

# **Chapter 5**

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## **Consultation and Coordination**

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## 5.1 Introduction

This chapter describes the consultation and coordination that has occurred during the preparation of the Benefits-Sharing Environmental Impact Statement (EIS). Consultation, coordination, and public involvement have been integral to identifying relevant issues and concerns and to make sure these issues are addressed. This was accomplished primarily through newsletter mailings, individual contacts, website postings, news releases, and Federal Register notices.

### 5.1.1 History of Public Involvement

#### ***5.1.1.1 Initial public scoping***

Public involvement for the Benefits-Sharing Environmental Impact Statement began in June 2001 with a public scoping process. Scoping is an early and open process for determining the scope of environmental issues and alternatives to be addressed in a NEPA document. Chapter 1, Section 1.8 contains a summary of the process and the major issues and concerns identified through this process, key to development of the DEIS. The NPS published a notice of intent to prepare an environmental assessment (EA) in the Federal Register on June 25, 2001.<sup>1</sup> Scoping comments received from the public persuaded the NPS that an EIS would be more appropriate. The NPS published a notice of intent to prepare an EIS in the Federal Register on April 12, 2002.<sup>2</sup>

#### ***5.1.1.2 DEIS public notification***

The Benefits-Sharing Draft Environmental Impact Statement (DEIS) was released for public review on September 22, 2006 (71 Federal Register [FR] 184), initiating the formal public comment period for the DEIS. Due to print omissions and delays in delivering the draft, the comment period was extended on December 15, 2006 (71 FR 241). The comment period concluded on January 29, 2007, and totaled 130 days.

Approximately 12,000 people were notified by mail or email about the availability of the DEIS for public review, including all NPS superintendents, all researchers who entered their contact information into the NPS Research Permit and Reporting System website, and every person who contacted the EIS team. Notification about the availability of the DEIS for public review was also made through press releases and by posting on the NPS Planning, Environment and Public Comment (PEPC) web site at <http://parkplanning.nps.gov> and also the benefits-sharing project website at [www.nature.nps.gov/benefitssharing](http://www.nature.nps.gov/benefitssharing). More than 450 hard copies or compact disks (CDs) of the DEIS were distributed and the DEIS was also posted for download from the PEPC web site. A complete list of individuals, agencies, tribes and organizations that received the project scoping materials and/or the draft EIS and/or the final EIS is on file at Yellowstone National Park. The following is a partial list of the agencies, offices, and organizations to whom the DEIS was sent.

#### ***5.1.1.3 List of DEIS recipients***

Alliance for the Wild Rockies  
Advisory Council on Historic Preservation  
Biotechnology Industry Organization  
Bureau of Land Management

Bureau of Reclamation Office of Science and Technology  
 Center for Urban Ecology  
 Cubist Pharmaceuticals, Inc.  
 Defenders of Wildlife  
 Department of Interior Deputy Secretary  
 Department of Interior Assistant Secretary for Fish and Wildlife and Parks  
 Diversa Corporation  
 Ecology Center  
 Edmonds Institute  
 George Wright Society  
 International Center for Technology Assessment  
 Minerals Management Service  
 National Agricultural Library  
 National Biodiversity Institute, Costa Rica  
 National Cave and Karst Research Institute  
 National Conference of State Historic Preservation Officers  
 National Institutes of Health Office of Technology Transfer  
 National Marine Fisheries Service  
 National Parks and Conservation Association  
 Native Forest Network  
 Public Employees for Environmental Responsibility  
 Sierra Club  
 Sierra Club Genetic Engineering Committee  
 US Army Corps of Engineers Office of Policy and Compliance  
 US Environmental Protection Agency  
 US Fish and Wildlife Service  
 US Department of State, Office of Ecology and Terrestrial Conservation  
 US Geological Survey  
 US Geological Survey Office of Technology Transfer  
 USDA Forest Service  
 USDA NRCS Agricultural Research Coordinator  
 Washington Biotechnology Action Council  
 Yellowstone Research Coordinating Network, Montana State University

#### ***5.1.1.4 Organizations and agencies consulted***

During the NEPA decision-making processes, the NPS is required to consult with certain American Indian tribes, as well as with federal and state agencies and entities with jurisdictional responsibilities (40 CFR 1502.25). This section documents these consultation and coordination efforts. Consultation will be an ongoing effort through completion of a final document and agency decision. Letters received from various organizations and agencies are included in the Representative Correspondences section of Chapter 5.

All American Indian Tribal Governments and Alaska Native Groups were notified about potential NPS benefits-sharing because this decision could affect any national park unit in the United States. Three tribes commented on the EIS. All correspondence received from tribes is reproduced in Chapter 5. Issues identified by tribes included cautioning against allowing any extraction of park natural resources for direct commercial use, and cautioning against allowing research to adversely impact park resources or spiritual values. The Shoshone-

Bannock Tribes also clarified their social and spiritual connection to Yellowstone National Park and made suggestions about research permitting procedures in Yellowstone.

The 1966 National Historic Preservation Act, as amended in 1992, requires federal agencies to consult with the state historic preservation officer and the Advisory Council on Historic Preservation (Council) regarding undertakings that may affect historic properties. Because the Benefits-Sharing EIS is about a servicewide proposal, formal consultation letters were sent to both the Council and the National Conference of State Historic Preservation Officers. Both the Council and the National Conference determined that the benefits-sharing proposal is not an undertaking as defined in the National Historic Preservation Act and its implementing regulations, “Protection of Historic Properties” (36 CFR Part 800). Accordingly, pursuant to 36 CFR 800.3(a)(1) and 800.16(y), the NPS has no further obligations for compliance with Section 106 for the development and implementation of benefits-sharing policy and agreements with scientists who conduct research in NPS units.

The Endangered Species Act of 1973, as amended, directs every federal agency to ensure that any action it authorizes, funds, or carries out is not likely to jeopardize the existence of any federally-listed species or destroy or adversely modify critical habitat (50 CFR 400). In compliance with Section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et. seq.), a formal letter was sent to the U.S. Fish and Wildlife Service (USFWS) in May 2007 regarding the DEIS. The USFWS replied in June 2007 with a caution that some specific research activities could require additional consultation in the future. Although research activities are out of scope of the Benefits-Sharing EIS, the NPS agrees and continues to review research activities for impacts to endangered species under a separate process. The USFWS determined that the benefits-sharing proposal (Alternative B) would be “not likely to adversely affect” threatened or endangered species.

The United States Department of State Office of Ecology and Terrestrial Conservation also provided comments on the DEIS. The NPS was advised that any benefits-sharing program should first and foremost encourage research and scientific innovation, not discourage it.

#### **5.1.1.5 DEIS public response**

About 9,600 individuals and organizations chose to participate in the comment process by submitting correspondence during the public review period.<sup>3</sup> The correspondence included form and non-form letters, both mailed and submitted over the internet at the NPS Planning Environment and Public Comment (PEPC) website. Only 190 individual or organization correspondents submitted non-form letters. Form correspondence (e.g., a form letter) is defined as a correspondence whose content is essentially duplicated by several commenters. Form correspondences are typically copied from material distributed by organizations.

The Comments and Responses section of Chapter 5 contains a summary of comments received on the Benefits-Sharing Draft Environmental Impact Statement. It also contains responses to comments as appropriate under CEQ regulations.

## 5.2 Responses to Comments on the Draft Benefits-Sharing EIS

### 5.2.1 Introduction

Section 5.2.3 contains a summary of all comments received on the NPS Benefits-Sharing Draft Environmental Impact Statement. Section 5.2.2 contains an overview of the process and a breakdown of comment types, numbers, and content. Sections 5.3.1 through 5.3.15 contain excerpts from correspondence that summarize the content of all correspondences received. Sections 5.3.1 through 5.3.15 also contain responses to comments as appropriate under CEQ regulations. Section 5.4 contains correspondences that are representative of the body of comment as a whole.

In preparing a final EIS (FEIS), an agency is required to assess and consider comments both individually and collectively. The agency has several options to respond by one or more of the following means, while stating its response in the final statement (40 CFR 1503.4). Possible responses include:

- Modify alternatives
- Develop and evaluate alternatives not given serious consideration
- Supplement, improve, or modify analyses
- Make factual corrections
- Explain why comments do not warrant further agency response

All substantive comments received on a draft EIS (DEIS) (or summaries thereof where the response has been voluminous), should be attached to the final statement whether or not the comment is thought to merit individual discussion by the agency in the text of the statement.<sup>4</sup> Substantive comments are defined as those that do one or more of the following:

- (a) question, with reasonable basis, the accuracy of information in the EIS
- (b) question, with reasonable basis, the adequacy of environmental analysis
- (c) present reasonable alternatives other than those presented in the EIS
- (d) cause changes or revisions in the proposal

In other words, substantive comments raise, debate, or question a point of fact or policy. Comments in favor of or against the proposed action or alternatives, or comments that only agree or disagree with NPS policy, are not considered substantive.<sup>5</sup>

Public comments on the Benefits-Sharing Draft EIS consisted of three main types: 1) copies of two form correspondences (e.g., form letters), 2) correspondences not subscribing to a form but clearly based on one of the websites that generated form correspondences, and 3) other correspondences that examine the DEIS in some detail. The entire body of comment is summarized in this chapter and all comments are responded to. For the most part, responses consist of explanations. Where a response also consists of some action reflected in the FEIS, it is noted.

Many comments shown in this summary are not substantive, but they are included in an attempt to portray what the public has stated. The correspondences in Section 5.4 contain statements that help provide a context for any substantive remarks in the correspondence. It is appropriate to refer to these correspondences as “representative” because they are representative of the content and substance of the entire body of comment.

### 5.2.2 Overview of the Comment Analysis Process

About 9,600 individuals and organizations chose to participate in the comment process by submitting correspondence during the public review period.<sup>6</sup> The correspondence included form and non-form letters sent both via regular mail and submitted over the internet at the NPS Planning Environment and Public Comment (PEPC) website. Only 190 individual or organization correspondents submitted non-form letters. Form correspondence (e.g., a form letter) is defined as a correspondence whose content is essentially duplicated by several commenters. Form correspondences are typically copied from material distributed by organizations. The content of form correspondences and non-form correspondences can be very similar. Non-form correspondences are in many cases distinguished by the personal remarks, expressions of concern, or other comments that are demonstrably individual in nature.

**Table 5.2.2. Summary of correspondence received**

|                                                                 | <b>Form<br/>Correspondence</b> | <b>Non-form<br/>Correspondence<sup>7</sup></b> |
|-----------------------------------------------------------------|--------------------------------|------------------------------------------------|
| Support benefits-sharing in general or support<br>Alternative B | 7,222                          | 45                                             |
| Oppose “commercial bioprospecting” or support<br>Alternative C  | 2,150                          | 142                                            |

All correspondences were sorted by general topic or category of concern. Each correspondence was reviewed for potential substantive comments. The content of the correspondences was recorded using a coding system. Each comment was then reviewed by at least one member of the NPS planning team.

Due to the volume of correspondence received, and the large amount of repetition in the correspondences, summaries of the comments were compiled, as allowed by regulation.<sup>8</sup> In every case, the actual wording of the correspondent has been used. Where more than one excerpt has been compiled from a single correspondence, the text that was skipped is indicated by ellipses (...). The NPS does not consider all of the information contained in the correspondence summaries as substantive. In addition, some correspondences contained personal anecdotal information which, though of interest to decision makers, is not regarded as pertinent to the content of the EIS and is not reproduced in Section 5.4.

CEQ regulations require the agency to respond to all comments, as a minimum, by explaining why those comments do not warrant further agency response, citing the sources, authorities, or reasons that support the agency's position and, if appropriate, indicating those circumstances that would trigger agency reappraisal or further response.

### **5.2.3 Correspondence Content and Response**

The majority of comments on the DEIS consisted of one of two form letters. The two form letters can be traced to common roots in two websites published by advocacy groups either favoring benefits-sharing or opposing "commercial bioprospecting." These two form letters are reproduced in full in Section 5.3 of this chapter. Many correspondents who sent in form letters also took the time to write additional thoughts or concerns. These additional expressions have been summarized in Section 5.2.4.

Most of the 190 non-form letter correspondences also shared phrases and terminology found on the same two websites. Letters in this category differ from form letters in that they expressed thoughts that were not part of a mass-produced letter. The non-form letters generally expressed individual thoughts, concerns and experiences. However, for the most part they did not contain relevant new information or scientific data that would necessitate changes in the final EIS. While letters of this type are not particularly informative to the NEPA process, they are of importance to decision makers.

The concepts and concerns surrounding benefits-sharing are complex and many correspondences were received from people who made comments based on simple summaries of the EIS provided on non-NPS websites. Correspondences such as these are still important to decision makers because they indicate that the majority of correspondents simply want the national parks to be protected under all circumstances.

For the most part, comments fell into two categories, based on information from one of two advocacy group websites. Correspondents motivated by a National Parks and Conservation Association (NPCA) website urged the NPS to adopt benefits-sharing with certain conditions. Correspondents motivated by a website entitled "Parks Not For Sale" responded to an interpretation of potential "commercial bioprospecting" activities and impacts created and publicized by the former plaintiffs in the court case that precipitated this EIS.<sup>9</sup> The latter correspondences were difficult to interpret since they responded to the "Parks Not For Sale" website material and not the actual proposal or content of the DEIS. For example, the phrase "commercial bioprospecting" was not used or defined in the DEIS. As a result, the correspondents assumed that "commercial bioprospecting" would ultimately lead to harvest and sale of park resources, activities that are prohibited by federal regulation and which were not proposed in the EIS.

The correspondences that are summarized and responded to in Sections 5.3.1 through 5.3.15 are best described as representative. The content of this representative group of correspondences, with respect to substance in particular, encompasses the content of the entire body of comment. In the summaries, the commenters' own words were used. The representative correspondences are duplicated in their entirety in Section 5.4.

Although the correspondence analysis process attempted to capture the full range of public concerns, it is acknowledged that comments from people who chose to respond do not necessarily represent the sentiments of the entire public. Further, the NEPA process emphasizes the content of the comment rather than “vote counting” or the number of times a comment was received.

To locate a response to a representative comment, refer to the Index to Comments and Responses. All correspondence received will be kept in the NPS PEPC database and at Yellowstone National Park headquarters.

