draft and much information is out of date, but it is based on the 2012 version that we had at the program meeting in Billings.

(b) (5)

[redacted]

8270 Business Plan revision 080113.docx
1297K

Foss, Scott <sfoss@blm.gov>

Paleontology Program SORN

1 message

Foss, Scott <sfoss@blm.gov> Wed, Nov 18, 2015 at 5:15 PM
To: Byron Loosle <bloosle@blm.gov>

Hi Byron,

I forgot to mention that we are moving forward with a departmental system of records notice (SORN) for 4x paleontology programs. That'l be a widget. (grin)

The next step will be to file our information collection paperwork independent of the rulemaking process. That way we will be able to implement SPATS before the rules are finished.

And finally the 8270 manual.

Full speed ahead.

S

Scott E. Foss, PhD
BLM Senior Paleontologist
20 M St. SE, Suite 2134, Washington, DC 20003
sfoss@blm.gov, 202-912-7253

Foss, Scott <sfoss@blm.gov>

PFYC policy, funding, and mapping

1 message

Foss, Scott <sfoss@blm.gov> Wed, Dec 23, 2015 at 12:44 PM
To: Brent Breithaupt <bbreitha@blm.gov>, Gregory A Liggett <gliggett@blm.gov>, Harley Armstrong <harmstro@blm.gov>, Hunt Foster Rebecca <rhuntfoster@blm.gov>, Philip A Gensler <pgensler@blm.gov>, Scott Foss <sfoss@blm.gov>, Greg McDonald <Greg_McDonald@nps.gov>

Hello,

I have attached the latest draft policy on PFYC. When we return in January I will share it with WO-240, the state heritage leads, and the WO program leads for lands, minerals, and planning. After receiving any comments I will brief the AD and get it into surname. Please send any thoughts or changes to me before **January 7**. You may share comments with me after that, but my hope is that you will each be be on board by that time and be available to answer questions in your offices as we run through surname.

In other news, we have some funding to do the mapping for PFYC, which I think we will make available through contract. Stay tuned for more information on that.

Finally, we are ready to publish at least two BLM Paleo Technical Reports on PFYC (Montana and the Dakotas, and El Centro Field Office, CA).

Happy holidays,
S

Scott E. Foss, PhD
BLM Senior Paleontologist
20 M St. SE, Suite 2134, Washington, DC 20003
sfoss@blm.gov, 202-912-7253

Potential Fossil Yield Classification, PFYC - draft 122315.doc
51K

Foss, Scott <sfoss@blm.gov>

Re: Paleo coordinator IM

1 message

Foss, Scott <sfoss@blm.gov> Thu, May 1, 2014 at 10:21 AM
To: "Gensler, Philip" <pgensler@blm.gov>

See IM2009-011 attachment 1:
Paleontology Program Coordinator (Paleontology Coordinator) *– The employee designated by the local BLM Office Manager to manage paleontological resource issues, including planning, mitigation, budget, and other administrative duties. The local point of contact for paleontological resource use permittees, the State Office Paleontology Program Lead, and the Regional Paleontologist. The employee is usually a geologist or archaeologist*.

On Wed, Apr 30, 2014 at 5:45 PM, Gensler, Philip <pgensler@blm.gov> wrote:
> Interesting. Since every state has implemented a paleo coordinator I would have assumed they were directed to do so through some form of guidance.
>
> Regional Paleontologist NM, AZ, CA
> 301 Dinosaur Trail
> P.O. Box 27115
> Santa Fe, NM 87502
> 505-954-2172
>
> On Wed, Apr 30, 2014 at 2:43 PM, Foss, Scott <sfoss@blm.gov> wrote:
> > I'm not sure it is implemented bureau-wide except by common usage.
> >
> > On Wed, Apr 30, 2014 at 4:34 PM, Gensler, Philip <pgensler@blm.gov> wrote:
> > > Scott,
> > > I was looking at the paleo coordinator IM and know it originated in Utah yet it is implemented BLM wide. How did it get implemented BLM wide?
> > >
> > > Regional Paleontologist NM, AZ, CA
> > > 301 Dinosaur Trail
> > > P.O. Box 27115
> > > Santa Fe, NM 87502
> > > 505-954-2172
> >
> > --
> > Scott E. Foss, PhD
> > BLM Senior Paleontologist
> > 20 M St. SE, Suite 2134
> > Washington, DC 20003
> > sfoss@blm.gov
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--
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3 attachments

IM2009-011_att1 - Guidelines.pdf
275K

IM2009-011_att2 - Flowchart.pdf
78K

IM2009-011 Assessment and Mitigation of Potential Impacts to Paleontological Resources.pdf
94K

Guidelines for Assessment and Mitigation of Potential Impacts to Paleontological Resources

Contents:

Introduction

Surface disturbing federal actions on public and split-estate lands may cause direct adverse impacts to paleontological resources through the damage or destruction of fossils or the disturbance of the stratigraphic context in which they are located. Indirect adverse impacts may be created from increased accessibility to fossils leading to looting or vandalism activities. Land tenure adjustments may result in the loss of significant paleontological resources to the public if fossils pass from public ownership.

Under the Federal Land Policy and Management Act (FLPMA) and the National Environmental Policy Act (NEPA), federal actions and land tenure adjustments that may impact or result in a loss of paleontological resources on public or split-estate lands are evaluated, and necessary mitigation is identified.

I. ASSESSMENT OF POTENTIAL IMPACTS TO PALEONTOLOGICAL RESOURCES

The following sections outline general steps designed to assist in the analysis and assessment of possible impacts to paleontological resources from proposed actions. These sections are sequential in order and provide for termination of the assessment at various stages if the analysis indicates no impacts are likely to occur.

A. Scoping. Field Offices must assess all proposed federal actions to identify possible effects to significant paleontological resources (see Appendix A for definition) that are potentially recoverable and are likely to be within the zone of expected surface disturbance or relatively close to the surface. The direct effects of all surface activities and the indirect effects of increased public access and land tenure adjustments must be considered in any paleontological assessment. The assessment will determine whether further analysis will be necessary. The Paleontology Program Coordinator (Paleontology Coordinator – see Appendix A for definition) has primary responsibility for the scoping process for projects within the Field Office area, but the Paleontology Program Lead (Paleontology Lead – see Appendix A for definition) may be responsible for projects that span multiple Field or District Offices, and can support the Paleontology Coordinator as requested.

1. Surface only activities – If the proposed project will not disturb potentially fossil-yielding bedrock or alluvium, no additional work is necessary. The project file should be documented as appropriate. Examples of such projects include weed spraying, mechanical brush treatment, geophysical exploration, or surface disturbing activities such as road construction when the fossil resource is expected to be buried well below project compression or excavation depth or when surface fossil resources would be left undamaged.

2. Land Tenure Adjustments – If parcels are identified to pass from public ownership in a proposed land tenure adjustment action but contain no potential for recoverable, significant paleontological resources, no additional work is necessary. The project file should be documented as appropriate**,** and conclusions addressed in the environmental document. This situation may arise, for example, in areas consisting only of granitic bedrock where paleontological resources would not normally occur.

3. Young alluvial deposits or deep soils may cover and obscure sedimentary bedrock, and any fossils that may occur in that bedrock would be unidentifiable or irretrievable prior to disturbance actions. In most of these cases, the fossil resources cannot be quantified, but the potential for impacting paleontological resources should be mentioned in the evaluation of the proposal, i.e., the planned disturbance will pass through the soil layer and impact a bedrock unit which is known to contain significant fossils elsewhere.

If the initial scoping identifies the possibility for adversely affecting significant paleontological resources, further analysis is necessary. If there will be no impact or potential impact based on the action or the fossil resource may be impacted, but is too deep to be recovered, e.g., deep well bore passing through a fossil formation, the project file must be documented, and no additional assessment is necessary.

B. Analysis of Existing Data. If scoping suggests the possibility of disturbing fossil-yielding bedrock or alluvium that is near to the surface and that may contain significant paleontological resources that are potentially recoverable, more in-depth analysis is necessary. Geologic mapping reflecting the Potential Fossil Yield Classification (PFYC) should be consulted, along with any other easily accessible information, such as GIS-based locality data, other known paleontological locality information, and existing paleontological reports for the area, aerial photos, or soils maps.

1. Potential Fossil Yield Classification (PFYC) – This is a system for categorizing the probability of geologic units to contain scientifically significant paleontological resources or noteworthy fossil occurrences. It has five levels or Classes, with Class 1 applied to geologic units that are not likely to contain significant fossils through Class 5 for geologic formations that have a high potential to yield scientifically significant fossils on a regular basis (see IM No. 2008-009). This classification does not reflect rare or isolated occurrences of significant fossils or individual localities, only the relative occurrence on a formation- or member-wide basis. Any rare occurrences may require additional assessment and mitigation if they fall within the area of anticipated impacts.

2. If the results of the preliminary analysis determine that the proposed project will only affect geologic units not likely to contain significant fossils or that have a very low or low potential for significant fossils (PFYC Class 1or 2), and no scientifically important localities are known to occur in the area, the project file should be documented, and no additional paleontology assessment is necessary.

3. The results of an analysis of a proposed project may indicate the potential to disturb PFYC Class 3, 4, or 5 formations or potentially fossil-bearing alluvium, or known significant localities, which may then suggest the need for field surveys and/or other mitigation measures. The results may also identify areas where little or nothing is known of the fossil record so that additional attention may be given to these areas during field survey. The analysis should consider the likely impacts on the known or potential fossil resource and should be the basis for determining the need for or level of additional assessments.