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# **Comment Summaries and Responses**

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## 5.3 Comment Summaries and Responses

### 5.3.1 Comments Regarding Legal or Procedural Matters— National Park Service Laws, Regulations, and Policies

#### 5.3.1.1 *Benefits-sharing is in keeping with or contrary to the NPS Mission/Organic Act*

*Comment #83:* Furthermore, I would like to note that I view bioprospecting as being consistent with the NPS mandate, that is, to preserve and conserve (in not so many words). The knowledge gained through bioprospecting activities far outweighs its environmental “impact” (if it can be stated as such) and in a world slowly falling to the loss of microbial diversity, bioprospecting does well to work against these decreases while at the same time providing for sustainable solutions to a number of industry problems (including but not limited to the development of alternative fuels and efficient, non-synthetic industrial processes).

*Comment Form Letter #96:* I believe that allowing commercial bioprospecting runs counter to the mission of our National Parks. The natural resources on our public lands must be preserved, protected and – most importantly – remain public for the public’s benefit.

*Comment #6719:* To allow commercial research in the parks goes expressly against the original purpose of the Park Service, which is to protect these areas from exploitation.

*Response:* The proposal in Alternative B is not a “commercial bioprospecting” proposal, it is a proposal to require benefits-sharing, when appropriate, with researchers who have already studied material originating as lawfully collected NPS research specimens (see Section 5.3.8.2). NPS research permits may only authorize specimen collection for projects with scientific or resource management goals.<sup>10</sup> See Section 5.3.7.2 for a detailed answer explaining that NPS does not allow research that is for purely commercial purposes. NPS research permitting procedures would remain unchanged under the benefits-sharing proposal.

The NPS Mission as stated in the NPS Management Policies is:

The National Park Service preserves unimpaired the natural and cultural resources and values of the national park system for the enjoyment, education, and inspiration of this and future generations. The National Park Service cooperates with partners to extend the benefits of natural and cultural resource conservation and outdoor recreation throughout this country and the world.<sup>11</sup>

NPS Management Policies provide guidance to the agency in interpreting the NPS mission. The benefits-sharing proposal (Alternative B) is in accordance with the mission, as interpreted by the management policies, in the following ways:

The NPS encourages research in parks as part of the fundamental purpose of parks.

The NPS evaluates research permit applications under NEPA.

The NPS does not allow sale or commercial use of park resources.

The benefits-sharing proposal abides by all of these policies.

The NPS recognizes that research involving the study of park specimens can sometimes result in discoveries with commercial applications. The proposal does not include any new research or bioprospecting initiatives. It was developed to respond to commercially applicable discoveries that have been and are being made as a result of research involving specimens collected from parks pursuant to a research permit.

| Public Comment: | Commenter: | Affiliation: |
|-----------------|------------|--------------|
| 83, 96, 6719    |            | Individuals  |

### ***5.3.1.2 Research specimen laws, regulations and policies***

***The NPS does not own research specimens collected under the authority of an NPS research permit. Researchers own the samples they have collected from parks.***

**Comment #7418:** The NPS has maintained, in discussions with the scientific community pertaining to the ownership of specimens taken from the parks under NPS-issued research permits, that it has, but cannot transfer ownership of specimens.

NPS does not, according to the Supreme Court, have ownership and because there are no laws barring transfer of ownership...

Nonetheless, the fact remains that in allowing the researcher to remove a specimen from the park, to study it with methods that may destroy or modify all or part of the specimen, and to retain the specimen permanently, the NPS has, in fact, transferred ownership of the specimen.

**Response:** Under the Organic Act, NPS has broad authority to promote and regulate the national parks to conserve the scenery and wildlife therein in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.<sup>12</sup> In addition to this broad authority, NPS is authorized to assure that management of units of the National Park System is enhanced by the availability and utilization of a broad program of the highest quality science and information.<sup>13</sup> Under this mandate, the primary purpose of study within park units is to more effectively achieve the mission of the National Park Service and to enhance management and protection of park resources and use information gathered for management purposes.<sup>14</sup> Scientific study within park units must be consistent with applicable laws and National Park Service management policies and must be conducted in a manner as to pose no threat to park resources or public enjoyment from those resources.

NPS has not asserted that the United States has any ownership in wild animals. NPS does allow the collection of research specimens pursuant to its statutory authority and federal regulation.<sup>15</sup> Based on property law, NPS takes the position that research specimens, once collected from lands owned by the United States and reduced to possession, are property of the United States.

Regarding authority to convey ownership, we refer the commenter to the response of Michael Soukup, Associate Director, Natural Resource Stewardship and Science (May 17, 2004) responding to letters received from the commenter dated February 18, 2003, and January 8, 2004. We quote from the letter below.

“Congress and NPS have determined that certain natural and cultural specimen collections are permissible pursuant to specific statutes and regulations. Scientific natural resource activities, including specimen collection, are governed by 36 CFR 2.5. A very limited number of other types of natural resource collecting is governed by 36 CFR 2.1.

Specimens collected pursuant to 36 CFR 2.5 are treated as NPS museum objects or collections. NPS museum objects and collections are subject to the statutory provisions in 16 USC 18f and 18f2-3. This statute defines “museum objects” and “museum collections” as “objects that are eligible to be or are made part of a museum, library, or archive collection through a formal procedure, such as accessioning. Such objects are usually movable and include but are not limited to prehistoric and historic artifacts, works of art, books, documents, photographs, and natural history specimens” 16 USC 18f-3(b).

Originally enacted in 1955 to allow NPS to accept donations and loans, the statute was amended in 1996 to provide NPS with additional management tools. However, Congress did not give NPS unfettered discretion to transfer or convey museum specimens. Rather, it prescribed specific conditions and parameters for donations, exchanges, loans, transfers and conveyances. “Transfers” to qualified Federal agencies may occur when the Secretary determines that museum objects or collections are no longer needed for museum purposes. Items transferred under this authority remain in federal ownership. “Conveyances” to private 501(c)(3) institutions and to non-federal governmental entities may occur if the Secretary determines that the collections are no longer needed for museum purposes, and the recipient is dedicated to the preservation and interpretation of natural or cultural heritage and is qualified to manage the property. A conveyance under 16 USC 18f-2(a)(2) would result in a change of ownership from NPS to the receiving entity.

Such conveyances are subject to the review and approval process outlined in 16 USC 18f-2(b). Under current NPS policy, deaccessioning is only accomplished on a case-by-case basis. (See NPS Museum Handbook II, Ch. 6, “Deaccessioning,” <[www.cr.nps.gov/publications/MHII/mushbkII.html](http://www.cr.nps.gov/publications/MHII/mushbkII.html)>.

36 CFR 2.5 requires that specimens collected under this regulation, if retained in museum displays or collections, bear official NPS museum labels and their catalog numbers be registered in the NPS National Catalog. Specimens collected under 36 CFR 2.5 and retained for museum collections are needed for museum purposes and future resource management decision-making. Therefore, they are not eligible for conveyance to other institutions. The strong interest of other museums in these specimens further demonstrates the importance of these specimens for museum purposes.”

The DEIS indicates that originally collected research specimens that are not destroyed or consumed in analysis and not authorized to be discarded are cataloged and retained in the NPS museum collection. The cataloged specimen is on loan when not in NPS custody. In a minority of cases, portions of originally collected microbial specimens can be successfully cultured (grown in the laboratory). In these cases, the culture may be suitable for permanent maintenance and retention by a qualified “culture collection” and is then accessioned as an NPS museum collection.

| Public Comment: | Commenter:                 | Affiliation: |
|-----------------|----------------------------|--------------|
| 7418            | The Ornithological Council | Organization |

***The USGS Organic Act dictates where NPS specimens may be deposited.***

**Comment #7461:** Provisions in the USGS Organic Act of 1879 which clearly outline the responsibility of the NPS to deposit research collections at the Smithsonian or other repositories.

**Response:** The United States Geological Survey (USGS) Organic Act states: “All collections of rocks, minerals, soils, fossils, and objects of natural history, archaeology, and ethnology, made by the National Ocean Survey, the United States Geological Survey, or by any other parties for the government of the United States, when no longer needed for investigations in progress, shall be deposited in the National Museum.”<sup>16</sup>

Subsequent legislation as noted below, established NPS authority over collections of rocks, minerals, soils, fossils, and objects of natural history in areas managed by the National Park Service. This legislation, in certain instances, supersedes the USGS Organic Act provision stated above.

The National Park Service Organic Act of 1916 (16 USC 1-4) states: “The service thus established shall promote and regulate the use of the Federal areas known as national parks, monuments, and reservations hereinafter specified, except such as are under the jurisdiction of the Secretary of the Army, as provided by law, by such means and measures as conform to the fundamental purpose of the said parks, monuments, and reservations, which purpose is to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.”

This law gives NPS authority to regulate the natural objects and wild life in parks, such as by permitting research and collection of natural objects and wildlife, and their conversion to natural history specimens through the collection process.

The Museum Act of 1955 (16 USC 18f) clarifies NPS management authorities for park museums and museum collections. It addresses “museums established within the individual areas administered by the Secretary of the Interior through the National Park Service as a means of informing the public concerning the areas and preserving valuable objects and relics relating thereto.” It states “‘museum objects’ and ‘museum collections’ mean objects that are eligible to be or are made part of a museum, library, or archive collection through a formal procedure, such as accessioning. Such objects are usually movable and include but are not

limited to prehistoric and historic artifacts, works of art, books, documents, photographs, and natural history specimens.”

The Museum Act further gives the Secretary of the Interior discretion to determine when collections are no longer needed for NPS purposes and to transfer them to other federal agencies, including the Smithsonian Institution, or convey them to other eligible parties. The law states:

“[T]he Secretary of the Interior may perform the following functions in such manner as he shall consider to be in the public interest: 1) Transfer museum objects and museum collections that the Secretary determines are no longer needed for museum purposes to qualified Federal agencies, including the Smithsonian Institution, that have programs to preserve and interpret cultural or natural heritage. . .”<sup>17</sup>

| Public Comment: | Commenter: | Affiliation: |
|-----------------|------------|--------------|
| 7461            |            | Individual   |

***NPS loan policies create undue burdens on repositories and discourage repositories from accepting NPS specimens.***

**Comment #7459:** Reference note 27 (cited on page 13 of Chapter One and explained on page 32) states, “Collected specimens that are not consumed in analysis or discarded after scientific analysis remain federal property.” Aside from the non-scientific and anti-science implications in that statement, current National Park Service policy requires that the specimens must be kept with National Park Service labels and apart from other collections.

**Comment #7461:** Most natural history collections currently will not take NPS collections under the conditions which Headquarters insist upon. NPS loan policies are expensive, create additional unfunded mandates, and for control purposes (to avoid misappropriation which might reduce benefit sharing as mentioned above) mandate dual systems of storage, curating, reporting and monitoring of the collections.

**Comment #7464:** Some...of the specific potential ramifications ... include... the need to obtain permission from the NPS to allow qualified scientists to examine such specimens, or to make available data from such specimens to other parties; and the inability to transfer such specimens to third party scientists or scientific institutions.

**Response:** NPS museum specimen loan policies are long-standing and were developed without regard to any benefits-sharing considerations. Specimens that are not consumed in analysis or discarded after analysis remain federal property, and must be labeled and cataloged into the NPS catalog system.

With respect to NPS collections on loan to repositories for management, NPS procedures require that NPS catalog the collections in the NPS cataloging system. Permittees may have responsibility for seeing that collected specimens are cataloged in the NPS system as a condition of the permit. The borrowing repository has responsibility for storage, curation, reporting, and monitoring of the collections. NPS allows, but does not require, the repository

to catalog the collections in the repository’s catalog system. NPS asks the repository to provide data for the NPS annual inventory or have an equivalent system in place.

NPS does not mandate dual systems of storage, curating, reporting, and monitoring. Such dual systems are the option of the repository manager, but NPS does not require that they be kept apart from other collections. For example, NPS herbarium specimens may be integrated into the taxonomically ordered storage of a designated repository’s herbarium.

In the interest of protecting irreplaceable and priceless specimens in perpetuity and following widely accepted professional procedures, NPS collections managers give permission for qualified researchers to access specimens in NPS custody. NPS authorizes repositories that manage NPS specimens to provide qualified researchers access to NPS specimens consistent with the repository’s procedures as authorized in the NPS loan agreement with the repository.

NPS outgoing loan agreements, such as with a repository, may specifically authorize third party loans. The outgoing loan conditions prohibit third-party loans, unless specifically authorized in the loan agreement.<sup>18</sup>

Data derived from the RPRS (the NPS’s Research Permit and Reporting System) system indicate that many non-NPS entities are willing to become repositories for NPS specimens. For example, in 2006, 64% of repositories designated on NPS permits were non-NPS repositories (36% were NPS repositories). On the permit application, proposed non-NPS repositories agree to accept collections on loan from NPS. RPRS has designated over 800 non-NPS repositories in the U.S. and other countries.

The 2006 RPRS data are as follows:  
Out of 1,065 permits to collect specimens, 455 permits authorized the researcher to retain collected specimens. These researchers placed their specimens in 470 repositories. Of the 470 repositories, 302 were non-NPS facilities and 168 were NPS facilities. For that year, there were a total of 855 non-NPS repositories available for use by NPS research permittees.

| Public Comment: | Commenter:                                                           | Affiliation: |
|-----------------|----------------------------------------------------------------------|--------------|
| 7459            | American Society of Mammalogists                                     | Organization |
| 7461            |                                                                      | Individual   |
| 7464            | Systematic Collections Committee<br>American Society of Mammalogists | Organization |

***Removing park resources for profit is prohibited by law.***

**Comment #7261:** The specific language in the creation acts for Yellowstone and the National Park Service clearly prohibits the removal of park resources for profit.

**Response:** NPS agrees that removal of park resources for sale or commercial use is prohibited by law (36CFR 2.1). This prohibition also applies to any natural resource that is authorized for collection as a research specimen. Additionally, research specimens remain federal property and transfer to any other party without prior written authorization from the NPS is also prohibited.