C. Determining the Need for Field Surveys and Mitigation. The previously discussed procedures may result in the determination that the project may encounter bedrock or an alluvial zone that has a moderate or high potential to contain significant paleontological resources. However, it does not determine the appropriate action, such as a field survey, on-site monitoring, special stipulations, avoidance, or other mitigation.

1. If the need for further work is not clearly evident after the analysis, the Authorized Officer and/or Project Leader should be consulted for a final decision. The Paleontology Lead or Regional Paleontologist may also be consulted. A brief written report of findings should be prepared, including the rationale for supporting the decision not to require a field survey or additional monitoring. The report should be signed by the Authorized Officer and placed in the project file. For example, a seismic survey using vibroseis trucks may be proposed on areas of deep soils, or a temporary recreational event may be planned in an area of low fossil potential. These types of projects are not likely to have a reasonable potential to adversely affect important

paleontological resources. The file should be documented and a standard discovery stipulation attached to the permit proposal.

2. If the analysis in Sec. I.B indicates a reasonably high expectation of not just encountering a potential fossil-bearing zone and also causing adverse impacts to significant paleontological resources, the determination must be made as to (1) whether adverse effects cannot be avoided; (2) whether the adverse impacts can be avoided by altering the location or scope of the project; (3) whether the impacts can be mitigated through development of special stipulations such as requiring on-site monitoring; or (4) whether field surveys will be necessary to determine the presence or absence of significant paleontological resources.

3. In the case where it is known that significant paleontological resources will be adversely impacted, the preferred course of action is avoidance of the impact by moving or rerouting the site of construction, or eliminating or reducing the need for surface disturbance.

4. Application of specific stipulations may reduce or eliminate adverse impacts in many cases. A standard discovery stipulation should be included in any permit approval that is likely to affect significant paleontological resources. The stipulation should mandate an immediate work stoppage in the area of discovery, notification to the Authorized Officer, and protection of the material and geological context. Other stipulations may be appropriate on a case-by-case basis.

(a) A suggested standard discovery stipulation for a discretionary federal action is:

> The permittee shall immediately notify the BLM Authorized Officer of any paleontological resources discovered as a result of operations under this authorization. The permittee shall suspend all activities in the vicinity of such discovery until notified to proceed by the Authorized Officer and shall protect the discovery from damage or looting. The permittee may not be required to suspend all operations if activities can be adjusted to avoid further impacts to a discovered locality or be continued elsewhere. The Authorized Officer will evaluate, or will have evaluated, such discoveries as soon as possible, but not later than 10 working days after being notified. Appropriate measures to mitigate adverse effects to significant paleontological resources will be determined by the Authorized Officer after consulting with the operator. Within 10 days, the operator will be allowed to continue construction through the site, or will be given the choice of either (1) following the Authorized Officer's instructions for stabilizing the fossil resource in place and avoiding further disturbance to the fossil resource, or (2) following the Authorized Officer's instructions for mitigating impacts to the fossil resource prior to continuing construction through the project area.

Note: C.1 and C.2 above would be conducted at the permittee's expense. By regulation, after a 3809 plan of operations is approved or where there is no plan, the BLM is responsible for the cost of any investigation and recovery of fossil materials.

(b) Other stipulations may be developed to reduce potential impacts, preferably in consultation with the project proponent. These may include (1) techniques to reduce surface

disturbance, (2) briefings for all personnel about the potential for discovery, (3) requiring all finds be reported, and (3) using a "light touch" in sensitive areas. These should be made a formal part of the authorization for the project and discussed at a preconstruction meeting or an on-site meeting in the case of oil and gas operations.

(c) All proponents should be directed to share the current rules and regulations regarding fossil theft and the limitations to free use collecting of invertebrate and plant fossils on BLM-administered lands with all employees and subcontractors under their direction. Unlawful removal, damage, or vandalism of paleontological resources will be prosecuted by federal law enforcement. Theft or damage to government property by a proponent, a proponent's employee, or a subcontractor that is under a proponent's direction may lead to legal actions against the proponent.

5. If avoidance actions or stipulating measures are insufficient to protect known paleontological resources, a written assessment must be completed to determine the need for field survey or monitoring. This assessment must include the anticipated direct or indirect impacts associated with the project, the inadequacies of avoidance or special stipulations to protect the resource, existing paleontological information and known localities, relevant geologic information, and the potential for additional discoveries. The assessment must be completed by the Paleontology Coordinator.

(a) In some cases, bedrock will not be visible at the surface in the project area (for example, where thin soils or alluvium obscure all outcrops), but the proposed excavation will likely penetrate into bedrock with known significant paleontological resources. Because fossil material will not be visible at the ground surface in these cases, it may be appropriate to forego a field survey prior to excavation, but require on-site monitoring or spot-checks when bedrock is finally encountered. If construction monitoring is proposed, the written assessment must include a thorough justification for the recommendation.

(b) The State Office may require the Paleontology Coordinator to notify the Paleontology Lead that a field survey or monitoring is deemed appropriate prior to the final decision to require the survey or monitoring. The notification should minimally include the name of the project, the legal description of the location or other locational information, a brief summary of the proposed action, reason(s) for the decision to require a survey or monitoring, and any other relevant information. Concurrence of the Paleontology Lead or Regional Paleontologist may be required prior to the final decision for requiring a survey or monitoring.

(c) A standardized assessment document may be developed that can be applied to projects that are similar in nature, relatively small, and repetitive in approach for use within a Field Office or District. This written assessment is intended to simplify the documentation process for those projects that are likely to have minimal impacts, and may be structured as a programmatic assessment, a form, a checklist, or other document with standard items. This assessment must include the name of the project, the legal description of the location or other locational reference, a brief summary of the proposed action, reason(s) for the decision, and any other relevant information. The parameters in the assessment should be designed to identify the need for a field survey. For example, the parameters may indicate a field survey may be required

for road and well pad construction activities occurring on Class 4 or 5 formations where the formation is likely to be encountered during surface disturbing activities. The Field Manager, in consultation with the Paleontology Lead, must approve the use of a programmatic assessment prior to initial implementation.

6. The decision to require a field survey or monitoring must be made by the Authorized Officer and documented in the project file. If required, a copy of the decision must be furnished to the Paleontology Lead.

II. PROCEDURES FOR CONDUCTING A PALEONTOLOGICAL FIELD SURVEY

If the assessment of existing data indicates: (a) the presence or high probability of occurrence of vertebrate fossils or uncommon nonvertebrate fossils (PFYC Class 4 or 5), or that the probability is unknown (Class 3), in the area of a proposed federal action or transfer of title, and (b) a reasonable probability that those resources will be adversely affected by the proposed action, a paleontological field survey should be conducted.

A. Definition of Field Surveys. Field Surveys are pedestrian surveys to be performed in areas where significant fossils can be expected to occur within the boundary and immediate vicinity of the anticipated disturbance, or where the probability of encountering significant fossils is unknown.

1. Field surveys are performed prior to any surface disturbing activities. Before conducting field surveys, the project location should be as final as possible and any staking of the location should be complete.

2. Surveys are conducted by a BLM Regional Paleontologist, Paleontology Lead, Paleontology Coordinator, appropriately trained and supervised BLM staff, or by a BLM-permitted consulting paleontologist hired by the project proponent.

(a) At the Field Manager's discretion, other qualified BLM staff may conduct surveys on small projects. Performance of surveys by BLM staff must also be approved by the Regional Paleontologist, Paleontology Lead, or Paleontology Coordinator.

(b) Surveys that are complex in nature, constrained by construction schedules, or otherwise cannot be performed by BLM staff should be performed by a consulting paleontologist holding a valid BLM Paleontological Resources Use Permit. Submission of reports may be done directly by the paleontologist to the BLM. The project proponent is also responsible for all costs associated with the survey, including the consulting paleontologist's fees and charges, all survey costs, fossil preparation to the basic identification stage, analyses, reports, and curation costs directly related to mitigation of the project's anticipated impacts. Any required monitoring and mitigation costs are also the responsibility of the project proponent. These costs are to be negotiated between the project proponent and the consulting paleontologist prior to beginning any data gathering, analysis, or field work, and these negotiations do not require BLM

involvement or approval. Any new, additional, or modified curation agreements between the paleontologist and the official repository must be in place prior to starting field work.

(c) Authorization for an activity to proceed cannot be given by a consulting paleontologist. Performance of the survey, either by a consulting paleontologist or BLM staff, or submission of the report DOES NOT constitute approval for the activity to proceed. The BLM must review the report, including adequacy of the field methods and findings. The Authorized Officer must approve the findings and determine the need for monitoring prior to approval to proceed.

B. Conducting Field Surveys. Field surveys must be performed by the Principal Investigator or an approved Field Agent or Field Monitor (see section IV.C., Types of Field Personnel for descriptions of these individuals) as authorized under a Paleontological Resource Use Permit, or by a BLM Regional Paleontologist or qualified BLM designee. Field surveys and collections performed as a mitigation measure are not intended to be scientific research studies, but are meant to identify, avoid, or recover paleontological resources to prevent damage or destruction from project activities. However, proper scientific techniques and procedures must be utilized during all mitigation efforts. Safety should be an important consideration; therefore, surveys should not be attempted on cliff faces, in open, non-reinforced trenches deeper than five feet, or other unsafe areas.

1. The scope of the survey is dependent upon the scale of the project. Small projects are defined as less than 10 acres, or, if linear, less than five miles; large projects exceed those dimensions.

2. At the start of field work, the consulting paleontologist (paleontologist) must contact the Paleontology Coordinator in each affected Field Office who may require a visit to that office. After an initial visit each year, the paleontologist may contact the Field Office by telephone or email prior to subsequent field trips, at the discretion of the Field Office. Information about the survey schedule, additional personnel, emergency field contact information, and any other pertinent data should be provided to the Paleontology Coordinator. The Field Office will inform the paleontologist of any conditions that may impact the survey, such as fire danger or restrictions, drought restrictions, wildlife timing restrictions, management restrictions, road restrictions or construction, and any other relevant information.