Commercial use of research results is different from commercial use of park resources. Inventions and intellectual property derived from research results involving park research specimens may be commercially used. This distinction was upheld on judicial review in April 2000 when a federal court ruled against the assertion that the Yellowstone–Diversa CRADA was a commercial use of Yellowstone National Park resources by saying, “The court finds that the Park Service reasonably determined that the Yellowstone–Diversa CRADA does not involve the ‘sale or commercial use’ of park resources...[A]ny ‘commercial use’ flowing from such research is limited to applications or products generated from the scientific study of the resources, not the resources themselves.”<sup>19</sup>

This chapter includes a more detailed description of some of the requirements for NPS research permit issuance that call for research projects to have scientific or educational goals in Section 5.3.7.

| Public Comment: | Commenter:                                                                                                                             | Affiliation:  |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------|---------------|
| 7261            | Edmonds Institute, Alliance for the Wild Rockies, Wilderness Watch, International Center for Technology Assessment, WildWest Institute | Organizations |

***Why are researchers who collect specimens subject to different rules than anglers or subsistence hunters?***

**Comment #7424:** To see specimen-based scientists treated fundamentally differently than other consumptive users of NPS flora and fauna is insulting, and it operates against the interests of NPS itself in obtaining an improved understanding of these resources. And these are renewable resources. Fishermen, subsistence hunters, berry pickers, and now commercial developers of NPS biological resources are apparently all more important to NPS in this regard than scientists who collect specimens to learn more about our public resources. This has to change! It clearly discriminates unfairly between user groups that have similar consumptive effects on Park resources.

**Response:** Differences in who, when, and how much certain park users may collect are attributable to the different NPS regulations, ultimately derived from laws enacted by Congress. Under NPS enabling legislation, the NPS has a great deal of discretion in promulgating regulations for use of the national parks. Certain uses, such as subsistence

hunting and gathering, are mandated by federal law. The correspondent is based in Alaska, where the Alaska National Interest Lands Conservation Act and regulations apply to legally-qualified subsistence users and activities.<sup>20</sup> Hunting, trapping, or any other methods of harvesting wildlife by the public is only allowed where it is specifically authorized, either on a mandatory or discretionary basis, under federal law.<sup>21</sup> Recreational fishing is allowed in parks when it is authorized by federal law or not specifically prohibited by federal law and determined to be an appropriate use.<sup>22</sup>

Use of national park units for research purposes is governed by law and regulation.<sup>23</sup> The NPS encourages scientific research. To this end, NPS regulations provide that researchers may be given special permission to collect material that other park visitors may not collect. For example, in many parks, pursuant to regulation 36 CFR 2.1(c)(1) and a park’s compendium, visitors are allowed to collect and eat berries and they are only permitted to collect what they can use immediately for personal consumption. On the other hand, researchers are allowed to collect and remove a wide array of material pursuant to the conditions of their research permits. In most NPS park units, permitted researchers are allowed to collect and remove more natural materials than visitors. No distinction or special collecting privileges are extended to “commercial developers of NPS biological resources” as the commenter suggests, nor is NPS proposing any.

Research specimens collected pursuant to 36 CFR 2.5 are treated as NPS museum objects or collections. NPS museum objects and collections are subject to the statutory provisions in U.S. Code.<sup>24</sup> Because research specimen collections are governed by this specific statute, issues involving commercial hunting, fishing and trapping are not analogous.

| Public Comment: | Commenter:                                | Affiliation: |
|-----------------|-------------------------------------------|--------------|
| 7424            | University of Alaska, Museum of the North | Organization |

### 5.3.2 Comments Regarding Legal or Procedural Matters—The Wilderness Act

#### 5.3.2.1 Research with foreseeable commercial application for research results is contrary to the Wilderness Act

*Comment #7261:* The vast majority of national park lands are subject to wilderness laws and policies, which place these lands off-limits to commercial bioprospecting.

*Comment #7485:* Commercial enterprise in wilderness is prohibited by the Wilderness Act. Bioprospecting is a commercial activity. Parks are to manage recommended wilderness the same as designated wilderness. There is so little of our natural heritage left and it needs to be guarded and preserved, not sold off for any reason.

*Response:* The EIS does not propose commercial enterprises in designated wilderness or

elsewhere. Commercial use of research results is distinct from commercial use of park natural resources. Inventions and other intellectual property derived from research results involving park research specimens may be commercially used. This distinction was upheld on judicial review in April 2000 when a federal court ruled against the assertion that the Yellowstone–Diversa CRADA was a commercial use of Yellowstone National Park resources by saying, “The court finds that the Park Service reasonably determined that the Yellowstone–Diversa CRADA does not involve the ‘sale or commercial use’ of park resources...[A]ny ‘commercial use’ flowing from such research is limited to applications or products generated from the scientific study of the resources, not the resources themselves.”<sup>25</sup>

The statutory purposes of wilderness include scientific activities, and these activities are encouraged and permitted when consistent with NPS’s responsibilities to preserve and manage wilderness.<sup>26</sup>

| <b>Public Comment:</b> | <b>Commenter:</b>                                                                                                                      | <b>Affiliation:</b> |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| 7261                   | Edmonds Institute, Alliance for the Wild Rockies, Wilderness Watch, International Center for Technology Assessment, WildWest Institute | Organizations       |
| 7485                   |                                                                                                                                        | Individual          |

### 5.3.3 Comments Regarding Legal or Procedural Matters—The National Parks Omnibus Management Act (NPOMA)

#### 5.3.3.1 *The NPS must use the authority of the National Parks Omnibus Management Act (NPOMA) to benefits-share instead of the FTTA*

*Comment #7492:* The DEIS, by relying on the FTTA and CRADAs, implicitly posits that Congress acted superfluously when it enacted NPOMA section 205(d).

The NPS must leave behind the inappropriate CRADA tool found in the FTTA and use the most relevant, current and park-specific law -- NPOMA.

*Response:* In April 2000, a federal court found that by enacting section 205(d) of the National Parks Omnibus Management Act (NPOMA) in 1998, Congress “reinforce[d] the conclusion that application of the FTTA to [NPS benefits-sharing] is consistent with Congressional intent regarding cooperative scientific research agreements with units of the National Park System.... [T]he CRADA ... plainly constitutes an ‘equitable, efficient benefits-sharing arrangement’ with a private entity for the purposes of scientific study.”<sup>27</sup> NPOMA clarified that NPS had the authority to enter into benefits-sharing agreements but did not specify what mechanism should be used for benefits-sharing. If the NPS decides to implement benefits-sharing as proposed in the EIS, it will comply with the requirements of the FTTA to the extent applicable and appropriate to the NPS’s specific circumstances and legislated mandates.

| Public Comment: | Commenter:                                        | Affiliation: |
|-----------------|---------------------------------------------------|--------------|
| 7492            | Public Employees for Environmental Responsibility | Organization |

#### 5.3.3.2 *NPOMA would allow parks to withhold information about “commercially valuable” specimen collection from the public*

*Comment #7261:* NPOMA § 207 states: “Information concerning the nature and specific location of a National Park System resource which is endangered, threatened, rare, or commercially valuable, may be withheld from the public in response to a request under section 552 of title 5, USC.” ... Even the very geographic location of the activity may be made secret, and, under FOIA, kept secret. Thus, the public and independent scientists may have no way to objectively judge a project’s impact on the environment ... The public will not be able to judge whether its own “free access” to certain areas will be precluded for unannounced commercial reasons.

*Response:* Section 207 of the National Parks Omnibus Management Act of 1998 (NPOMA) provides NPS with the option to withhold information concerning “the nature and specific location of a National Park System resource which is endangered, threatened, rare, or commercially valuable, of mineral or paleontological objects within units of the National Park System, or of objects of cultural patrimony....” The Act goes on to specify the information “may be withheld from the public unless the Secretary [of Interior] determines that (1) disclosure of the information ... would not create an unreasonable risk of harm, theft, or destruction of the resource or object, including individual organic or inorganic specimens; and (2) disclosure is consistent with other applicable laws protecting the resource or object.”

NPOMA attempts to balance the availability of information to the public and the NPS’s mandate to protect park resources. The statute is intended to thwart illegal activities, such as poaching of plants and animals, the looting of archeological sites and removal of fossils and minerals, where many times the objects have a high commercial value and will be immediately sold on the black market. With the exception of NPOMA-protected resources, the nature and location of research projects and specimens collected is public information as most are not “commercially valuable” resources protected by NPOMA. Instead, it is often the information learned from a research specimen after long and skilled study that may be valuable.

Although it is the general NPS policy to share information widely, the Service also realizes that providing information about the nature and location of park resources may sometimes place those resources at risk of harm. NPS managers use these exemptions sparingly, and only to the extent allowed or required by law.

NEPA analyses for specific research permits and projects must take NPOMA confidentiality considerations into account in a manner that provides as much information about the resources to the public as possible.

In an additional protection against the scenario proposed by the correspondent, the example CRADA (Appendix A) includes the requirement to append a copy of the associated research permit, which discloses the location of specimen collection as well as the maximum allowable quantity of collections. An NPS research permit does not grant exclusive rights to individual researchers. Additionally, the NPS research permit General Condition #17 states: “Expiration date—Permits expire on the date listed. Nothing in this permit shall be construed as granting any exclusive research privileges or automatic right to continue, extend, or renew this or any other line of research under new permit(s)” (see Scientific Research and Collecting Permit in Appendix H of the EIS).

| Public Comment: | Commenter:                                                                                                                             | Affiliation:  |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------|---------------|
| 7261            | Edmonds Institute, Alliance for the Wild Rockies, Wilderness Watch, International Center for Technology Assessment, WildWest Institute | Organizations |

## 5.3.4 Comments Regarding Legal or Procedural Matters—The Federal Technology Transfer Act (FTTA)

### 5.3.4.1 NPS cannot consider parks to be laboratories under the definition provided by the Federal Technology Transfer Act (FTTA)

*Comment #7261:* As the District Court noted, the Park Service could find no statutory authority for commercial bioprospecting and, struggling to find a shoe that might fit, began to creatively stretch the language and the imagination in order to allow it by claiming that Yellowstone and other national parks are “federal laboratories” under the meaning of the Federal Technology Transfer Act (FTTA) of 1986 . While the Court ultimately accepted this interpretation, in the minds of the public, such an interpretation was at odds with basic logic and commonsense. Moreover, the legislative history of the FTTA would indicate that Congress enacted the law for the named “national laboratories”, such as Los Alamos National Laboratory, Oak Ridge National Laboratory, National Institutes of Health, etc. Nowhere does FTTA history suggest that the law was enacted for the purpose of declaring the units of the National Park System as national laboratories under the definitions of the FTTA.

*Comment #7492:* Nothing in that Act’s (Federal Technology Transfer Act) language or its legislative history refers to a national park system or its areas as “laboratories.” A review of the legislative history reveals that Congress enacted the FTTA for the named “national laboratories.”

*Response:* In 1997, some of the authors of comment #7261 filed a lawsuit against the NPS claiming, among other things, that the NPS could not consider Yellowstone National Park to be a laboratory under the FTTA. The court found that the NPS provided a reasoned basis for concluding that the broad, statutorily assigned definition of laboratory in the FTTA encompasses Yellowstone National Park’s research facilities and ruled firmly in NPS’ favor.<sup>28</sup> The court’s explanation of its decision is summarized here.

When Congress passed the FTTA, it assigned a particular definition to the term “laboratory.” Although the court agreed that a national park does not immediately remind people of a laboratory, neither courts nor government agencies are allowed to cast congressional definitions aside in favor of a term’s “ordinary” meaning. The FTTA defines a laboratory as “a facility or group of facilities owned, leased, or otherwise used by a Federal agency, a substantial purpose of which is the performance of research, development, or engineering by employees of the Federal Government.”

The legislative history of the FTTA also provided guidance to the NPS in determining whether parks could be considered laboratories. Congress intended that the term should be “a broad definition which is intended to include the widest possible range of research institutions operated by the Federal Government.”<sup>29</sup> As the court explained in its April 2000 decision, the dictionary definition of facility is “something that is...established to perform some particular function or to serve or facilitate some particular end.” Therefore, as the court determined, a national park meets the dictionary definition of facility, and can meet the congressional definition of laboratory if a “substantial purpose of [the park] is the performance of research.”

Like other federal facilities that carry out research activities, units of the National Park System that satisfy the FTTA definition of a laboratory are eligible to enter into CRADAs. With regard to Yellowstone specifically, the court determined that Yellowstone meets the FTTA criteria as a laboratory. If benefits-sharing is implemented, NPS will determine whether or not other parks meet these criteria on a case-by-case basis, as needed.

| Public Comment: | Commenter:                                                                                                                             | Affiliation:  |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------|---------------|
| 7261            | Edmonds Institute, Alliance for the Wild Rockies, Wilderness Watch, International Center for Technology Assessment, WildWest Institute | Organizations |
| 7492            | Public Employees for Environmental Responsibility                                                                                      | Organization  |

#### ***5.3.4.2 The NPS must adopt all of the requirements in the Federal Technology Transfer Act (FTTA) before entering into any benefits-sharing agreements***

*Comment #7492:* If the FTTA governs the national park system as laboratories, the NPS has been in substantial noncompliance with several provisions of that law. In brief the FTTA did the following:

- Made technology transfer a responsibility of all federal laboratory scientists and engineers.
- Mandated that technology transfer responsibility be considered in employee performance evaluations.
- Established principle of royalty sharing for federal inventors (15% minimum) and set up a reward system for other innovators.
- Legislated a charter for Federal Laboratory Consortium for Technology Transfer and provided a funding mechanism for that organization to carry out its work.
- Allowed current and former federal employees to participate in commercial development of the research fostered by the CRADA, to the extent there is not conflict of interest.

The National Park Service ... has yet to implement a single one of the above actions:

- Where is the "technology transfer responsibility" found in the performance evaluations of employees? The answer, in short, is "NOWHERE."
- Does the NPS Director sit as a member of the Federal Laboratory Consortium for Technology Transfer? NO.
- Has the NPS set up a mechanism to allow current and former federal NPS employees to participate in commercial development of the research fostered by the CRADA? NO

In short, the NPS disregards the CRADA provisions of the FTTA, expect for that portion that may provide a revenue stream or monetary benefits to the negotiating park ("laboratory").

The FTTA language on CRADAs also requires that "an agency shall make separate

determinations of the mission or missions of each of its laboratories.” 15 U.S.C. 3710a(e). Where is the NPS determination of the mission or missions of the Yellowstone National Park Laboratory, or the Sequoia National Park Laboratory? The NPS has never made the required FTTA determinations of the mission or missions of each of its nearly 400 separate “laboratories.” ...

Ethics issues relating to the FTTA are complex and numerous. Agencies that are actually governed by the FTTA (not, like the NPS, which imagines that it is) have developed such ethics standards. The NPS has not even thought about it. That is but one indication that the NPS never actually believed the FTTA applied to it until the DIVERSA Agreement led it to grasp this flimsy rationale.

Before entering into a single benefits-sharing agreement, including the DIVERSA-Yellowstone CRADA, the NPS must adopt standards to implement these parts of the FTTA that guard against conflicts of interest or corruption. The ethics standards must be reviewed by the Department of Justice and be placed before the public.

*Response:* If the NPS decides to implement benefits-sharing, it will comply with the requirements of the FTTA to the extent applicable and appropriate to the NPS’s specific circumstances and legislated mandates. Taking action towards implementing benefits-sharing, such as those described above, prior to completion of this EIS would be inappropriate and potentially violate CEQ regulations.

The “technology transfer responsibility” is not in the performance evaluations of NPS employees because the NPS does not currently have a technology transfer function. Completion of this EIS must precede any decision by the NPS to implement “technology transfer.” If benefits-sharing is adopted by the NPS, employees could be assigned technology transfer tasks, as appropriate, which would be reflected in their performance evaluations.

The NPS Director does not sit as a member of the Federal Laboratory Consortium for Technology Transfer. The membership requirements of the Consortium is established by 15 USC 3710(e)(2). If benefits-sharing is implemented, the NPS will review the FTTA and determine whether it is appropriate for a senior representative from the NPS to be appointed to the Consortium.

The NPS has not set up a mechanism to allow current and former federal NPS employees to participate in commercial development of the research fostered by CRADAs. This type of action would be inappropriate prior to completion of the EIS. If benefits-sharing is implemented, the NPS will review the FTTA provision 15 USC 3710a(b)(3)(C), which states “to the extent consistent with any applicable agency requirements or standards of conduct, [the laboratory may] permit an employee or former employee of the laboratory to participate in an effort to commercialize an invention made by the employee or former employee while in the employment or service of the Government.” Note that the establishment of such a mechanism is not a requirement of the FTTA, it is an option.

The NPS has not set up a mechanism to distribute royalties or other payments received by the NPS. NPS does not currently receive royalties or other payments and this type of action would be inappropriate prior to completion of the EIS.

The missions of Sequoia National Park and Yellowstone National Park are derived from the NPS’s Organic Act of 1916 (16 USC 1) and each park’s respective enabling legislation. NPS Management Policies require every park to prepare a Strategic Plan, beginning with a mission statement (NPS Management Policies, Chapter 2, Section 2.3.3). The FTTA does not strictly govern the manner in which a laboratory mission determination is made. This could be done separately from the Strategic Plan mission statement, or if a park is in the process of developing their Strategic Plan, the laboratory mission could be incorporated. Yellowstone did make a determination regarding its laboratory mission prior to entering into the Yellowstone–Diversa CRADA. With regard to other parks needing a laboratory mission determination, this has not occurred as benefits-sharing activities were halted pending completion of this EIS.

In terms of ethics considerations, the EIS discusses the most probable potential conflict of interest related to benefits-sharing (identified during public scoping and internal NPS reviews), that benefits-sharing considerations might inappropriately influence research permitting decisions. The EIS mitigates against this including the following examples from the EIS (Sections 2.4.6.4 and 4.4.5.5)

- CRADAs would be negotiated only with researchers who had already been issued a research permit. Thus, issuance of a research permit would precede negotiation of a benefits-sharing agreement, thereby separating the timing of the decision about access to research specimens (the research permit) from any decision about entering into a benefits-sharing agreement (the CRADA).
- Separate individuals would manage preparation of benefits-sharing arrangements and research permit issuance decisions. If a park could not provide separate individuals to supervise the separate benefits-sharing and research permit reviewing processes, as may be the case in some smaller parks, the superintendent would seek assistance from another park, a regional office, or national headquarters.
- Parks would not negotiate and execute CRADAs in a vacuum. After a CRADA was prepared, it would be recommended for approval by the appropriate regional director and reviewed by the Department of Interior Solicitor’s Office and the NPS director before it was signed by the park superintendent and the researcher.

| Public Comment: | Commenter:                                        | Affiliation: |
|-----------------|---------------------------------------------------|--------------|
| 7492            | Public Employees for Environmental Responsibility | Organization |

### 5.3.5 Comments Regarding Legal or Procedural Matters—The National Environmental Policy Act (NEPA)

#### ***5.3.5.1 The EIS failed to analyze cumulative impacts, include specific mitigation measures, or incorporate opposition to benefits-sharing***

**Comment #7261:** Inexplicably, the DEIS only describes cumulative impact relative to interpretive services provided by the NPS to park visitors.

The DEIS does not contain a discussion of opposing views. It simply states they have been incorporated into one of the alternatives, without identifying the specific opposing views or how they have been addressed within the given alternatives.

NPS provides only an inadequate mention of mitigation measures, simply stating that they will be developed.

*Response:* The CEQ defines “cumulative impacts” as the impacts to the environment that result from the incremental impact of each action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (federal or non-federal) or person undertakes such actions. The cumulative scenario, describing the past, present, and reasonably foreseeable future actions, for each impact topic was described in EIS sections 4.3.1.6, 4.3.2.6, 4.3.3.6, and 4.3.4.6. The cumulative impacts of each alternative, if any, are described in the EIS for each impact topic in the following EIS sections: Sections 4.3.1.7, 4.3.2.7, 4.3.3.7, 4.3.4.7, 4.4.2.8, 4.4.3.6, 4.4.4.8, 4.4.5.7, 4.5.2.6, 4.5.3.6, 4.5.4.6, and 4.5.5.6.

Specific mitigation measures associated with the benefits-sharing proposal were explained in detail in the DEIS in sections 2.4.6, 2.4.6.1, 2.4.6.2, 2.4.6.3, 2.4.6.4, 4.4.4.6, and 4.4.5.5.

The CEQ requires agencies to “make every effort to disclose and discuss at appropriate points in the draft statement all major points of view on the environmental impacts of the alternatives including the proposed action.”<sup>30</sup> The DEIS described how opposition to benefits-sharing was incorporated into the alternatives in Sections 1.9 and 2.6. Section 1.9 in the final EIS has been edited to clarify that Alternative C, “Prohibit Specimen Collection for Any Commercially Related Research Purposes,” was developed in response to comments opposing benefits-sharing and opposing commercialization of research discoveries.

| Public Comment: | Commenter:                                                                                                                             | Affiliation:  |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------|---------------|
| 7261            | Edmonds Institute, Alliance for the Wild Rockies, Wilderness Watch, International Center for Technology Assessment, WildWest Institute | Organizations |

### 5.3.6 Comments Regarding Legal or Procedural Matters—Issues from the Edmonds Institute, et al. v. Babbitt, et al. Court Decisions

#### 5.3.6.1 Edmonds Institute highlights several issues from the first District Court ruling in Edmonds Institute, et al. v. Babbitt, et al.

*The court’s first ruling told the NPS there is a difference between ordinary research in parks and research involving a CRADA*

*Comment #7261:* The Judge rejected the Park Service position that bioprospecting is no different than other research conducted in the parks ... The judge went on to point out that, “There is an undeniable reality that commercial activity is qualitatively different than scientific

and educational activity of a similar nature, due to the very different forces and motivations that drive them.”

The Court wrote “... the introduction of commercial bioprospecting into the nation’s parks represents a dramatic change in Park Service policy ...”

**Response:** The authors quote the court’s March 1999 decision without reference to the related April 2000 decision by the same court (both court decisions are provided in Appendix I of this EIS). In its April 2000 decision, the court clarified the difference between the CRADA and Diversa’s pre-existing research permits, saying “Since 1994, prior to its entry into the CRADA, Diversa, under its previous name Recombinant Biocatalysis, Inc., had already been conducting the same sort of sampling from Yellowstone, pursuant to [research and collecting] permits issued in accordance with Park regulations. The main difference, however, is that prior to the CRADA, the company was under no obligation to share any of the economic or other benefits that might result from its research on Park resources.” The dramatic change in park policy the court referred to in its March 1999 decision was the first use of a CRADA by a national park, hence benefits-sharing agreements (CRADAs) are the subject examined in this EIS.

In April 2000, the court clarified that the NPS made a reasoned decision when it considered commercial use of research results to be distinct from commercial use of park resources, saying “The court finds that the Park Service reasonably determined that the Yellowstone–Diversa CRADA does not involve the ‘sale or commercial use’ of park resources ... [A]ny ‘commercial use’ flowing from such research is limited to applications or products generated from the scientific study of the resources, not the resources themselves.”<sup>31</sup>

#### ***The Yellowstone–Diversa CRADA authorized specimen collection.***

**Comment #7261:** The CRADA allowed Diversa to remove biological samples including microbes, soils, fungi, trees, plants, rocks and other natural features.

The Court wrote: “... With regard specifically to Yellowstone, the defendants have offered no persuasive counter to plaintiffs’ assertion that the CRADA, on its face, allows for a tremendously broad range of activities spanning a broad range of ecosystems.”

**Response:** The CRADA did not authorize any collection of park natural resources. The authors quote the court’s March 1999 decision without reference to the related April 2000 decision by the same court (both court decisions are provided in Appendix I of this EIS). The court’s ruling (April 2000) against the commenter (former plaintiffs) firmly corrected their misunderstanding about what the Yellowstone–Diversa CRADA authorized. To quote the court’s April 2000 decision, the Yellowstone–Diversa CRADA “does not grant Diversa the right to collect any research specimens at all. Indeed, contrary to plaintiffs’ assertion, neither the CRADA nor its Scope of Work authorizes Diversa to take any natural materials from Yellowstone. Rather, the CRADA outlines the rights and responsibilities of Yellowstone and Diversa with respect to information and inventions developed after the conclusion of research specimen collection and analysis.”<sup>32</sup>

#### ***The DEIS failed to analyze the topics ordered by the court.***

**Comment #7261:** It is our position that the DEIS does not fulfill or comply with the instructions contained in the District Court’s Order.

*Response:* The District Court’s March 1999 decision declined to specify exactly what topics were to be studied in a NEPA analysis. Instead, the Court indicated that the Yellowstone–Diversa CRADA was a precedent-setting agreement and should require an intensive deliberation by the NPS through the NEPA process. The Court deferred to this process, rather than substitute its own judgment for that of the agency without the benefit of a well developed record. That decision further stated that the NPS should “suspend operation of the Yellowstone–Diversa CRADA and prepare an environmental assessment in accordance with the requirements of the NEPA.”<sup>33</sup>

NPS complied with the court’s order to suspend the Yellowstone–Diversa CRADA. NPS began an environmental assessment of benefits-sharing agreements that ultimately merged with this EIS. NPS believes it has fully complied with the court’s order by taking a “hard look” and providing a full and fair discussion of the significant environmental impacts associated with benefits-sharing agreements to inform decision-makers and the public of the reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment, as required by NEPA.

| Public Comment: | Commenter:                                                                                                                             | Affiliation:  |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------|---------------|
| 7261            | Edmonds Institute, Alliance for the Wild Rockies, Wilderness Watch, International Center for Technology Assessment, WildWest Institute | Organizations |

### 5.3.7 Correspondents Discuss “Commercial Bioprospecting”

#### 5.3.7.1 NPS should prohibit “commercial bioprospecting”

*Comment #112:* Bioprospecting in our National Parks is a horrible idea! These lands are supposed to be protected from commercial, natural resource exploitation.

*Comment #6724:* I do not want any bioprospecting in our country’s national parks. I hope you do not approve any plan which permits this no matter what the financial benefits. Our parks have been set aside to protect them from exploitation of any kind including bioprospecting.

*Comment #7473:* I oppose any commercial exploitation by any commercial bioprospecting. Park resources should not be used at all for commercial purposes. National parks are for the protection of their natural resource, not commercial uses.

*Response:* Although many correspondents wrote of bioprospecting as if it were a new activity invented as a part of modern biotechnology, examples of early bioprospecting include the first development of crop plants and herbal medicines. Despite the lack of extractive or consumptive aspects of the proposal and the existing measures that protect national park resources during research activities, some correspondents said that bioprospecting is an unethical exploitation of nature that should be prohibited in the national parks.

The NPS received correspondence on the draft EIS discussing “commercial bioprospecting” and focusing on the motivations and intentions of “commercial bioprospectors.”

Correspondents also seemed to assume that large numbers of commercially motivated researchers are poised to target a commercial product and then search for naturally occurring compounds to use in manufacturing that product. In preparing the EIS, the NPS monitored research permits for examples of declared bioprospecting and has not found any example of that kind of product-targeted research. Instead, declared bioprospectors who have been issued NPS research permits have identified scientific or resource management goals in their research permit applications.

All research permit applications are reviewed pursuant to NEPA as well as NPS policies and regulations. Permits are only issued if the proposed research activities are determined to be acceptable for park research under NPS’s long-standing Scientific Research and Collecting Permit protocols.

The NPS has concluded that the benefits-sharing proposal is not likely to attract researchers who fit the public’s expressed perception of “commercial bioprospecting.” For more information about the way NPS research policies protect parks, please see Section 5.3.8.

| Public Comment: | Commenter: | Affiliation: |
|-----------------|------------|--------------|
| 112, 6724, 7473 |            | Individuals  |

#### ***5.3.7.2 NPS should not allow research that is for purely commercial purposes***

**Comment #39:** Research conducted on publicly-owned lands should not have the profit motive as its paramount concern.

**Comment #7261:** Research for purely commercial purposes is inconsistent with the original purposes of the park system and individual park creation acts.

The specific language in the creation acts for Yellowstone and the National Park Service clearly prohibits the removal of park resources for profit.

**Comment #7488:** The Sierra Club is very supportive of scientific research occurring in our national parks and aware that on occasion biological resources will inevitably result in discoveries with may have economic, social and environmental values. However, the Sierra Club believes that wildlife and biological resources of the national parks should not be exploited for purely commercial purposes.

**Comment #7492:** Alternative C differs from Alternative B in that it disallows agreements with entities whose research is commercial in nature, motive and purpose.