3. During the field survey, the paleontologist surveys, locates, and documents all paleontological resources within 200 feet of the proposed project location or corridor, or less distance upon approval.

(a) Where significant paleontological resources are at risk, data collection alone does not constitute mitigation of damage. All significant fossils that may be damaged or destroyed during project activities must be collected, along with all relevant contextual and locational data. Specimens must be collected during the survey or prior to commencement of any surface-disturbing activities.

(b) In many cases, isolated gar scales, chelonid (turtle) carapace or plastron fragments, crocodile and fish teeth, and unidentifiable bone fragments do not need to be collected. The location must be recorded and a description of the fossil material noted in the field notes and on a BLM Locality Form as part of the report. The context of these types of fossils should be considered, as they may represent rare occurrences or unusual faunal associations, and thus may be scientifically important and must be documented and voucher specimens collected where appropriate.

(c) Occurrences of plant or invertebrate fossils should be recorded and representative examples or voucher specimens collected where appropriate. Additional mitigation measures may be appropriate in some cases for these types of localities.

(d) If a large specimen or a concentration of significant fossils is located during the field survey, the available time and/or personnel may not allow for full recovery during the survey. The specimen(s) and locality(ies) should be stabilized as needed, and a determination made as to whether avoidance is necessary or whether full recovery of the specimen is required at a later time prior to disturbance activities. The Authorized Officer and project proponent must be notified, the mitigation alternatives discussed including funding for recovery, and a decision reached as soon as possible. If avoidance or later recovery is selected for mitigation, the find should be stabilized, buried if needed to protect the fossils and context, and appropriate measures implemented to reduce adverse effects from natural or human causes.

4. During the survey, locations or areas that exhibit a lithology suggesting a high probability of subsurface fossil material must be recorded, and a recommendation for the need for on-site monitoring, spot-checking, or testing should be made in the report. This may include areas where no fossil material was found on the surface during the survey. The recommendation should consider the size and type of planned disturbance, such as the depth of a trenching operation or the acreage of surface disturbance.

5. Surveys must be performed only during times when the ground is visible and not frozen. This will often preclude surveys during winter months in many areas. Biological timing restrictions, such as critical nesting or birthing times, may confine or delay field activities. Project proponents should be informed of BLM's requirement for performing any field surveys as soon as possible and should be advised of the possibilities for delays in survey completion based on seasonal weather conditions or other management restrictions to allow for adequate scheduling of available time.

C. Report of Survey Findings. After completion of the field survey, the paleontologist must file a written report with the BLM and the designated repository. If required, a copy should also be filed with the project proponent. This report must summarize the results of the survey as well as appropriate geological and paleontological background information as described below. It should also include any recommendations for on-site monitoring or other mitigation. For small projects (less than 10 acres), the report must be filed within 30 days after completion of the survey unless specific approval for a different time frame has been received from the BLM. The time frame for submission of the report for large projects should be negotiated during project scoping. On a case-by-case basis, approval to begin project activities may be granted for those

portions of the project area noted to be less paleontologically sensitive prior to final approval of the report.

1. Reports of the general findings and the background information must be submitted to the BLM project manager or Authorized Officer (if appropriate), the Paleontology Lead or Regional Paleontologist, and each affected Field Office. Reports must include the following details, as applicable. Items (a) and (b) should appear at the beginning of the report and may be presented as a title page in multi-page reports. Some of these categories may be combined.

(a) Name, affiliation, address, date of report, and permit number (if consultant) of paleontologist doing the survey.
(b) Project name and number (if used), name of proponent, and general location of project.
(c) Date(s) of survey and names of any personnel assisting with the survey.
(d) Brief description of the proposed project, emphasizing potential impacts to paleontological resources.
(e) Description of background research conducted. (Include overview of known paleontological information, institutions consulted, previous surveys in the area, previous projects of similar nature in the area, and general description of survey techniques employed).
(f) Summary of regional and local geology. May reference earlier projects for relevant information.
(g) Summary of regional and local paleontology. May reference earlier projects for relevant information.
(h) Summary of the survey results.
(i) Significance of findings.
(j) Potential impacts to paleontological resources resulting from the project.
(k) Detailed mitigation recommendations that may lessen potential adverse impacts.
(l) Potential fossiliferous areas to allow for future assessment of sites if applicable.
(m) Cited and other pertinent references.
(n) Map of project area, indicating areas surveyed, known localities, and new discoveries.
(o) Relevant photos, diagrams, tables to aid in explaining, clarifying, or understanding the findings.
(p) Listing of collected material, including field numbers, field identifications, and elements, cross-referenced to locality field numbers. This list may be submitted in electronic format, preferably in spreadsheet format.
(q) BLM locality form (8270-3) or equivalent for each new locality (including localities where fossils were observed but not collected) with a 1:24000 scale map showing the localities (not reduced in scale during photocopying) (see items 2 and 3 below).

2. Exact locations of fossil localities contained in these reports are considered sensitive and must not be included in any public document. The BLM locality form (8270-3) or

equivalent, 1:24000 scale map showing the localities, and any other information containing specific fossil locations may be bound separately or placed in a separate section to allow for preservation of confidential locality data. A copy of this confidential section must be submitted to the Paleontology Lead (in some cases, two copies may be required). A copy for each affected Field Office may be required. Another copy must be submitted to the official repository with the collected materials.

3. BLM GPS recording and data standards must be used to report paleontological locality data. Existing USGS topographic maps are often based on the NAD27 standard, so locality data calculated from a map base must be converted before submission. Data must be recorded and reported with a mean error of +/- 12.5 meters or less, at a 95 percent confidence level. For small localities, data should be reported as point data. Larger polygonal localities should be reported using coordinates of a centroid and a description of the approximate size, or the key coordinate points of a bounding polygon. Linear features, such as roads or surveyed project boundaries, must be reported as line data. The 1:24000 scale map(s) accompanying the locality forms should graphically illustrate the locality, either as a point or an outline of the locality as appropriate, and be clearly labeled with the locality or field number.

D. Report Approval. The Authorized Officer will analyze the Survey Report for adequacy within 10 working days of receipt. Notification accepting the report, or explaining any identified deficiencies, will be sent to the consulting paleontologist and the project proponent with a copy placed in the project file. Any deficiencies must be corrected as soon as possible, usually initiated within five working days, and the report must be resubmitted for approval. Any resubmissions must be prompt, but consideration will be made for the amount of time needed for major corrections. Deficiencies directly affecting the survey, such as inadequate survey procedures or incomplete data, must be corrected before granting approval for the project to proceed. Deficiencies not directly affecting the survey, such as curation issues, will not prevent approval of the project, but must be corrected as soon as possible.

III. DETERMINATION OF FURTHER MITIGATION REQUIREMENTS

The need for additional mitigation to protect paleontological resources will be determined on a case-by-case basis. The Authorized Officer, in consultation with Regional Paleontologist or the Paleontology Lead, will analyze the Survey Report for survey findings and any mitigation recommendations. If no further mitigation is needed, the Authorized Officer will promptly notify the project proponent that there are no additional paleontological surveys or mitigation measures required, and the project may proceed pending any other approvals. The project file must be documented indicating acceptance of the survey report and identifying any additional mitigation requirements. If it is determined that additional mitigation efforts are needed to protect or preserve the paleontological resources, the project proponent will be notified as soon as possible. The Authorized Officer and/or the Paleontology Lead usually develop and approve the mitigation procedures or recommend a project be redesigned in consultation with the project proponent. Factors such as locality or specimen significance, economics, safety, and project urgency will be considered when developing mitigation measures. Additional mitigation

measures will be developed and implemented as timely as possible so as not to delay project actions.

A. Relocation. The preferred mitigation technique is to change the project location based on the results of the field survey. Relocation, however, may necessitate a field survey of the new area, as well as resurveys by other resource specialists. Anticipation of this contingency prior to or during the original survey may allow for survey of an expanded area at the same time. If relocation will eliminate impacts and is acceptable to all parties, then a report to the file, including a map showing the original and revised locations, must be completed documenting the change. Approval for the project to proceed in the revised location may then be granted by the Authorized Officer to the project proponent. When avoidance is not possible, appropriate mitigation may include excavation or collection (data recovery), stabilization, monitoring, protective barriers and signs, or other physical and administrative protection measures.

B. Deferred Fossil Collection. In some cases, fossil material may have been identified, but not completely collected during the initial field survey, such as a partial dinosaur or other large fossil assemblage. It may be possible to complete the recovery of this material and all related data prior to beginning construction activities, and thus mitigate the adverse impact. This may require a shift in the project schedule and must be coordinated with the project proponent. Approval by the Authorized Officer for the project to proceed will only be granted when recovery of the fossil material and field data is completed. A report to the file and the project proponent documenting the recovery and indicating that no further mitigation is required must be completed, and the report signed by the Authorized Officer. If the discovery cannot be fully collected within the available time frame, it may have to be avoided by relocating or redesigning the project.

IV. PROCEDURES FOR FIELD MONITORING

The purpose of on-site monitoring is to assess and collect any previously unknown fossil material uncovered during the project activities or soon after surface-disturbing actions. Based on the initial scoping, the field survey and recommendations, and the plan of operations, it may be necessary to require monitoring of surface-disturbing activities. Monitoring may be required as part of an overall mitigation for a project which was developed during the NEPA process, or upon the discovery of paleontological resources during project activities.