**Response:** NPS research permits are issued pursuant to regulations 36 CFR 1.6 and 2.5 and in compliance with NEPA, which afford strict resource protection provisions. Currently, neither NPS policy nor regulations prohibit research or collections associated with the development of commercial products. See Section 5.3.8.2 for a detailed answer explaining that NPS

does not allow research that is for purely commercial purposes. Research permits may only authorize specimen collection for projects with scientific or resource management goals.<sup>34</sup> NPS Management Policies (2006) section 4.2.4 state, “Extractive use of park resources for commercial purposes is prohibited except when specifically authorized by law or in the exercise of valid existing rights.”

Commenters frequently confused and blurred the line between research permitting and benefits-sharing. As NPS proposed in the EIS, these are two very distinct and separate processes which the EIS indicates need to remain distinct and separate (EIS section 2.4.6.3). Factors that contribute to this separation are described in detail in EIS Section 4.4.4.5 Mitigation for potential impacts to NPS Administrative Operations.

Additionally, commercial use of research results is very different from commercial use of park resources. This distinction was upheld on judicial review in April 2000 when a federal court ruled firmly against the assertion that the Yellowstone–Diversa CRADA was a commercial use of Yellowstone resources. “The court finds that the Park Service reasonably determined that the Yellowstone–Diversa CRADA does not involve the ‘sale or commercial use’ of park resources...[A]ny ‘commercial use’ flowing from such research is limited to applications or products generated from the scientific study of the resources, not the resources themselves.”<sup>35</sup>

Current NPS research permitting instructions have been added to the EIS as Appendix H. These two documents are the “Guidelines to Researchers for Study Proposals” and the “Application Procedures and Requirements for Scientific Research and Collecting Permits.” These documents describe the requirements researchers must satisfy as part of their research permit applications. In addition, a sample research permit is included in Appendix H illustrating typical restrictions placed on researchers regarding their conduct and activities while in a park unit.

| <b>Public Comment:</b> | <b>Commenter:</b>                                                                                                                      | <b>Affiliation:</b> |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| 39                     |                                                                                                                                        | Individual          |
| 7261                   | Edmonds Institute, Alliance for the Wild Rockies, Wilderness Watch, International Center for Technology Assessment, WildWest Institute | Organizations       |
| 7488                   | Sierra Club                                                                                                                            | Organization        |
| 7492                   | Public Employees for Environmental Responsibility (PEER)                                                                               | Organization        |

## 5.3.8 Correspondents Support Protecting Park Resources

### 5.3.8.1 Research and bioprospecting should not harm park resources

**Comment #32:** In principle I support allowing commercial bioprospecting in our National Parks. However, any such scheme must make protection and preservation of the wild ecosystem an utmost priority. This includes requiring whatever environmental impact statements and field oversight are necessary to ensure the collecting is done in an ecologically sensitive manner.

**Comment #72:** National Parks, as places for self-willed nature and humans to interact in non-consumptive ways must not be compromised with for profit activities that most likely will harm biological diversity, ecological integrity and ecosystem integrity.

**Comment #83:** The impact to our environment in regards to bioprospecting is negligible; in some cases, it is nonexistent.

**Comment #84:** There should be no bioprospecting in national parks. The mission of the NPS is to protect parks and everything they consist of for future generations.

**Comment #105:** I vehemently oppose commercial bioprospecting in our National Parks. These are natural treasures that should be allowed to remain pristine for the public and wildlife.

**Comment #150:** You, the National Park Service, are supposed to protect our parks instead we find you trying to exploit them. Is there any government official that can be trusted?

**Comment #6718:** We favor the use of national parks for research that draws upon the natural organisms and ecosystems that are protected in the parks, as long as it does not compromise the protection of the parks. We believe the benefits flowing from that research should be shared with the national parks to advance their conservation.

**Comment #6721:** I must strongly protest and oppose any move to allow any commercial 'bioprospecting' in our national parks. The National Parks Service has been assigned stewardship of our precious lands, to preserve and to protect them.

**Comment #7492:** For example, Exxon-Mobil researchers could approach a park manager seeking a BSA [benefits-sharing agreement] to conduct seismic surveys in a park to determine oil deposits in and around the park ... Without a doubt, this type of BSA [benefits-sharing agreement] could occur under Alternative B. If we are wrong, the Final EIS must state so and explain why.

Seismic research is only one of many conceivable scenarios where research by commercial interests could impinge on park values and public enjoyment of those values.

**Comment #7502:** Park resources should not be directly or indirectly adversely affected by the research or specimen collection process. Also, visitors and their experience and enjoyment of parks should not be adversely affected by research conducted within parks. Park resources must remain unimpaired for future generations.

**Response:** Many correspondents reminded the NPS of the importance of preserving

its resources “unimpaired for future generations.” The NPS agrees that this is the most important consideration when deciding among the alternatives in the EIS.

The NPS agrees that park resources and values must not be harmed by research activities. Authorization to conduct scientific research in national parks is subject both to well-established NPS regulations and to separate NEPA compliance procedures. The long-standing review procedures associated with research permitting are designed to identify and then mitigate, minimize, or avoid adverse impacts to park resources and values. Federal actions analyzed in this EIS would not change these review procedures.

Objective 3 of the EIS (section 1.4.3) expressed the NPS’s desire to: “Ensure that the NPS research permitting process is independent, objective, and unaffected by actions proposed in this DEIS.” To this end, Alternative B (the benefits-sharing proposal in this EIS) includes mitigation measures to separate research permitting and benefits-sharing functions to prevent research activities from being evaluated with regard to any benefits-sharing considerations (EIS Section 4.4.5.5). Research permit issuance would precede and remain separate from negotiation of any benefits-sharing agreement (EIS Section 2.4.6.3). Separate individuals would manage preparation of benefits-sharing arrangements and research permit issuance decisions (EIS Section 2.4.6.4).

Additionally, benefits-sharing would not change NPS research permitting procedures or policies (EIS section 2.4.6.3) nor would it circumvent or supersede any NPS planning process, permitting authority, or other regulatory procedure or policy. For example, benefits-sharing agreements would not authorize any research activities in parks that otherwise require a permit (EIS Section 2.4.2.2). This means that every scientific proposal that would currently require a research permit would still require the same permit, including a NEPA review, if benefits-sharing were implemented.

The seismic study example, as described in comment #7492, could not be authorized by a benefits-sharing agreement. A research permit application for such a project would need to be analyzed for its potential impacts before a permit was issued or denied. In general, research permit applications proposing use of seismic methods could potentially impact natural and cultural resources as well as visitors, therefore such a research permit application would be subject to strict site-specific evaluation under NEPA before a decision could be reached about whether or not to issue a permit. No benefits-sharing agreement could permit such an activity.

| Public Comment:                      | Commenter:                                               | Affiliation: |
|--------------------------------------|----------------------------------------------------------|--------------|
| 32, 72, 83, 84, 105, 150, 6718, 6721 |                                                          | Individuals  |
| 7492                                 | Public Employees for Environmental Responsibility (PEER) | Organization |
| 7502                                 | Greater Yellowstone Coalition                            | Organization |

### **5.3.8.2 Benefits-sharing must not authorize harvest, extraction or sale of park resources**

*Comment #37:* In the event of a viable discovery, how will the park protect its philosophical and physical mission to the public when extraction begins?

*Comment #71:* Please preserve our national parks as havens rather than as raw material for commercial exploitation. Do not allow such an invasion of our publicly safeguarded areas to occur under any circumstances.

*Comment #74:* The truth of the matter is that the NPS has no legal right to sell off the natural resources that it holds in the public interest.

*Comment #92:* I do not think that the Benefits sharing program will be beneficial to the parks ecosystems. The whole point of the National Parks is to preserve the natural beauty of this country. Letting logging and mining happen will destroy this natural beauty.

*Comment #152:* Alternative B sets a bad precedent that will open the door to more extractive activities for commercial purposes.

*Comment Form Letter #167:* No benefits sharing agreement should be developed that results in resources being used for commercial purposes. Any research contemplated under Benefits Sharing agreements cannot result in the direct commercial use of those samples removed from parks.

*Comment #7116:* Sirs, these parks are national treasures belonging to the American people. Please defend them from the 'biomining' that would inevitably result from the initial 'bioprospecting', and leave a bio-devastation in our parks comparable to that left by mineral mining throughout the West.

*Comment #7261:* Potentially, the public may not even be able to know ... whether the project will involve what is precluded in § 3 of the National Park Service Act, notably the lease, rental, or grant of natural curiosities, wonders, or objects of interest "on such terms as to interfere with free access to them by the public."

*Comment #7477:* Environmental impact analysis of roads, impacts of equipment on the soil, wildlife, soluble and non' soluble trash, and future development can never be adequately predicted once prospecting begins.

*Comment #7487:* I am completely opposed to the NPS allowing private corporations to have access to the park for profit making exploration.

*Response:* Many correspondents seemed to be responding to what they read on a web site entitled "Parks Not For Sale" rather than the content of the DEIS or newsletters or websites provided by the NPS. Benefits-sharing would only apply to research results and would not authorize harvest, use or sale of NPS natural resources for product production or any other commercial purpose. The EIS does not propose sale of natural resources, "biomining," logging, or any kind of mining or extractive processes. Benefits-sharing agreements and

research permits would not authorize any resource extraction; no harvest of natural resources could occur under the guise of “research” because the strict resource protection provision of NPS regulations would not allow it and NPS Management Policies reinforce this prohibition. Benefits-sharing agreements, as proposed in the EIS, would not grant or authorize “the lease, rental, or grant of natural curiosities, wonders, or objects of interest.”<sup>36</sup> Research permits issued by the NPS do not violate 16 USC 3 as they do not lease, rent, or grant natural curiosities, wonders, or objects of interest in a manner that interferes with free access to them by the public. All specimens collected under the authority of an NPS research permit remain federal property.

By regulation, a specimen collection permit may be issued only when the superintendent determines that the collection is necessary to the stated scientific or resource management goals of the institution or agency conducting the research. In addition, a research permit that authorizes the collection of living organisms for destructive analysis “may be issued only when the superintendent approves a written research proposal and determines that the collection will benefit science or has the potential for improving the management and protection of park resources.”<sup>37</sup> NPS Management Policies prohibit the repeated collection of materials to ensure a continuing source of supply for research or propagation.<sup>38</sup>

| Public Comment:                       | Commenter:                                                                                                                             | Affiliation:  |
|---------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|---------------|
| 37, 71, 74, 92, 152, 7116, 7477, 7487 |                                                                                                                                        | Individuals   |
| 167 (form letter)                     | National Parks and Conservation Association                                                                                            | Organization  |
| 7261                                  | Edmonds Institute, Alliance for the Wild Rockies, Wilderness Watch, International Center for Technology Assessment, WildWest Institute | Organizations |

### 5.3.9 Correspondents Suggest NPS Units Should Be “The Commons”

#### 5.3.9.1 All details about research involving study of NPS resources should be in the public domain

**Comment #36:** Our government has an honorable history of making its scientific research available to all citizens, in the public domain, like the USGS survey maps I use often. Opening our National Parks to private economic gain, with no thought of the public good, is directly opposed to this tradition. Scientific research is a laudable endeavour, but only if conducted in the open so the knowledge gained may be shared by all, and not locked away by private greed.

**Comment #88:** It [Alternative C] will assure that the results all research in the Park system will be placed in the public domain.

*Comment #4602:* National parks belong to all of us - all their resources. Therefore all individuals should have the benefit of any research conducted in the park.

*Comment #7261:* It [NPS] ignores the example of such agencies as the Centers for Disease Control, where public service scientists search for vaccines against such threats to public health and safety as the avian flu, and conduct extensive research in the public interest.

*Response:* The NPS benefits-sharing proposal stipulates that all information generated under a benefits-sharing agreement be shared freely with the NPS. The NPS would have unlimited rights to share most of this information with the public, in accordance with confidentiality and unfair business practice laws (see Section 4.4.2.2) which limits disclosure of certain business and commercial information such as trade secrets.<sup>39</sup> The benefits-sharing proposal provides for access to research information above and beyond the requirement placed on other NPS research permittees, who by comparison are required to provide only a brief annual report.<sup>40</sup> A benefits-sharing agreement would assure that the public had more, not less, access to the information generated by scientific research involving the study of park specimens.

Both government agencies referenced by correspondents, the United States Geological Survey (USGS) and the Centers for Disease Control (CDC) conduct publicly funded research in the public interest. Both agencies also enter into CRADAs and support the patenting and commercial development of research results. Of note, the USGS CRADA policy, like the NPS benefits-sharing proposal, requires that information about projects conducted under CRADAs be in the public domain, but also allows patenting and other forms of intellectual property protection for research results.<sup>41</sup> The CDC’s Technology Transfer Office “is wholly focused on translation of CDC’s research findings into practical application for the benefit of health and safety of the American public and the world.”<sup>42</sup> To date, more than 70 CRADAs have been formed between the CDC and industry. The CDC patents the inventions of its scientists and licenses inventions to provide income to the CDC.

| Public Comment: | Commenter:                                                                                                                             | Affiliation:  |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------|---------------|
| 36, 88, 4602    |                                                                                                                                        | Individuals   |
| 7261            | Edmonds Institute, Alliance for the Wild Rockies, Wilderness Watch, International Center for Technology Assessment, WildWest Institute | Organizations |

**5.3.9.2 NPS should prohibit patenting of any intellectual property related to study of park resources**

*Comment #61:* Privatization has been gaining strength for past number of years in the Park Service ... We do not want corporations to patent genetic codes, plant, and animal life from public lands for their own benefits.

**Comment #68:** I used to work on intellectual property (IP) issues for the National Center for Supercomputing Applications and have some familiarity with how businesses manage IP. Bioprospecting transfers value from the public domain to private hands. What is in the public domain should remain in the public domain, therefore no private IP should be allowed from bioprospecting in national parks. Bioprospecting effectively takes public assets and limits access to their benefits so that some individual and institutional investors can benefit. That is an unfair tradeoff which does not serve the public interest. If the science is really compelling, leave the resulting IP in the public domain to maximize public benefit.

**Comment #69:** The very idea that genetic codes can be patented is unethical to begin with, and the practice should not be encouraged or facilitated.

**Comment #71:** Ample experience has shown that large corporations trying to patent life forms and biological/genetic material do not have the interests of the public at heart, but are seeking to maximize profits at almost any cost.

**Response:** The Constitution of the United States gives Congress the power to promote the progress of science by securing for limited times to inventors the exclusive right to their discoveries. The issuance of patents is exclusively governed by the Patent Act, 35 USC 101-376. The NPS does not have the authority to determine what is or is not patentable in the United States, nor may it preclude inventors from pursuing patents for their discoveries.

Correspondent #68 suggests that what is in the public domain should remain in the public domain. Research specimens collected through a research permit remain federal property subject to the statutes and regulations governing the NPS. A patented discovery based on study of natural resources does not preclude study of those same resources by others. An absolute prohibition against the development and protection of intellectual property derived from research involving specimens collected from NPS units would be contrary to the policies of the United States as expressed through the intellectual property rights and other laws that encourage discovery and technological innovation.

| Public Comment: | Commenter: | Affiliation: |
|-----------------|------------|--------------|
| 61, 68, 69, 71  |            | Individuals  |

### ***5.3.9.3 Do not cede control of parks to corporations; beware of patents that might restrict access to resources within parks***

**Comment #69:** If a corporation obtains patents on genetic patterns of plants and animals that live in the national parks, then they could attempt to enforce those patents and monopolize access to the plants and animals possessing the genetic patterns. This would effectively remove or restrict public access to the national parks. This is not acceptable.

**Comment #154:** I am concerned that increasing privatization of “public” interests will further erode the public’s already fragile control of our resources ... It is necessary that the NPS be in full

control of research, if we are to avoid handing over the resources to corporations ...  
Corporate control of public resources is an irreversible trend, and a very slippery slope.

**Comment #7466:** I am aware of the existing system for limited ‘prospecting’ of natural species within the parks, with friends who deal with academic biological studies, and with research from private corporations. The system that is currently in place admittedly works well, as stated within the DEIS. This allows low-impact surveys, with any beneficial results spread across the public. Commercialized bio-prospecting will entail a ‘lock,’ in the form of limited licensure or a patent on a specific natural process or item.

**Response:** U.S. patents cannot be issued for naturally occurring organisms or natural processes. If a researcher patents his research results related to study of a park organism, the patent does not control or affect the park organism or limit or prohibit other researchers from attempting to collect identical park specimens. The commercialization of park-related research results would not affect park management or visitor access to parks.<sup>43</sup>

Correspondent #7466 indicates that the system for allowing research and associated collecting in parks works well and then assumes that, if benefits-sharing were selected, that system would change. The benefits-sharing proposal would make no changes to the way that research permit applications are evaluated and issued or denied by the NPS. The correspondent further assumes that currently all research results remain entirely in the public domain but would become private under the proposal. Laws already allow researchers to protect their intellectual property and research results. The proposal would have no impact on intellectual property rights as recognized in U.S. intellectual property rights laws.

| Public Comment: | Commenter: | Affiliation: |
|-----------------|------------|--------------|
| 69, 154, 7466   |            | Individuals  |

**5.3.9.4 NPS should prohibit any commercial use of research results involving study of specimens collected from NPS units**

**Comment #56:** I am writing to support the alternative that prohibits scientific research involving NPS specimens if associated with the development of commercial products. The parks are not meant to be commercial resources, nor are they meant to be self-supporting in any way.

**Comment #59:** Why is there no option to rule out bioprospecting altogether?

**Comment #72:** Cease all commercialization of park biodiversity including but not limited to soil organisms, plants, insects, amphibians, reptiles, birds, mammals, bacteria, fungi, protists, algae and minerals. This is part of the Commons, held and protected in perpetuity for future generations of humans and non-humans.

**Comment #7241:** Velcro, metallic paints, the least toxic EPA approved herbicide, biological weed control, and light without heat (glow-in-the-dark sticks and accessories) were all invented from the study of nature. Industry increasingly turns to the wonders of nature to meet society’s wants and needs.

*Response:* As the DEIS stated in Section 2.7, the option to rule out bioprospecting altogether was considered but was deemed unreasonable, as described below. NEPA does not require unreasonable alternatives in an EIS.

An absolute prohibition against the development of any commercial use of research results involving specimens collected from NPS units would be contrary to the policies of the United States as expressed through the intellectual property rights and other laws that encourage discovery and technological innovation. To prohibit any commercial use of research results that involved specimens collected from NPS units could arbitrarily deprive society of important discoveries and also have a chilling effect on research in units of the National Park System. Such consequences would be contrary to a wide range of NPS policies as well as National Parks Omnibus Management Act (NPOMA).

Commercial use of research results is distinctly different from commercial use of park resources. This distinction between commercial use of research results and commercial use of park resources was upheld on judicial review in April 2000 when a federal court ruled against the assertion that the Yellowstone–Diversa CRADA was a commercial use of Yellowstone resources. “The court finds that the Park Service reasonably determined that the Yellowstone–Diversa CRADA does not involve the ‘sale or commercial use’ of park resources...[A]ny ‘commercial use’ flowing from such research is limited to applications or products generated from the scientific study of the resources, not the resources themselves.”<sup>44</sup>

Under Alternative C the NPS proposed a prohibition on the collection of specimens for research that was identified or acknowledged by the researcher to have potential for commercial development (EIS Section 2.5).

| Public Comment:  | Commenter: | Affiliation: |
|------------------|------------|--------------|
| 56, 59, 72, 7241 |            | Individuals  |

**5.3.9.5 NPS should not allow private interests to profit from the study of public resources**

*Comment #71:* The purpose of the national park system, the public interest, and the public trust would be violated by allowing private interests to exploit the resources of our national parks for their own gain.

*Comment #102:* NPS’s decision on the subject of benefits-sharing will support the spread of privatization -- or it can affirm the value of the Commons. Each time we give our Commons to corporations, we get further locked in to the market mindset. The mandate of the NPS asks us to be more creative than that: to find a solution that will foster the common good.

*Comment #150:* I object to research in national parks that is commercial and for private profit. These parks belong to the citizens and any profit from the parks should be put back into the parks’ upkeep.

**Comment #7455:** I strongly oppose opening up the parks for business partnerships. Also, I want to see profits from research or applications of research conducted in the parks to be shared with the parks...

**Comment #7476:** I am very proud of our National Parks System, the finest in the world, and I believe overwhelmingly seen as havens of natural resources to be enjoyed as Nature--not as commercial resources!

**Response:** Some correspondents advised the NPS to prevent any private enterprises from profiting on projects related to the study of public resources, including correspondents who differed on whether NPS-related research results ought to be used for commercial purposes. However, the application of new knowledge to useful public purposes depends largely upon actions by business. For example, many potentially useful inventions made by university scientists are simply waiting for a business to express an interest in developing these inventions further so that they could actually be used by the public.

Various laws, regulations and policies, such as The National Parks Omnibus Management Act of 1998 (NPOMA), encourage the NPS to extend the benefits of natural resource conservation to the public. If research on the resources preserved in parks might lead to beneficial discoveries, generally speaking, the NPS supports research efforts of this type as long as they meet stringent resource protection standards and requirements of the NPS research permitting process and are appropriate for a park environment. Conserving park resources is of critical importance to the NPS, and both public and private entities have demonstrated the ability to comply with and adhere to strict park protection standards for research and collecting activities, while benefiting management of park resources through enhanced understanding of the resources they study.

| Public Comment:          | Commenter: | Affiliation: |
|--------------------------|------------|--------------|
| 71, 102, 150, 7455, 7476 |            | Individuals  |

## 5.3.10 Correspondents Discuss Benefits-Sharing Details

### 5.3.10.1 Benefits-Sharing agreements and public disclosure

#### *The public should know who has entered into a benefits-sharing agreement with the NPS*

**Comment #4:** As a member of the public I have the absolute right to know who is making money off our parks. Secret arrangements, behind our backs, does not do justice to the American people!

**Response:** The NPS agrees. Section 2.4.4.1 of the EIS specifies that all benefits-sharing agreements and the associated research permit would be made available to the public upon request.

| Public Comment: | Commenter: | Affiliation: |
|-----------------|------------|--------------|
| 4               |            | Individual   |

#### *All non-monetary and monetary benefits received by the NPS should be disclosed to the public*

**Comment #7463:** We would also like to see a detailed description of the non-monetary benefits provided to the NPS to be included in the CRADA.

**Comment #7492:** Under that alternative [B1], there must be full public disclosure of the benefits, monetary or non-monetary, that are exchanged between the parties to the BSA [benefits-sharing agreement].

There is no legitimate justification for keeping secret the benefits, monetary or non-monetary, that are exchanged between the parties to the BSA.

**Response:** The NPS agrees that all monetary and non-monetary benefits received by the NPS should be disclosed to the public, as allowed by law, and the final EIS has been edited to clarify this (Section 4.4.2.2). The EIS indicates that the benefits derived from the sharing of resource knowledge and the establishment of enhanced collaborative research relationships would be the most valuable component of a benefits-sharing package (EIS Section 4.4.1.1). The benefits-sharing agreement would establish this relationship and outline expected non-monetary benefits. The annual report to Congress and the public would provide details about the actual non-monetary benefits received by the NPS.

| Public Comment: | Commenter:                                               | Affiliation: |
|-----------------|----------------------------------------------------------|--------------|
| 7463            | National Parks and Conservation Association              | Organization |
| 7492            | Public Employees for Environmental Responsibility (PEER) | Organization |

***Should the monetary terms and conditions of benefits-sharing agreements be disclosed?***

**Comment #6:** I prefer alternative B3 [never disclose financial terms of agreements], which both benefits NPS and gives some flexibility in negotiation with researchers regarding financial matters.

**Comment #85:** Many private corporations are highly secretive about their financial arrangements, and will not establish a research collaboration if terms are made public. The NPS will best be served by not having a strict policy regarding the disclosure of financial terms of agreement. Mandatory transparency will significantly reduce the number of commercial parties willing to engage in benefits-sharing research, and these are precisely the parties that can provide the most benefits to the Parks. Another reason the NPS should be cautious about revealing financial terms is that once made public, these terms will become a de facto standard for parks and countries around the world.

**Comment #89:** I write in favor of Alternative B1, benefits-sharing with mandatory disclosure of all terms and conditions. I am not in favor of the preferred alternative with optional disclosure. These lands are our national heritage; I want to know exactly what is occurring on them, who is benefiting, and how.

**Comment #7444:** I ... do believe that mandatory disclosure of terms and conditions of any and all benefit sharing agreements must be a critical condition to avoid the appearance of impropriety and prevent benefit sharing agreements and bioprospecting from failing due to public perception of wrong doing.

**Response:** The Benefits-Sharing EIS contains three different options concerning release of information protected under confidentiality laws as described in Section 2.4.4. The title of Alternative B2 has been changed in the final EIS to emphasize that Alternative B2 would disclose all information not protected by unfair business practice and confidentiality laws. The potential impacts of these options are discussed in Section 4.4.

| Public Comment: | Commenter: | Affiliation: |
|-----------------|------------|--------------|
| 6, 85, 89, 7444 |            | Individuals  |

**5.3.10.2 Entering into benefits-sharing agreements**

***All of the reports and information generated under a benefits-sharing agreement should be disclosed, even when contrary to FOIA***

**Comment #7261:** Whatever the intentions of the NPS, the other parties to CRADAs may designate part of the CRADA as confidential business information. The public will have no effective means of accessing this information, not even the Freedom of Information Act.

**Comment #7463:** The public should have the right to view any agreement, including the agreement’s financial terms and the underlying research permit.

However, we disagree with 2.3.4, “Protected CRADA Information” in the Model CRADA (Appendix A, p. 190), and we believe that language should be struck from the model CRADA. NPCA is specifically interested in the agreement’s financial terms, including royalty rates, up front payment rates, and the underlying metrics used to derive an agreed upon cash payment. It is also important to understand a detailed description of the biological materials, the discovery or development, process, function, anticipated use and market for the product ... Finally, all reports made by the company and all subsequent audits (as described in the Model CRADA, 4.4 “Records”, p. 193) conducted by NPS, or NPS agent, must also be made available for public review.

*Response:* Under the preferred alternative, the NPS would comply with confidentiality and unfair business practice laws which protect certain business or commercial information potentially received from benefits-sharing partners. All benefits-sharing agreements would be made available to the public in their entirety upon request unless one or more parties to an agreement objected to the release of any specific information for reasons satisfying one or more of the statutory disclosure exemptions provided under the federal Freedom of Information Act (FOIA). A summary of such information would be prepared and released to the public upon request (EIS Section 2.4.4.2). The research permit associated with each CRADA would be appended to the CRADA and provided to the public with the CRADA. (Research permits restrict the collection of biological or other materials to those specified in the permit by location, description and quantity.) In addition, the total non-monetary and monetary benefits generated by the benefits-sharing agreement would be reported to the public annually and also when requested.

Alternative B1 would implement benefits-sharing agreements with mandatory disclosure of the entire agreement, without exception, including its associated research permit. NPS expects that researchers would have two responses to this alternative. First, researchers could simply withhold information from NPS (e.g., market projections and other financial business information) that would have been useful to the NPS in negotiating favorable terms for agreements. Second, information collected by NIH indicates that many researchers would simply refrain from performing NPS-related research or not develop their discoveries for commercial applications to avoid entering into completely transparent negotiations.

If NPS were to implement Alternative B1 and release certain information contrary to a CRADA partner’s wishes, the NPS could find itself enjoined in a “reverse FOIA” or similar litigation, whereby the NPS would be sued by the CRADA partner to prevent disclosure of the information. The NPS could also be liable for any damages caused by release of a CRADA partner’s protected information (EIS section 4.4.2.2).

If Alternative B1 is selected, financial information contained in the CRADA would never be withheld, the parties to the agreement would be so advised, and “Protected CRADA Information” would not apply to the financial terms of the CRADA. Under all benefits-sharing alternatives, “Protected CRADA Information” would only be withheld for a period of five years after which it would be released to the public upon request (example [model] CRADA Article 10.3.2).

The example (model) CRADA assures that all information generated in the performance of the CRADA (“Subject Data”) can be used by the NPS for park management, whether or not it

has been disclosed to the public (example CRADA Article 10.1).