A. Monitoring Plan. A monitoring plan can be developed by a BLM paleontologist or a qualified paleontologist hired by the proponent. The plan must be appropriately scaled to the size and complexity of the anticipated monitoring. If developed by a third party, the appropriate Paleontology Lead or Regional Paleontologist shall review the plan for sufficiency prior to acceptance. Monitoring of the project may proceed when the monitoring plan is approved by the Authorized Officer. A monitoring plan indicates the treatments recommended for the area of the proposed disturbance and must minimally address the following:

1. The recommended approach to additional specimen collection, such as total or partial recovery or sampling; and

2. The specific locations and intensity of monitoring or sampling recommended for each geologic unit, stratigraphic layer, or area impacted.

Monitoring intensity is determined based on the analysis of existing data and/or field surveys and any previous monitoring efforts.

B. Types of Monitoring. There are two types of monitoring: 1) on-site, performed during ongoing operations, and 2) spot-checks, performed during or after disturbance, or at key times during the progress of the project.

1. On-site monitoring – In areas with a high probability for buried fossils, the presence of a monitor at the site of disturbance at all times that disturbance is occurring may be warranted. The need for a full-time monitor is based on the findings of the survey, the local geology, and the proposed actions. Efforts will be made to complete fossil recovery with minimal work stoppage. However, in some cases, an extended period of work stoppage may be required, so coordination with the project proponent or representative is important (see D below). Prior to beginning the monitoring work, the monitor, company supervisor, and machinery operators should agree on procedures for brief work stoppages to allow for examination of finds. It is critical that safety be of utmost concern because of the presence of heavy machinery and open trenches.

The monitor must assess any finds, collect loose fossil material and related data, and take appropriate steps to mitigate any current or potential damage. Consideration of the size of the expected fossils must also be considered; for example, microfossils may not be visible during excavation activities. It may be appropriate to collect samples of matrix for later recovery of microvertebrate fossils or other analyses. Activities planned to occur during night time should be assessed relative to the potential to uncover significant fossils. Fossils may not be visible at night in trenching or grading operations, so construction activities may need to be suspended during night time in sensitive areas.

2. Spot-checking – In areas with a moderate to high probability for unknown fossil material, it may be more appropriate to check only at key times rather than maintain continuous monitoring of operations. Key times for scheduling spot-checking are when the fossil-bearing bedrock is exposed to view or prior to placing spoil material back into the excavation. Examples of these key times may be when a pipeline trenching operation is complete but before pipe is placed and the trench backfilled or prior to redistribution of topsoil. Spot-checking requires close coordination with the project proponent and the paleontologist, and usually requires the paleontologist to be available on short notice. In some instances, it may be advantageous to allow rain and/or wind to erode away loose matrix and concentrate fossil material to increase visibility. The paleontologist will coordinate with the project proponent to allow sufficient time for this action to occur, as appropriate to conditions, expected fossil material, and construction schedules.

The paleontologist should report potentially fossiliferous areas in the final report to allow for future assessment of sites, even if no fossils were located during the project monitoring.

C. Types of Field Personnel. Depending on the complexity of the project, it may be necessary to employ a number of paleontology field personnel simultaneously. There may be a lack of fully qualified paleontologists to perform all the necessary monitoring during the scheduled times of construction. Use of additional personnel for field work is permissible, but Field Agents and Field Monitors (described below) must be requested by the Permittee and authorized by the BLM prior to field work.

1. **Principal Investigator** – The person listed as Permittee (Permit item 1a) on the Paleontological Resources Use Permit is the Principal Investigator (PI) and is responsible for all actions under the permit, for meeting all permit terms and conditions, and for the performance of all other personnel. This person is also the contact person for the project proponent and the BLM.

2. **Field Agent** – Other qualified paleontologists may perform field work independently of the PI under the conditions of this permit. Résumés must be submitted to BLM and must demonstrate qualifications equivalent to those of Permittees. Field Agents must be listed on the permit under "Name(s) of individual(s) responsible for planning, supervising, and carrying out fieldwork" (Permit item 8) or authorized in a separate letter from BLM. They must follow all the permit terms and conditions applicable to field work and must carry a copy of the permit, included terms and conditions, and separate authorizing letter (if used) while in the field. Field work results must be reported to the PI, who will then submit required reports.

3. **Field Monitor** – Field Monitors may be utilized for supplemental on-site monitoring of surface-disturbing activities when the PI or a Field Agent is performing field work elsewhere. Field Monitors must have sufficient field experience to demonstrate acceptable knowledge of fossil identification, collection methods, and paleontological techniques. The PI must supply a summary of each person's experience to the BLM prior to field work. Field Monitors must be approved by the BLM prior to performing field work and must carry a copy of the permit while in the field. The PI or Field Agent must be in communication with the Field Monitor using a portable communication device, such as a cell phone or two-way radio, and are required to be near enough to the Field Monitor to allow for prompt examination of all fossil discoveries (no more than two hours away) by the PI or Field Agent.

4. **Field Assistant** – Additional personnel not meeting the previously cited experience or knowledge levels may be utilized during field work, but must be under direct, on-site supervision of either the PI or a Field Agent as part of a supervised crew. Field assistants must have at least four to eight hours of training or experience received from a qualified paleontologist in identifying paleontological resources prior to performing field work or when first utilized in this capacity. A listing of all Field Assistants (including contact information) must be supplied prior to any field work. All discoveries made by a Field Assistant must be immediately reported to the PI or Field Agent on site. To ensure proper supervision, an appropriate ratio of Field Assistants per PI or Field Agent must be maintained. The complexity of the project, the area to be covered, and the experience of the assistants are some of the factors that should be considered in determining the proper ratio, but commonly five to seven assistants is the maximum number that can be supervised by one PI or Field Agent.

D. Work Stoppage. If significant fossil material is discovered during construction activities, the PI, Field Agents, and Field Monitors have the authority to temporarily halt surface disturbing actions until an assessment of the find is completed and appropriate protection measures taken. Efforts will be made to complete fossil recovery with minimal work stoppage. However, in some cases, an extended period of work stoppage may be required. If the paleontological resource can be avoided, mitigated, or collected within approximately two hours, work may resume after approval from the PI or Field Agent, and the Authorized Officer must be notified as soon as possible of the discovery and any mitigation efforts that were undertaken. If the find cannot be mitigated within a reasonable time (two hours), the concurrence of the Authorized Officer or official representative for a longer work stoppage must be obtained. Work may not resume until approval is granted from both the PI or Agent and the Authorized Officer.

V. FINAL PROJECT REPORT

Upon completion of all field work, including survey and monitoring, the PI must submit within 30 days, a written final report to the Authorized Officer, Paleontology Lead, and the designated repository. A copy of the report may be provided to the project proponent if required**,** but without the BLM Locality forms. Reports must include the following details. Items 1 and 2 should appear at the beginning of the report, and may be presented as a title page in multi-page reports.

1. Name, affiliation, address, date of report, and permit number (if consultant) of the paleontologist doing the survey.
2. Project name and number (if used), name of proponent, and general location of project.
3. Date(s) of the survey and names of any personnel assisting with the survey.
4. Brief description of project and expected impacts to paleontological resources.
5. A summary of mitigation performed.
6. A summary of findings, including important discoveries.
7. A description of potentially fossiliferous areas to allow for future assessment of sites, even if no fossils were located during the project monitoring.
8. A completed BLM locality form 8270-3 or equivalent for each new locality using Universal Transverse Mercator (UTM) NAD 83 coordinates, and 1:24000 scale maps with new localities plotted using points or polygons as appropriate. Locality forms, maps, and any other information containing specific fossil locations should be bound separately or assembled as a separate section to allow for preservation of confidential locality data.
9. List of specimen field numbers and field identifications of collected material, cross-referenced to the locality field number. This list may be submitted in electronic format, preferably in a spreadsheet format.

If the survey was performed by BLM, a report similar in contents must be written and filed in the project file, and the project proponent notified as soon as possible upon completion.

VI. COMPLETION OF MITIGATION RESPONSIBILITY

When the final report with the specimen inventory and the signed receipt of confirmation of museum deposition are accepted by the BLM, mitigation for paleontological resources related to the project will be considered completed. The project proponent will be notified in writing as soon as possible by the Authorized Officer after consulting with the Paleontology Lead or Regional Paleontologist and a copy of the notification placed in the project file.

The responsibility of the project proponent ends when appropriate mitigation related directly to the project is completed and final approval is received from the Authorized Officer. Any additional field collection, quarrying, final specimen preparation, etc. will be considered to be research, and will be the responsibility of the consulting paleontologist or another approved party. The project proponent will not be held responsible for completion of any research project. However, the project proponent can choose to sponsor further research. A separate research permit will be required for additional research activities.

VII. COLLECTIONS RESULTING FROM ASSESSMENT AND MITIGATION

Fossil specimens and related data collected from public lands during field surveys and mitigation remain the property of the Federal government. They must be placed in the approved repository(s) identified on the Paleontological Resource Use Permit held by the consulting paleontologist as soon as practical and receipt(s) of collections submitted to the BLM, but no later than 60 days after all field work is completed. Written approval from the Paleontology Lead or Regional Paleontologist is required if additional time is needed for transfer of all specimens and field data.

VIII. RESOURCE MANAGEMENT UPDATES

Based on findings resulting from any of the above steps, the project file, locality and specimen information, and other BLM data should be updated to reflect any new or modified information. Paleontology permit files should be checked and updated, as well as any other administrative information.

The PFYC Class assignments can be assessed based on the analysis, survey, and monitoring results. New information may indicate a change in the PFYC Class is appropriate for one or several geologic units. Other applications of the PFYC system should be considered, such as the use for impact analyses in planning documents or for survey and mitigation determinations for other projects. Any changes in classification must be made in consultation with the Paleontology Lead or Regional Paleontologist to maintain consistency across Field Office boundaries.

APPENDIX A – DEFINITIONS

(As applicable to BLM management of paleontological resources)

Alluvium – A general term for clay, silt, sand, gravel, or similar unconsolidated detrital material [fragments of rock or mineral material derived from older rocks] deposited during relatively recent geologic time by a stream or other body of running water as a sorted or semi-sorted sediment in the bed of the stream or its flood plain or delta, or as a cone or fan at the base of a mountain slope; especially, such a deposit of fine-grained texture (silt or silty clay) deposited during a time of flood (*from* American Geological Institute (AGI), Glossary of Geology, 1972 ed.)

Alluvium may contain paleontological resources in older alluvial deposits. The location on the landscape often will provide clues to the potential for paleontological resources within alluvial deposits. As an example, alluvium developed near major river courses or lake margins has a much higher potential to contain significant paleontological resources than alluvium (colluvium) formed from slope wash.

Approved Repository – Meets the Department of the Interior 411 Departmental Manual (DM) provisions for museum property, including capability for providing adequate long-term curatorial services, such as a physically secure environment, and maintaining professional staff qualified to catalog, care for, preserve, retrieve, and loan, where appropriate, these materials and associated records.

Bedrock – A general term for the rock, usually solid, that underlies soil or other unconsolidated, surficial material (*from* American Geological Institute (AGI), Glossary of Geology, 1972 ed.) For paleontological purposes, bedrock generally excludes alluvium, colluvium, sand dunes, and loess (fine-grained blanket deposit of marl or loam). In certain situations, bedrock may contain recent soils/sediments with fossils.

Colluvium – A general term applied to any loose, heterogeneous, and incoherent mass of soil material or rock fragments deposited chiefly by mass-wasting, usually at the base of a steep slope or cliff; e.g., talus, cliff debris, and avalanche material. Also, alluvium deposited by unconcentrated surface run-off or sheet erosion, usually at the base of a slope (*from* American Geological Institute (AGI), Glossary of Geology, 1972 ed.)

Field Agent – Other qualified paleontologists may perform field work independently of the PI under the conditions of this permit. Résumés must be submitted to BLM and must demonstrate qualifications equivalent to those of Permittees. Field Agents must be listed on the permit under "Name(s) of individual(s) responsible for planning, supervising, and carrying out fieldwork" (Permit item 8) or authorized in a separate letter from BLM. They must follow all the permit terms and conditions applicable to field work and must carry a copy of the permit, included terms and conditions, and separate authorizing letter (if used) while in the field. Field work results must be reported to the PI, who will then submit required reports.

Field Assistant – Additional personnel not meeting the previously cited experience or knowledge levels may be utilized during field work, but must be under direct, on-site supervision

of either the PI or a Field Agent as part of a supervised crew. Field assistants must have at least 4 to 8 hours of training or experience received from a qualified paleontologist in identifying paleontological resources prior to performing field work or when first utilized in this capacity. A listing of all Field Assistants (including contact information) must be supplied prior to any field work. All discoveries made by a Field Assistant must be immediately reported to the PI or Field Agent on site. To ensure proper supervision, an appropriate ratio of Field Assistants per PI or Field Agent must be maintained. The complexity of the project, the area to be covered, and the experience of the assistants are some of the factors that should be considered in determining the proper ratio, but commonly five to seven assistants is the maximum number that can be supervised by one PI or Field Agent.

Field Monitor – Field Monitors may be utilized for supplemental on-site monitoring of surface-disturbing activities when the PI or a Field Agent is performing field work elsewhere. Field Monitors must have sufficient field experience to demonstrate acceptable knowledge of fossil identification, collection methods, and paleontological techniques. The PI must supply a summary of each person's experience to the BLM prior to field work. Field Monitors must be approved by BLM prior to performing field work and must carry a copy of the permit while in the field. The PI or Field Agent must be in communication with the Field Monitor using a portable communication device, such as a cell phone or two-way radio, and are required to be near enough to the Field Monitor to allow for prompt examination of all fossil discoveries (no more than two hours) by the PI or Field Agent.

Field Survey – Pedestrian (walking) surveys performed in areas where significant fossils are expected to occur within the boundary or immediate vicinity of an anticipated disturbance. Surveys are performed by a qualified paleontologist or BLM Regional Paleontologist or other officially appointed BLM employee prior to any surface disturbing activities. Survey activities also include concurrent collection of significant fossils.

Land Tenure Adjustments/Change in Title – Changes in ownership or administration of surface or mineral estates, typically exchanges or sales, which may result in a change in ownership or control of paleontological resources.

Monitoring – a) On-site observation during all surface disturbing activities to assess and collect any previously-unknown fossil material uncovered by the project activities. b) Examination of excavation or spoil piles at key times during project activities. Monitoring must be performed by a permitted paleontologist, field agent, or field monitor (see section ***IV.C***.), Regional Paleontologist, or other officially appointed BLM employee, and occurs during or soon after surface disturbing actions.

Paleontological Locality (Locality) – A geographic point or area where a fossil or associated fossils are found in a related geological context. A paleontological locality is confined to a discrete stratigraphic layer, structural feature, or physiographic area.

Paleontology Program Coordinator (Paleontology Coordinator) – The employee designated by the local BLM Office Manager to manage paleontological resource issues, including planning, mitigation, budget, and other administrative duties. The local point of contact for

paleontological resource use permittees, the State Office Paleontology Program Lead, and the Regional Paleontologist. The employee is usually a geologist or archaeologist.

(a) In some offices, additional employees may be designated by the supervisor to determine the need for field surveys and monitoring for some projects, or other duties in support of the paleontology program. The scope of duties for these additional employees must be approved by the Paleontology Program Lead and closely coordinated with the Paleontology Coordinator.

(b) A few current BLM employees may meet the same professional qualifications that are required for a BLM Paleontological Resources Use Permit applicant. BLM-approved training and field experience may also allow employees to gain sufficient background to achieve competency in the field. With the approval of the Regional Paleontologist and the Office Manager or Deputy State Director, these employees may be designated as qualified to perform field surveys or monitoring. The current availability of these employees must also be approved by the unit manager or Deputy State Director, typically on a project-by-project basis or within a defined time period. Depending on official duties, local roles and responsibilities, and management preferences, these employees may or may not be the Paleontology Coordinator.

Paleontology Program Lead (Paleontology Lead) – Any one of the following: the Regional Paleontologist in the states with an identified position; the paleontologist at Grand Staircase-Escalante National Monument; or the State Office Archeologist in the states without a Regional Paleontologist.

Principal Investigator – The person listed as Permittee (Permit item 1a) on the Paleontological Resources Use Permit is the Principal Investigator (PI) and is responsible for all actions under the permit, for meeting all permit terms and conditions, and for the performance of all other personnel. This person is also the contact person for the project proponent and the BLM.

Regional Paleontologist – The BLM paleontologist that provides professional expertise in paleontology, and is responsible for interpreting relevant laws, authorities, and policy for the administration of the BLM paleontology program for all States in his/her respective region, and as the program interface between Field and/or District Offices, State Offices, and the Washington Office. In some cases, the Regional Paleontologist also serves as the State Office Paleontologist.

Significant Paleontological Resource (syn. **Significant Fossil Resource**) – Any paleontological resource that is considered to be of scientific interest, including most vertebrate fossil remains and traces, and certain rare or unusual invertebrate and plant fossils. A significant paleontological resource is considered to be scientifically important because it is a rare or previously unknown species, it is of high quality and well-preserved, it preserves a previously unknown anatomical or other characteristic, provides new information about the history of life on earth, or has identified educational or recreational value. Paleontological resources that may be considered to not have paleontological significance include those that lack provenience or context, lack physical integrity because of decay or natural erosion, or that are overly redundant or are otherwise not useful for research.

Vertebrate fossil remains and traces include bone, scales, scutes, skin impressions, burrows, tracks, tail drag marks, vertebrate coprolites (feces), gastroliths (stomach stones), or other physical evidence of past vertebrate life or activities.

Soil – The natural medium for growth of land plants (*from* American Geological Institute (AGI), Glossary of Geology, 1972 ed.) Generally, well-developed soils do not contain paleontological resources. However, the C horizon (the substratum above bedrock that is little affected by soil forming processes) may occasionally contain Pleistocene-aged fossils.

Stipulations – Written conditions that may restrict or impose limits on approved activities, or require that certain procedures be followed. The general usage herein encompasses several formal terms specific to other use authorizations such as Mitigation, Terms and Conditions, Conditions of Approval, and Standard Stipulations.

Surface disturbance – Disruption of the ground surface and subsurface. Disruption may damage or destroy significant paleontological resources and their geological context.