By their nature, audits of company records, while generally infrequent events, can be expected to examine proprietary information that is seldom if ever disclosed to the public in any other context. Therefore, the NPS would comply with confidentiality and unfair business practice laws when determining whether to disclose the results of any audit that might occur.

| Public Comment: | Commenter:                                                                                                                             | Affiliation:  |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------|---------------|
| 7261            | Edmonds Institute, Alliance for the Wild Rockies, Wilderness Watch, International Center for Technology Assessment, WildWest Institute | Organizations |
| 7463            | National Parks and Conservation Association                                                                                            | Organization  |

***Each specific benefits-sharing agreement should be subject to public review prior to finalizing***

**Comment #7241:** Delaying time to market typically results in loss of revenue through missed opportunity, salary/manufacturing/distribution overhead, delay of new product research, reduce stock value and can result in employee lay-offs. The steps from Discovery to Marketing, layed out on page 85, are not separate events, but overlap substantially to aid in reducing the time to market. Although a delay to market may be viewed as more “equitable” to the national parks, it can be devastating to a research company.

**Comment #7463:** The NPS process for negotiating and entering into benefits-sharing agreements must be transparent -- fully open and accessible to the public.

**Comment #7502:** The process for entering into benefits-sharing agreements must be open to the public and transparent. The public ought to be provided with an opportunity to comment on the agreement and the final agreement must be available to the public.

**Response:** Congress specified that NPS benefits-sharing procedures must be equitable and efficient.<sup>45</sup> In order to be “efficient,” the negotiation and completion of a benefits-sharing agreement must occur within a reasonable timeframe. As correspondent #7241 describes, researchers who commercialize research results face many obstacles on the way to marketing their product, and a typical 30- to 60-day public review period followed by revisions and further negotiations would be contrary to the “equitable, efficient benefits-sharing arrangements” required by the law.

An “equitable” negotiation must deal fairly and equally with both the NPS and the benefits-sharing partner. Exposing a company’s negotiating positions to the public can reasonably be expected to cause competitive harm to that company. Some commenters might be concerned that the NPS would fail to demand appropriate levels of benefits. However, making negotiations a matter of public record would more likely (1) limit payment equityability, (2)

create an artificial “rate ceiling,” (3) expose the NPS to litigation or other penalties, (4) discourage some research, and (5) discourage establishment of benefits-sharing agreements (EIS Section 4.4.2.2). Public negotiations would be more likely to result in lower levels of benefits for individual agreements and also lower levels of benefits over all.

Some commenters might have an underlying concern that a benefits-sharing agreement could give researchers special privileges in a park. The EIS explains that a benefits-sharing agreement would not regulate or authorize any researcher’s access to NPS resources (EIS Sections 1.2.1 and 2.4.5.1).

If benefits-sharing is implemented, publicly available annual reports to Congress would describe all non-monetary and monetary benefits received by the NPS from benefits-sharing agreements. Additionally, the benefits-sharing agreements and their underlying research permits would be made available to the public, providing an opportunity for public oversight of NPS benefits-sharing.

| Public Comment: | Commenter:                                  | Affiliation: |
|-----------------|---------------------------------------------|--------------|
| 7241            |                                             | Individual   |
| 7463            | National Parks and Conservation Association | Organization |
| 7502            | Greater Yellowstone Coalition               | Organization |

***Each specific benefits-sharing agreement should be subject to NEPA review prior to entering into that agreement***

**Comment #7261:** [The DEIS] simply states ... that NEPA is applied at the permit issuance level. By this tactic, the NPS attempts to evade the “hard look” required by NEPA. Further, according to DEIS estimates, negotiating a new CRADA will require a high-end estimate of 0.18 FTE staff time, and the more CRADAs, the less time spent per agreement. This amount of staff time is clearly inadequate for scientifically credible NEPA compliance.

**Comment #7463:** All benefits sharing agreements/CRADAs must undergo full NEPA analysis, disclosure and appropriate public review in order for the NPS and the public to understand the potential environmental impacts of each agreement.

**Response:** If Alternative B (Implement Benefits-Sharing) is selected, an environmental (NEPA) review (Categorical Exclusion, Environmental Assessment, or Environmental Impact Analysis<sup>46</sup>) of specific benefits-sharing agreements that might be established by individual parks in the future can be tiered from this programmatic EIS. If an individual park proposed site-specific resource management projects using non-monetary or monetary benefits generated by a benefits-sharing program, such projects would receive a separate environmental review for potential project-specific impacts in compliance with NEPA.<sup>47</sup>

Benefits-sharing agreements would not authorize any research activities in parks that otherwise require a permit.<sup>48</sup> This means that any kind of research proposal that currently

requires a research permit would still require the same permit, including a NEPA review, if any benefits-sharing proposal in this EIS is implemented.

Correspondent #7261 may not recognize the distinction between the proposed benefits-sharing agreement and its underlying research permit. All research permit applications are evaluated under NEPA and the benefits-sharing proposal would not supersede or circumvent this policy. In addition, personnel who negotiate benefits-sharing agreements would not be involved in review, approval or denial of research permit applications. The time estimated for entering into a benefits-sharing agreement (0.18 FTE) was based on the experience of the Association of University Technology Managers (AUTM) annual survey respondents who enter into thousands of similar agreements each year. Because the AUTM FTE figure includes a variety of activities not included in the NPS's benefits-sharing proposal, the 0.18 FTE is a generous estimate of the workload to execute a single new benefits-sharing agreement (see EIS Section 4.4.5).

| <b>Public Comment:</b> | <b>Commenter:</b>                                                                                                                      | <b>Affiliation:</b> |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| 7261                   | Edmonds Institute, Alliance for the Wild Rockies, Wilderness Watch, International Center for Technology Assessment, WildWest Institute | Organizations       |
| 7463                   | National Parks and Conservation Association                                                                                            | Organization        |

***NPS Scientists should not be diverted to CRADA negotiations.***

**Comment #6733:** Furthermore, our national parks are understaffed as they are, and option C in the DEIS is the only option that would allow the park staff to continue on their mission on the public's behalf. Other options would divert time away into negotiating Commercial Research and Development Agreements (CRADAs). Not only would the public lose its national park resources, it would also lose tax-funded working hours of national parks employees.

**Comment #7488:** The Sierra Club is concerned that the size of the National Park Service scientific staff is very limited at present and that this staff needs to focus its time on science in the public interest, not developing, negotiating and managing Commercial Research and Development Agreements (CRADAs).

**Response:** The NPS shared this concern and developed the benefits-sharing proposal in a way that would avoid undue impacts to park staff. With few exceptions, NPS scientists would not be diverted to negotiate agreements. Ordinary administrative functions would be performed by specialized administrative staff, not scientists. To the contrary, the proposal seeks to increase the quantity and quality of research and scientific knowledge available to manage parks.

The potential impacts of benefits-sharing to NPS staff workload were analyzed in the EIS using the best available data. No additional data or specific evidence was offered that demonstrated the analysis in the EIS was flawed.

| Public Comment: | Commenter:                                          | Affiliation: |
|-----------------|-----------------------------------------------------|--------------|
| 6733            |                                                     | Individual   |
| 7488            | Sierra Club--National Parks and Monuments Committee | Organization |

***5.3.10.3 The benefits generated by benefits-sharing agreements***

***What kind of benefits should be required?***

**Comment #79:** A wise private landowner would certainly require some sort of benefit-sharing agreement from the same persons if the private landowner allowed such research on their property. United States citizens who use and enjoy the national parks, as I do, should not be denied similar benefits. I consider the money received from benefit-sharing agreements a benefit to all US citizens, not just to the NPS, when it is used for the maintenance and continued preservation of the national parks.

**Comment #95:** A modification of the Preferred Alternative, in which scientific benefits and in-kind services would be shared with NPS by the researchers, but no royalty benefits paid, would be the ideal solution.

**Comment #7463:** NPCA is most interested in assuring that the non-monetary benefits are secured as a first priority, as we believe it is a critical tool to provide the public with new

scientific knowledge about park resources.

**Comment #7483:** The Washington Biotechnology Action Council ... has long opposed the NPS-Diversa sort of agreement, an an egregious example of the privatization of a public good. Corporate give-aways along these lines are inconsistent with the purposes of the National Parks, and should not be tolerated.  
We could support a variant of Alternative B which included ... the proportion of direct monetary benefits is high and significant.

**Comment #7490:** One idea to examine during the benefit-sharing discussion is to require that most (if not all) of the benefits are non-monetary for commercial organizations as well. This approach might promote cooperation between those commercializing something derived from a biological resource collected in a National Park to work towards the desired non-monetary benefits that each park and commercial organization is uniquely suited to provide. For example, the commercial organization may be able to provide special services such as genetic work, or funding training opportunities (for Ph.D. and masters students, NPS personnel, academics). Focusing on non-monetary benefits might stimulate other novel and creative ideas and plans for how to enhance the education, research, and conservation efforts in the National Parks more than the approach of simply taking in monetary benefits. In addition, some organizations might be more willing to provide non-monetary than monetary-benefits for several reasons including: enhancing their public relations image or more willingness to provide special services that are less costly to give to the NPS than it would be for the NPS to obtain by using outside consulting services. This might be more favorable to the NPS as well, to more easily demonstrate the true scientific and conservation goals of the NPS to U.S. citizens, some of which may have a misperception that the NPS is “selling off” their natural resources.

**Response:** As stated in the EIS, the NPS expects that non-monetary benefits would be the primary benefit resulting from any benefits-sharing agreement.

Federal law (the National Parks Omnibus Management Act of 1998) requires any potential NPS benefits-sharing agreements to be “equitable.” The NPS recognizes that companies will only accept agreement terms that allow the company to recoup its costs and realize some profit. Requiring a majority of income from a discovery to accrue to a park may not recognize the costs associated with research and development of the discovery. (See EIS Appendix C for more information about how potential monetary benefits were estimated.)

| Public Comment: | Commenter:                                  | Affiliation: |
|-----------------|---------------------------------------------|--------------|
| 79, 95, 7490    |                                             | Individuals  |
| 7463            | National Parks and Conservation Association | Organization |
| 7483            | The Washington Biotechnology Action Council | Organization |

### ***Where should benefits be distributed?***

**Comment #38:** The money should go into a national NPS pool and not to one park or area. Otherwise there is a very clear conflict of interest for individual park superintendents, especially in these times of tight budgets. There would be a much more objective review of proposals if parks knew they were not going to get all of the money generated ...

**Comment #76:** I would support these revenues returning directly to the NPS unit where the research originated.

**Response:** The distribution of monetary benefits from CRADAs would be accomplished pursuant to the requirements of the Federal Technology Transfer Act (FTTA). In accord with the FTTA, if monetary benefits result from commercialization of a patentable invention, the majority of any monetary benefits must be retained by the park that entered into the CRADA. The specific distribution of the remainder of any monetary benefits received from the commercialization of a patentable invention would be determined by the NPS Office of Natural Resource Stewardship and Science Associate Directorate in Washington, D.C.

If monetary benefits result from commercialization unrelated to a patentable invention, all monetary benefits must be retained by the park that entered into the CRADA for the conduct of specified research or development efforts which are consistent with the missions of the park.

Although the analysis in the EIS concludes that it is unlikely, if monetary benefits exceed 5% of the entire NPS budget, the FTTA specifies that most of that excess must be deposited in the U.S. Treasury.

| Public Comment: | Commenter: | Affiliation: |
|-----------------|------------|--------------|
| 38, 76          |            | Individuals  |

### ***How should benefits be used?***

**Comment Form Letter #167:** All scientific information resulting from any agreement must be shared with the park, and any compensation received should be used to benefit resource protection and research.

**Comment #7241:** I do not agree with potential research dollars being re-directed to conservation of our national parks when an option of directing funds to the Natural Resource Challenge exists. Alternative B would be more acceptable if dollars gained by NPS from benefits-sharing were applied to the NRC [Natural Resource Challenge].

**Comment #7463:** Monies that are received as a result of benefits sharing agreements should be employed to directly benefit resource protection, as opposed to other park needs or other general government budget items.

**Comment #7490:** The original researcher who collected the species could have a role in defining how the species from which the commercial use was derived can best be conserved.

Or if the species is abundant, the original researcher could recommend other species to which such monetary benefits could be directed.

**Comment #7492:** A means to ensure that park managers meet the highest professional standards in negotiating and approving BSAs is to direct all monetary benefits to a central account in the NPS Headquarters in Washington, D.C ... The central account should be devoted solely to the research needs of the national park system.

**Comment #7501:** We suggest that the Final EIS establish mechanisms to ensure proceeds are focused on protecting natural resources in the Parks ...

**Response:** The benefits-sharing proposal specifies that all benefits, both non-monetary and monetary, received by the NPS under a benefits-sharing agreement would be dedicated to the conservation of resources protected and managed by the NPS. In addition, article 5.1 of the example CRADA (Appendix A) specifies that all payments and non-monetary benefits received by the NPS may only be used for natural resource conservation purposes.<sup>49</sup> The example CRADA, once signed by all parties, is an enforceable contract and the NPS must use benefits for the stated purpose and in accordance with the FTTA.

Benefits could be used for the purposes and projects undertaken for the NPS Natural Resource Challenge, but this is not a requirement of the proposal. In general, CRADA benefits must be used for scientific purposes.

The NPS expects that the researcher who enters into a benefits-sharing agreement would be consulted regarding the specific benefits that researcher could offer to the park. The EIS indicates that non-monetary benefits derived from the sharing of resource knowledge and the establishment of enhanced collaborative research relationships would be the most valuable component of a benefits package (EIS section 4.4.1.1).

| Public Comment:            | Commenter:                                        | Affiliation:      |
|----------------------------|---------------------------------------------------|-------------------|
| 167 (form letter) and 7463 | National Parks and Conservation Association       | Organization      |
| 7241, 7490                 |                                                   | Individuals       |
| 7492                       | Public Employees for Environmental Responsibility | Organization      |
| 7501                       | US Environmental Protection Agency                | Government Agency |

#### **5.3.10.4 The NPS should evaluate the use of benefits-sharing agreements other than CRADAs**

**Comment #7261:** Throughout the DEIS analysis, only one form of benefit sharing agreement is considered: the CRADA ... The NPS should have considered other forms of benefit sharing, including the use of fully transparent contracts made available for public view.

**Response:** The NPS proposed use of the standardized agreement provided in Appendix A because it best suits the overall needs of the NPS. Additionally, CRADAs are used by many other agencies throughout the federal government for technology transfer, and there is an existing legal foundation and framework surrounding their use. The General Provisions of a CRADA provide a well-used and well-accepted framework to allow sharing of scientific and monetary benefits resulting from improved cooperation between national parks and the research community. Since the enactment of the Federal Technology Transfer Act (FTTA), CRADAs have been used to strengthen cooperative research activities between federal agencies and private sector researchers, something the NPS finds highly desirable.