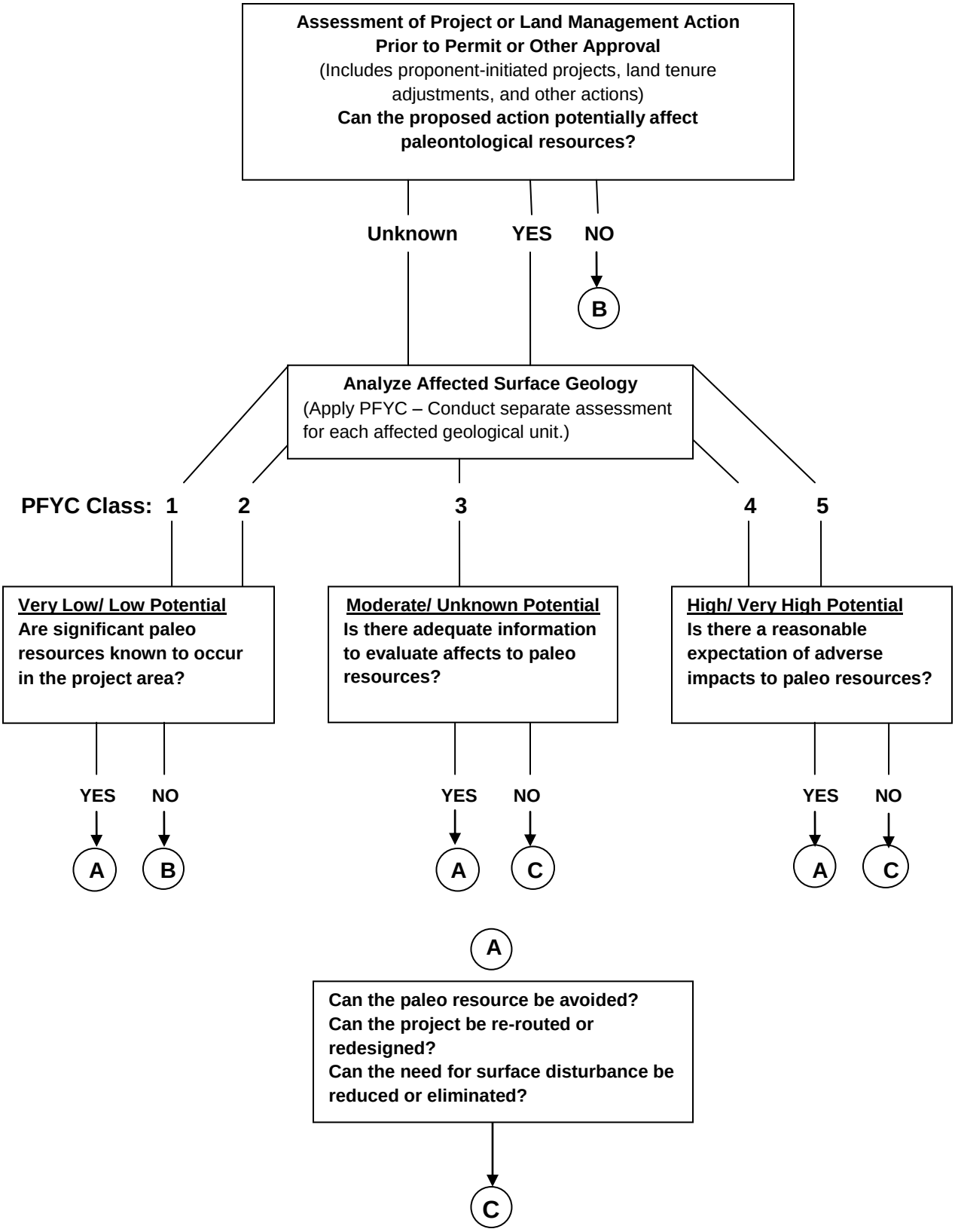
– Generally excludes: fire (but not fire activities, see below), vegetation mowing, weed spraying, grazing, natural erosion, fence building

– Some activities that may impact the ground surface and must be assessed on a case-by-case basis are:

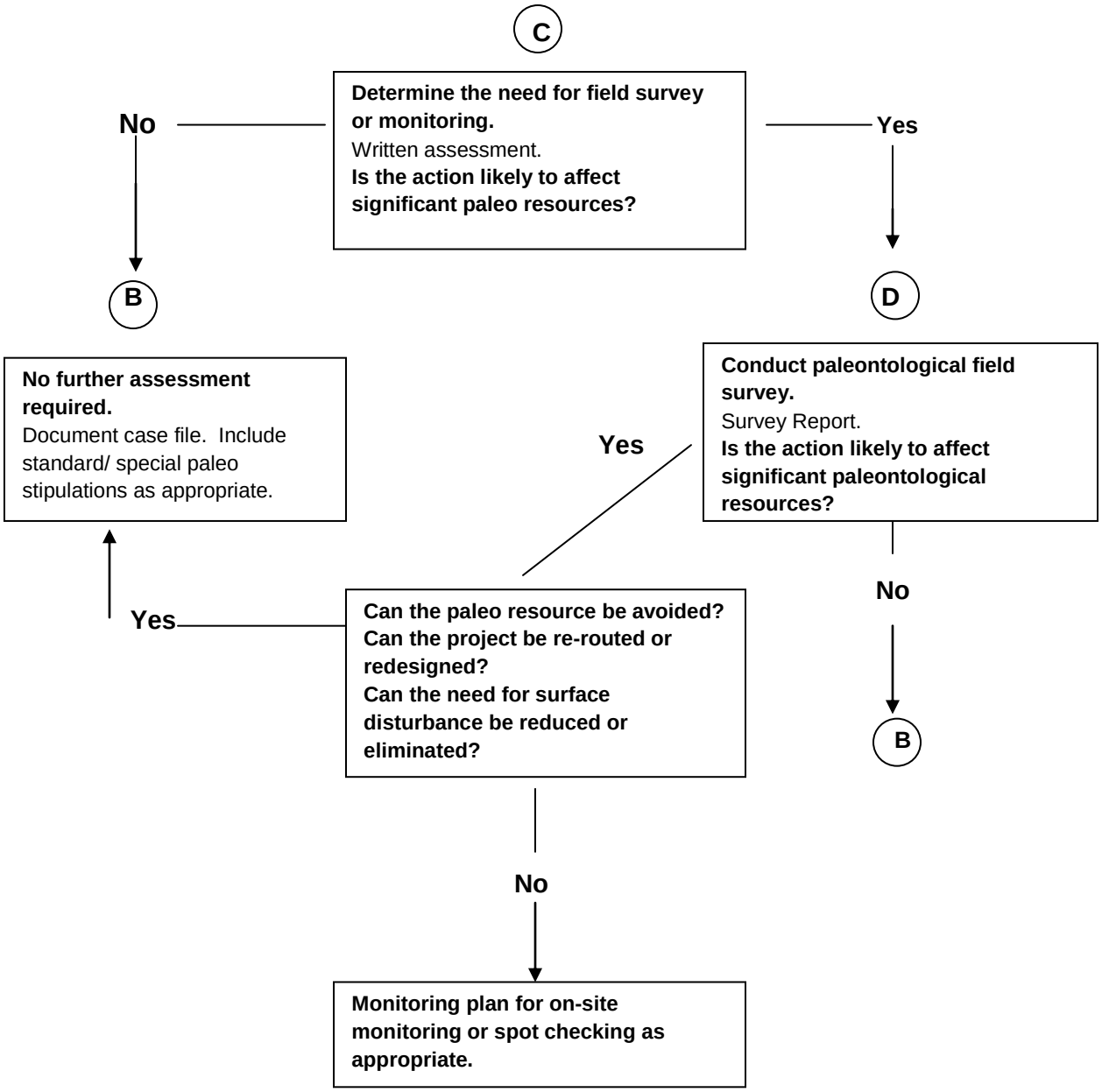
* Mechanized vegetative treatments – chaining, sagebrush chopping, etc
* Seismic activities – vibroseis techniques, cross-country travel
* Fire management activities – line building, brush removal and thinning using mechanized equipment
* Recreational activities – OHV, rock collecting, mountain biking, public events

Voucher Specimen – A representative sample that verifies the kind of fossil material found during a field survey, and is collected and curated in an approved repository along with its associated field data.

Paleontological Resources Assessment Flowchart



Paleontological Actions



UNITED STATES DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT
WASHINGTON, D.C. 20240

October 10, 2008

In Reply Refer To:
8270, 1790 (240) P

EMS TRANSMISSION 10/29/2008
Instruction Memorandum No. 2009-011
Expires: 09/30/2010
To: All State Directors

From: Assistant Director, Renewable Resources and Planning

Subject: Assessment and Mitigation of Potential Impacts to Paleontological Resources

Program Areas: Paleontological Resources Management, Environmental Assessment

Purpose: This Instruction Memorandum (IM) provides guidelines for assessing potential impacts to paleontological resources in order to determine mitigation steps for federal actions on public lands under the Federal Land Policy and Management Act (FLPMA) and the National Environmental Policy Act (NEPA). These guidelines also apply where a federal action impacts split-estate lands. In addition, this IM provides field survey and monitoring procedures to help minimize impacts to paleontological resources from federal actions in the case where it is determined that significant paleontological resources will be adversely affected by a federal action.

Policy/Action: It is the policy of the BLM that potential impacts from federal actions on public lands, including land tenure adjustments, be identified and assessed, and proper mitigation actions be implemented when necessary to protect scientifically significant paleontological resources. This policy also applies to federal actions impacting split-estate lands and is subject to the right of landowners to preclude evaluation and mitigation of paleontological resources on their land. Paleontological resources removed from public lands require a Paleontological Resources Use permit for collection. Significant paleontological resources collected from public lands are federal property and must be deposited in an approved repository. Paleontological resources collected from split-estate lands are the property of the surface-estate owner, and their disposition will be in accordance with the surface agreement between the landowner and the permittee.

Timeframe: This guidance is effective immediately for all BLM offices.

Background: Surface disturbing activities may cause direct adverse impacts to paleontological resources through the damage or destruction of fossils; or loss of valuable scientific information by the disturbance of the stratigraphic context in which fossils are found. Indirect adverse impacts may be created by increased accessibility to important paleontological resources leading to looting or vandalism. Land tenure adjustments may result in the loss of significant paleontological resources to the public if paleontological resources pass from public ownership. Generally, the project proponent is responsible for the cost of implementing mitigation measures including the costs of investigation, salvage and curation of paleontological resources.

This IM together with the Potential Fossil Yield Classification system (PFYC; see IM 2008-009) will provide guidance for the assessment of potential impacts to paleontological resources, field survey and monitoring procedures, and recommended mitigation measures that will better protect paleontological resources impacted by federal actions. This guidance expands and clarifies the guidance inthe Handbook H-8270-1 (General Procedural Guidance for Paleontological Resource Management) Chapter III (Assessment & Mitigation) and will be incorporated into the next Handbook revision.

Impact on Budget: Costs are minimal for implementation of this guidance since mitigation of paleontological resources is already part of any approval of surface-disturbing actions on public lands.

Manual/Handbook Affected: Supersedes Handbook H-8270-1 (General Procedural Guidance for Paleontological Resource Management) Chapter III.B.

Coordination: Washington Office Division of Cultural and Paleontological Resources and Tribal Consultation.

Contact: For questions regarding application of this policy and guidance, please contact Lucia Kuizon, National Paleontologist, at (202) 452-5107 or lkuizon@blm.gov.

Signed by:
Edwin L. Roberson
Assistant Director
Renewable Resources and Planning

Authenticated by:
Robert M. Williams
Division of IRM Governance,WO-560

2 Attachments

1- Guidelines for Assessment and Mitigation of Potential Impacts to Paleontological Resources (19 pp)

2- Paleontological Resources Assessment Flowchart (2 pp)

Foss, Scott <sfoss@blm.gov>

Re: Paleontology Mitigation Policy

1 message

Foss, Scott <sfoss@blm.gov> Tue, Jan 20, 2015 at 2:20 PM
To: "Liggett, Gregory" <gliggett@blm.gov>

Let's bounce it back and forth. I'll start with an outline.
S

On Tue, Jan 20, 2015 at 1:41 PM, Liggett, Gregory <gliggett@blm.gov> wrote:

> Agreed...
>
> Did you want me to take a stab at it? At one point I offered, but it hasn't happened yet, but I am willing to give it a go and run...
>
> Greg Liggett
> State Office Paleontologist
> Bureau of Land Management
> 5001 Southgate Dr
> Billings, MT 59101-4669
>
> 406-896-5162
> www.blm.gov/paleontology
>
> On Tue, Jan 20, 2015 at 11:36 AM, Foss, Scott <sfoss@blm.gov> wrote:
>
> > Well done. Let's get that first IM drafted.
> > S
> >
> > On Tue, Jan 20, 2015 at 1:27 PM, Liggett, Gregory <gliggett@blm.gov> wrote:
> >
> > > Below is a brief discussion on BLM policy and guidance for mitigation related to paleontological resources (fossils). I understand why there might be questions as to what our responsibilities are.
> > >
> > > Currently, our policy is to mitigate impacts to fossils that result from any BLM-authorized action. That policy is outlined in Manual 8270 (for example in sections 6.A.4, 8.E.3, and 9.H.).
> > > http://www.blm.gov/style/medialib/blm/wo/Planning_and_Renewable_Resources/coop_agencies/paleontology_library.Par.75198.File.dat/ms8270.pdf
> > >
> > > Chapter III of our Handbook 8270-1 further clarifies this and covers assessment and mitigation procedures.
> > > (http://www.blm.gov/pgdata/etc/medialib/blm/ut/natural_resources/cultural/paleo/Paleontology_Documents.Par.64888.File.dat/8270_hbk.pdf)
> > >
> > > In short, each action should be reviewed for its potential impacts (the assessment part) and then if impacts to paleontological resources are likely, to develop a mitigation plan to limit those impacts.
> > >
> > > In addition to the Manual and Handbook sections is IM 2008-009 which outlined a revised system of making assessments. The system was adapted from a Forest Service system and called the Potential Fossil Yield Classification, or PFYC. The PFYC is intended to be a rapid assessment tool to help predict when impacts to fossils are likely, and is based upon the model that fossils are closely associated with the rock units in which they are preserved. The rock units have varying degrees of likelihood to preserve fossils, so in the PFYC rock units are ranked 1 (very low) to 5 (very high).
> > >
> > > The IM also provided guidance in implementing the PFYC and in making assessments. In brief, actions that impact PFYC rocks ranked 3-5 need to be more carefully considered. Prior to making a mitigation

plan the full assessment might include pre-disturbance field surveys to assess the situation on the ground. Based upon the results of the assessment a mitigation plan is developed. The plan may be limited to contractor-directed monitoring of the actions with a plan for what to do in case fossils are exposed. Alternatively, the assessment may indicate that professional monitoring of ground-disturbing actions is warranted, and must be conducted by a qualified and BLM-permitted paleontologist. The assessment and mitigation plan needs to be developed by a fully qualified paleontologist, and approved by BLM. The costs for doing the assessment and mitigation are the responsibility of project proponents (Manual section 8.E.3).

BLM's responsibility to ensure adequate assessment and mitigation for fossils is in place for both federal surface and split estate conditions, the same as with cultural resources. The cultural authority for private surface most often cited is Section 106 of the National Historic Preservation Act. For paleontology, the authorities to address split estate are included in NEPA, the Mineral Leasing Act, FLPMA, and various decisions and case law. The new paleontology law, the Paleontological Resources Preservation Act (PRPA) further states that agencies will manage resources using scientific principles and expertise.

Unfortunately across the BLM the assessment and mitigation requirements for fossils have been very unevenly applied. This is true to the extent that even though the policies and guidance date back at least 16 years (in the case of the Manual and Handbook 8270) awareness of these policies might feel "new."

The paleontology program as a whole is working to revise and clarify BLM policy and more explicitly outline our responsibilities, and update and clarify our guidance. We hope to get a series of new IMs out in the near future that serves this purpose. Please let me know if you have any other questions or need further clarification.

Greg Liggett
State Office Paleontologist
Bureau of Land Management
5001 Southgate Dr
Billings, MT 59101-4669

406-896-5162
www.blm.gov/paleontology

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Foss, Scott <sfoss@blm.gov>

Re: Paleontology Team Meeting this week in DC

1 message

Foss, Scott <sfoss@blm.gov> Mon, Aug 31, 2015 at 1:34 PM
To: "Armstrong, Harley" <harmstro@blm.gov>

Outstanding Harley. I feel stagnant too. We have made progress with both SPATS and PRPA, but we still don't have a product to show for it. I agree we need some sort of finished product we can point to. And we need to push on with other things if the PRPA regs aren't going to get done soon.
S

Scott E. Foss, PhD
BLM Senior Paleontologist
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sfoss@blm.gov, 202-912-7253

On Mon, Aug 31, 2015 at 12:26 PM, Armstrong, Harley <harmstro@blm.gov> wrote:

> Thanks Scott,
>
> You all have good meetings. Sorry I'm not there, but I'll interact as best I can from here. Thanks for including me where you can with the agenda. The Agenda looks good.
>
> I have nothing to add to the agenda, other than to state a wish. You/we have done a great job of keeping the Paleo Program going, with many issues and difficulties, but here is my wish: In the next year, I'd like to see one of our projects be finalized and out. This could be the IM#1, or an 8270 update, PRPA regs, or?
>
> Otherwise, seems like we are getting into a state of constant drafts of things. So I think it would be healthy to get something on one of these drafts accomplished. Bet it would put a little more 'pep' into each of us.
>
> So Scott, let us know where I/we can help you.
>
> Thanks and Best Wishes!
> Harley
>
> Cheers,
> H.
>
> On Mon, Aug 31, 2015 at 9:44 AM, Foss, Scott <sfoss@blm.gov> wrote:
>
> > I apologize in advance for the bunch of calendar invites I just sent. Those are the topics we will be discussing with the phone bridge activated. I'm sorry that two of the sessions cross your lunch hour, but you will notice that none require you to call in at 6:00 am. I have attached a full copy of the agenda, so let me know if there are other topics on the schedule in which you would like to participate.
> >
> > I'm sorry that you are not able to join us. If I have time I will see about producing a flat avatar of each of you. <grin>
> >
> > S
> >
> > ---
> > Scott E. Foss, PhD
> > BLM Senior Paleontologist
> > 20 M St. SE, Suite 2134, Washington, DC 20003
> > sfoss@blm.gov, 202-912-7253

--
Harley J. Armstrong
BLM Regional Paleontologist
BLM Colorado State Office
2850 Youngfield Street
Lakewood, CO 80215
303-239-3943 (voice)
303-239-3808 (fax)
harmstro@blm.gov

Foss, Scott <sfoss@blm.gov>

Re: Reference on Museum Authorities

1 message

Foss, Scott <sfoss@blm.gov> Thu, Apr 3, 2014 at 5:07 PM
To: "Palus, Emily" <epalus@blm.gov>
Cc: Alice Hart <ahart@blm.gov>, "Loosle, Byron N" <bloosle@blm.gov>

This is extremely useful and timely. Now is a good time to migrate all of the relevant authorities into the WO-240 mission draft. Lucy pulled together all of the authorities that are relevant to paleo (8270) and the draft 1780 manual has a good coverage of the tribal relations authorities. There are some recent presidential, secretarial, and OSTP memos that can also be added to the mix. This will be a useful document.
S

On Thu, Apr 3, 2014 at 4:27 PM, Palus, Emily <epalus@blm.gov> wrote:

> So, in pulling together some info for the heritage presentation to budget, I stumbled across a document I drafted several years ago on museum authorities and the like directing BLM to manage collections. The impetus for this was back in 2006 when I was facing the philosophy that BLM didn't have responsibility for artifacts and specimens in museum collections recovered from the public lands - beyond a "reversionary interest." This list help sway the accounting and property folks, although there were still a few hold outs, which eventually became irrelevant.
>
> Anyhow, looks like I updated it in 2010, and could use some more updates. But, might be a useful reference. Its also on the shared drive under Museum Collections, Policy.
>
> Em

--
Scott E. Foss, PhD
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UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
WASHINGTON, D.C. 20240

July 22, 1998

In Reply Refer To:
8100, 8300, 8270 (240) P
Ref. IB 98-142

EMS TRANSMISSION 7/24/98
Information Bulletin No. 98-163

To:All State Directors

Attn: DSD, Land and Renewable Resources

From: Group Manager, Cultural Heritage, Wilderness, Special Areas & Paleontology

Subject: New Paleontology Guidance

As part of our continuing effort to develop policies for implementing the 1993 Issue Paper "Recommendations for the Management of Paleontological Resources on the Public Lands," we are transmitting to you the attached Paleontology Program Manual and Handbook. Together, these documents constitute the 8270 Manual Section. These documents reflect the experience the Bureau of Land Management (BLM) has gained in addressing paleontology since the first program policies were issued in 1978. They incorporate policies set forth in prior Instruction Memoranda, and reflect the work of a special 1997 Paleontology Task Force, which was convened to review the effectiveness of these past policies. They also reflect the many comments that were received on the documents when they were sent as drafts for your review.

A few of the comments that were received raised fundamental issues concerning policy. We would like to briefly inform you as to how they were addressed.

Questions were raised about our ability to manage the collection of fossil plants. We consulted with our Solicitor on this matter. While current legislation does not specifically address fossil plants, the Federal Land Policy and Management Act provides general management and administrative authority for the BLM to manage these resources. Fossils plants were included so that we would have a complete package addressing the collection of the major fossil types.

Some comments questioned the need for professional standards for paleontologists, and the use of local, non-specialist, staff in managing paleontological resources. Paleontology, like most disciplines, has a distinct and long derived body of technical knowledge and procedures, usually gained through long years of specialized study and practice.

Managers who have to make resource decisions that may be challenged in court must base their decisions on the best professional input and technical data available. The BLM's designated Regional Paleontologists meet these standards. Adherence to such professional standards is also consistent with other BLM programs such as cultural resources management and wildlife management. The manual and handbook, however, provide for a team oriented approach to managing paleontological resources. Field Office Paleontology Program Contacts, working in consultation with their designated Regional Palaeontologists, provide the BLM with a process which fully integrates and maximizes the skills available to our managers at all levels.

Will small-scale internal BLM actions, or actions involving remote lands such as those in Alaska, be subject to paleontological review and/or mitigation? Yes. Internal BLM actions must consider impacts to affected resources just like any externally driven proposal. Consideration of paleontological resources may be easily and quickly accomplished following consultation with the Regional Paleontologist.

Some questions were raised regarding consultation with Indian tribes when issuing paleontological resource use permits. There is no legal or BLM requirement for tribal consultation on paleontology permits per see. However, sometimes tribes have concerns regarding traditional cultural properties, sacred sites or other issues, about which we are required to consult, which may be affected by activities under the permit. Please consult the 8160 Manual and 8160-1 Handbook regarding such consultation.

Some commentors were confused about the relationship between the Regional Palaeontologists and program staff in the States they service. A new section has been added to the manual (section .04.E) to clarify this relationship. In addition, the procedural guidance contained throughout the handbook chapters hopefully provide further elaboration and clarification respecting these interdependent and mutually supporting roles.

Some comments addressed the utility of providing the Washington Office with copies of executed paleontology permits. Since the Department raised the management of museum property as an issue, BLM has been hindered in its ability to address the matter, in part, because of its inability to adequately determine where collections from BLM administered lands are located. This arises from the lack of a consolidated

bureau permit archive. The WO has the ability to see that such a central archive of permits is maintained.

What is the relationship between the Paleontology Program and the proposed Geological Heritage Initiative? The BLM is currently considering a proposal to implement a Geological Heritage Initiative. (See Information Bulletin No.98-142.) Some paleontological localities may be suitable for designation as Geological Heritage Areas. Such designations could be another tool used in the protection of important fossil

localities, or for promoting public education and appreciation of paleontology. However, localities containing vertebrate fossils, or noteworthy occurrences of invertebrate or plant fossils, will not normally be designated as the Geological Heritage Areas. All such paleontological designations shall be done in consultation with the Regional Paleontologist.

We would like to thank all those who submitted comments on the draft. We believe your views helped us to make this a more comprehensive and rigorous document. Please feel free to address any questions to Mr. Carl Barna, National Paleontology Program Coordinator, at (202) 452-0325 or Email cbarna@wo.blm.gov.

Signed by:
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Authenticated by:
Robert M. Williams
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2 Attachments
1 - 8270 Manual Section (12 pp)
2 - 8270 Handbook (33 pp)

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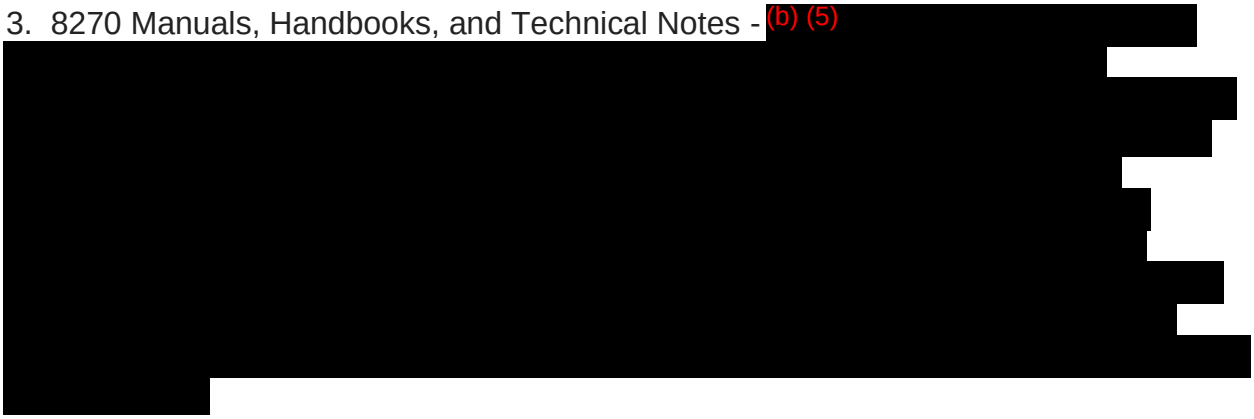
Paleo saw a transition from Lucy to me. There were no major changes in what gets done or how we do it. However, the following may be relevant:

1. Paleo Team - The "regional paleontologist" group that met as necessary with Lucy to discuss the development and implementation of paleo policy (and other topics) was expanded to include all seven of the professional paleontologists in the BLM and renamed the "paleo team". The paleo team is an informal group that meets every other Monday at 2:00 pm MT (4:00 pm ET). This has resulted in better coordination across the paleontology program, including sharing of tasks (leading to better efficiency), and has led to more participation (and enthusiasm) by all of the paleontologists.

2. PRPA rulemaking - The PRPA Interagency Coordination Team (ICT) has has rewritten a draft set of proposed rules that will be complete by the end of September (2013). WO-240 (BLM) is a co-lead with the Geological Resources Division (GRD) of the NPS. This draft version will be sent back to technical specialists in the four affected DOI bureaus for comment (including paleontologists, cultural program leads, law enforcement, and management). We hope to keep this review brief and informal, but depending on the substance of comments we will extend the review as far as is necessary.

3. 8270 Manuals, Handbooks, and Technical Notes - (b) (5)



4. Policy Updates/Draft IM's - In anticipation of PRPA rules and a revised 8270 manual, the paleo team suggests introducing some policy updates for both the paleontology and the museum programs. If adopted, these could be implemented as IM's in the upcoming year (FY14).

5. Position Changes - Lucia Kuizon retired as the senior paleontologist in November, 2012. Scott Foss was assigned as acting senior paleontologist immediately after Lucy's retirement and continued until June, 2013, when he was hired as the new senior paleontologist. Currently, the BLM paleontology program has one vacant FTE position. The regional paleontologist stationed in Utah that also represents Nevada and Oregon. We expect this position to be filled in FY14.

UPDATING THE WO 8270 MANUAL & HANDBOOK

SUBJECT: Updating the WO 8270 Manual and Handbook.

SUMMARY: Increased use of the land, including mineral development and recreation, and an increased number of paleontological resource use permits (over 100% in the past three years) have made it necessary for the WO paleontology program (8270) to develop specific policies and procedures to address paleontological issues that have been overlooked in the past.

DISCUSSION:
The new 8270 manual is currently in a preliminary draft form and will be available for general review by the summer of 2010.

The new 8270 handbook is being constructed one chapter at a time and should be available as a draft document by the summer of 2011:

1) General Procedural Guidance for Paleontological Resource Management
2) Paleontological Resource Use Permits [currently in preliminary draft]
3) Potential Fossil Yield Classification (PFYC) [currently released as WO IM 2008-009]
4) Assessment and Mitigation [currently released as WO IM 2009-011]
5) Paleontological Resources and Planning
6) Paleontological Resources Data Management
7) Paleontological Resources Protection
8) Paleontological Education and Interpretation

The manual and handbook sections are being coordinated by the WO paleontologist with the assistance of the four BLM regional paleontologists.

Passage of the Senate Bill S. 22 (Omnibus Public Management Act of 2009) in the 111th Congress will include the *Paleontological Resources Preservation Act*, which may necessitate changes to the timing of the 8270 manual and handbook implementation.

MAIN MESSAGE: The current manual and handbook are inadequate to offer the necessary guidance for effective management of paleontological resources on BLM administered lands. The new documents will allow all BLM managers to direct paleontology programs that meet both federal and bureau standards required by FLPMA, NEPA, and other federal laws and rules.

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