Objective 2 of the EIS is to “Strengthen conservation and protection of resources managed by the NPS by deepening understanding of biodiversity and physical and biological processes” (EIS Section 1.4.2). This objective is responsive to Congress’s mandate that the NPS must “assure that management of units of the National Park System is enhanced by the availability and utilization of a broad program of the highest quality science and information.”<sup>50</sup> CRADAs provide an established mechanism and model to accomplish that through enhanced collaborative relationships with researchers, even in the absence of monetary benefits or a major commercial discovery.

The NPS decided to use a well-established and well-accepted agreement instrument rather than attempting to use or create an entirely new and untested agreement format. The NPS did investigate and consider other forms of benefits-sharing while developing the alternatives, including cooperative agreements. No other form of contract available to the NPS by law allows monetary benefits, if any are generated, to be used by the NPS for purposes other than cost recovery. Other agreement and contract types all require that monetary benefits remaining after cost recovery be deposited in the U.S. General Treasury. Only CRADAs allow monetary benefits to be retained by the NPS for use in the parks. Since 1995, when the idea of NPS benefits-sharing was first discussed with the public, it has been clear that most researchers would be happy to comply with benefits-sharing on the condition that the benefits would be used to help protect the resources upon which the research was based. Researchers have explained to the NPS that they would not be encouraged to provide benefits to the U.S. General Treasury if there was no expectation that any such benefits would accrue to the NPS.

| <b>Public Comment:</b> | <b>Commenter:</b>                                                                                                                      | <b>Affiliation:</b> |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| 7261                   | Edmonds Institute, Alliance for the Wild Rockies, Wilderness Watch, International Center for Technology Assessment, WildWest Institute | Organizations       |

### **5.3.10.5 The benefits-sharing program should be routinely evaluated**

**Comment #7490:** In summary, if it is possible that any benefit-sharing system may be more expensive than the value of the benefits brought in, then the NPS should evaluate critically the worth of applying benefit sharing to the National Parks.

**Comment #7502:** The NPS should review the benefits-sharing program every five years to assess lessons learned, evaluate opportunities to strengthen the program, ensure the research permitting process remains insulated from the benefits-sharing agreements, and demonstrate that any benefits accrued are not negatively affecting congressional spending on park programs.

**Response:** The NPS agrees that a program such as benefits-sharing should be evaluated periodically. If the NPS implements benefits-sharing, the timing and elements to include in such reviews will be determined at that time.

| Public Comment: | Commenter:                    | Affiliation: |
|-----------------|-------------------------------|--------------|
| 7490            |                               | Individual   |
| 7502            | Greater Yellowstone Coalition | Organization |

### **5.3.10.6 Some park officials might be inclined to issue research permits based on an expectation that benefits-sharing might be likely**

**Comment #166:** Isn't this going to invite unwarranted and invasive research in the hopes that it will create "benefits"?

**Comment #7261:** This policy of benefit apportionment represents a built-in system for potential abuse of discretion in the issuance of permits, favoring commercial bioprospectors and opening the door for conflict of interest in permit issuance and environmental impact review.

**Comment #7418:** If two (or more) proposals would impact the same resource, the NPS may give priority to the activity that involves a benefits-sharing agreement over one that does not. The benefits-sharing agreements may also encourage the NPS to limit access to natural resources for academic study, because the prior discovery of valuable information in non-commercial research may undermine the value of benefits-sharing agreements. There is a very real incentive for the NPS to favor research involving benefits-sharing agreements over academic research.

**Comment #7429:** Any proposal to collect any sort of fees for commercial activity in the parks, other than those for limited traditional franchises such as lodges and gasoline stations, is entirely unacceptable. It creates a financial incentive to permit activities which are detrimental to the Park Service's mission to preserve the natural and historical features of the parks.

**Response:** NPS agrees that these are valid concerns and the EIS has addressed them. The major purpose of the mitigation measures included in the proposal is to prevent NPS

employees from creating a bias toward research projects associated with benefits-sharing agreements and making improperly influenced decisions.

Specific mitigation measures associated with the benefits-sharing proposal were explained in detail in EIS sections 2.4.6, 2.4.6.1, 2.4.6.2, 2.4.6.3, 2.4.6.4, 4.4.4.6, and 4.4.5.5.

| Public Comment: | Commenter:                                                                                                                             | Affiliation:  |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------|---------------|
| 166, 7429       |                                                                                                                                        | Individuals   |
| 7261            | Edmonds Institute, Alliance for the Wild Rockies, Wilderness Watch, International Center for Technology Assessment, WildWest Institute | Organizations |
| 7418            | The Ornithological Council                                                                                                             | Organization  |

### **5.3.10.7 The CRADA fails to control specimens**

*Comment #7418:* The CRADA (Appendix A) does not specify that NPS retains ownership of the physical specimen or any part of the specimen that is the underlying basis for the agreement. The CRADA does not prohibit destruction or consumption of the specimen, or any part of it, nor does the CRADA require return of the specimen or any part of the specimen that is not consumed, destroyed, or altered in research or development. The CRADA, in fact, talks only of the intellectual property, ignoring the fact that without the transfer of a physical specimen there could be no CRADA.

*Response:* The example CRADA in the EIS (Appendix A) stipulates that the parties to the agreement are aware that the federal government retains ownership of the research specimen collected by a researcher pursuant to a research permit (Article 6.1 of the example CRADA). However, research specimens themselves are controlled by the research permit under which they were collected, not by the CRADA. The specific purpose of the CRADA is to address the handling of intellectual property and to clarify the rights and responsibilities of researchers and the NPS.

| Public Comment: | Commenter:                 | Affiliation: |
|-----------------|----------------------------|--------------|
| 7418            | The Ornithological Council | Organization |

### **5.3.10.8 Researchers would or would not comply with benefits-sharing requirements**

*Comment #85:* CRADAs and MTAs are long-standing and proven procedures used widely by government and academic institutions both for commercializing their knowledge and intellectual properties and for ensuring that they capture a fair share of the profit streams that result from such commercialization.

*Comment #7492:* Researchers who develop commercial applications derived from NPS research permits have no incentive to seek out or enter into CRADA agreements with NPS. The cumbersome 30-page model CRADA with profit-sharing as well as detailed reporting requirements is something an entrepreneur would seek to avoid at all costs. Researchers are not required to enter into any contracts to implement a CRADA. Rather, the obligation to enter into a CRADA only arises when or if useful discoveries are developed. In the event that NPS was able to discover the discovery, it lacks any legal means to force the commercial researcher to negotiate a CRADA with it.

*Response:* Authorization to conduct research and collect research specimens in NPS units is granted only after an NPS research permit specific to that researcher is signed by both the park superintendent and the researcher. The research permit (see Appendix H) is a legally binding contract that obligates the researcher to negotiate a benefits-sharing agreement with NPS in the event the researcher wishes to commercialize their research results involving the study of a park research specimen.

The 30-page example (model) CRADA is based closely on the well-accepted CRADAs already used by over 5,000 researcher/government partnerships annually. In addition, the format of the CRADA is similar to the tens of thousands of commercial licenses in use by academic institutions annually. Although the example CRADA may be confusing to the layperson, the NPS expects that many researchers would have the assistance of technology transfer experts in their own institutions who would already be familiar with the CRADA format.

There are many important reasons researchers are likely to comply with benefits-sharing requirements. First, and most importantly, research and development (R&D) institutions need and expect legal clarity. R&D institutions increasingly anticipate that benefits-sharing will be required and are concerned about their related rights and obligations. R&D institutions also are increasingly being required to demonstrate that they have legal rights to use biological material in their possession. For example, some federal research grants require that biological materials be obtained in full compliance with all applicable benefits-sharing laws and regulations, as encouraged by the State Department (guidance dated November 5, 2003), and many institutions routinely use Material Transfer Agreements that include a requirement to obtain additional authorization before using research results for commercial purposes (e.g., NIH's Universal Biological Material Transfer Agreement in use since 1995).

Secondly, the Biotechnology Industry Organization (BIO) endorses benefits-sharing. BIO, the premier biotechnology trade group, has published voluntary "Guidelines for Bioprospecting" that encourage members to engage in benefits-sharing with the providers of their research specimens. These guidelines also encourage companies to acquire prior informed consent from the provider for specimen collection and third-party material transfers (see <http://www.bio.org/ip/international/200507guide.asp>).

Lastly, through the research permitting process, researchers acknowledge by signing their permit that if they fail to enter into a benefits-sharing agreement before using their research results for commercial purposes, "the permittee will pay the NPS a royalty rate of twenty percent (20%) of gross revenue from such sales or other revenues. In addition to such royalty, the NPS may seek other damages to which the NPS may be entitled including but not limited

to injunctive relief against the permittee” (see Item 6 of the “Conditions Subject To All National Park Service Research Permits” in the “Scientific Research And Collecting Permit,” in Appendix H). Twenty percent of gross revenues would be an onerous amount compared to the royalty rate potentially negotiated through a CRADA with the NPS. Every NPS permitted researcher is legally bound to the conditions of the servicewide NPS research permit, as it constitutes a legally enforceable contract.

| Public Comment: | Commenter:                                        | Affiliation: |
|-----------------|---------------------------------------------------|--------------|
| 85              |                                                   | Individual   |
| 7492            | Public Employees for Environmental Responsibility | Organization |

### ***5.3.10.9 Questions and suggestions for implementation of benefits-sharing***

**Comment #7241:** Parks may elect not to enter into the agreement if negotiation reveals that royalty payments, which would otherwise be reinvested back into research, will only cover park administration costs.

To fully accept Alternative B, I would need to see more detail on what factors would be considered during a benefits-sharing negotiation?

The developed service-wide institutional record of benefits-sharing agreements must be easily assessable to the researchers and their companies for the same reason these would be beneficial to the parks to enhance institutional expertise and efficiency.

Would monetary benefits be paid to the park before or after taxes?

**Comment #7418:** It is not entirely clear if the DEIS and the benefits-sharing agreements contemplated by the National Park Service (NPS) pertain to the noncommercial, academic research conducted by the members of the organizations we represent.

The DEIS implies that a CRADA (which we use here to refer to all benefits-sharing agreements, whether arising under the FTTA or otherwise) may or will be required for every collection of resources, for all purposes, including the development of noncommercial (i. e., traditional, academic) scientific knowledge.

**Comment #7461:** Would biomechanical inventions—such as a clamp which was designed after watching the use of a spider’s mouth—be covered? Would the development of a cancer fighting drug from a plant in Canada which was studied because it was related to a plant in an American National Park be covered, even if the American plant did not provide the ultimately useful product but was part of the discovery process?

**Comment #7463:** NPCA requests that this provision [the audit] be conducted by an agency or organization acting in the public interest.

Please conduct and disclose appropriate analysis to understand which NPS units may have enabling legislation that contains guidance that would prevail over this service-wide [benefits-sharing] policy.

*Response:* Correspondent #7418 asked whether a benefits-sharing agreement would be required for the development of “noncommercial scientific knowledge” associated with an NPS research permit. Data presented in the EIS indicates that less than 1 % of permitted researchers were declared bioprospectors (EIS section 3.4.3.2), so requiring the rest of the nearly 4,500 researchers annually to complete benefits-sharing agreements where no commercially valuable research results were anticipated would not be an effective use of NPS personnel or resources. Under Alternative B, the NPS would expect to enter into the majority of benefits-sharing agreements only with declared bioprospectors.

Correspondent # 7418 suggested that a benefits-sharing agreement would be required before a researcher could collect specimens. Benefits-sharing agreements do not authorize collections or research. Additionally, research permits would not be issued at the same time a benefits-sharing agreement was negotiated. As noted in the EIS, this would compromise the separation necessary to keep these processes independent of each other. Research permits, including those authorizing specimen collection, would be issued or permit applications denied without regard to whether the permit applicant was or might become a party to a benefits-sharing agreement. Negotiation and establishment of a benefits-sharing agreement would not change or affect the existing procedures relating to the issuance of permits for research activities. Issuance of a research permit would not be conditioned on negotiation of a benefits-sharing agreement (see EIS Section 2.4.6.3).

In some instances, a benefits-sharing agreement could be established before a researcher had a commercially valuable discovery. However, it would be up to the researcher to begin the process of entering into a benefits-sharing agreement by identifying or acknowledging to the NPS that their research results could have potential, reasonably foreseeable commercial uses. In most cases, benefits-sharing agreements would be requested by researchers at an appropriate time during the research and development process.

Some correspondents asked very specific questions or offered specific recommendations on how the NPS might implement benefits-sharing and negotiate terms in individual agreements. While the NPS will consider these comments if benefits-sharing is implemented, some issues may lack the necessary detail an actual situation would provide or are otherwise unripe for consideration before the decision of whether or not to benefits-share is made.

Correspondent #7461 asked whether certain types of discoveries would be subject to benefits-sharing. Generally speaking, the types of discoveries mentioned by the correspondent could be the subject of benefits-sharing agreements. However, additional information such as the monetary value of the discovery and the role a park specimen played in the development of a discovery could also be significant in determining whether a benefits-sharing agreement would be required.

Correspondent #7463 proposed procedures for conducting audits. Audits of company records are generally expected to be infrequent events and could involve the examination of proprietary information that is seldom if ever disclosed to the public in any other context. In considering who might participate in an audit, the NPS would need to consider a number of things, such as existing NPS audit procedures and compliance with confidentiality and unfair business practice laws regarding disclosure of audit results.

Correspondent #7463 requested a review and analysis of park enabling legislations for directives that would prevail over servicewide benefits-sharing policy. This comment likely responds to a sentence in EIS section 1.7.1 indicating that parks should conduct such a review. This sentence was included as a general statement to indicate that a park's enabling legislation would take precedence in the event there was a park with explicit language contrary to servicewide benefits-sharing policy. The NPS is unaware of any such parks. The data in the EIS for nearly 400 NPS units indicates, with the exception of Yellowstone, there is a low probability of any one park entering into a benefits-sharing agreement in any given year. Thus, specific reviews of park enabling legislation will be done if benefits-sharing is implemented and at the time a benefits-sharing agreement is under consideration at that specific park unit.

| Public Comment: | Commenter:                                      | Affiliation: |
|-----------------|-------------------------------------------------|--------------|
| 7241, 7461      |                                                 | Individuals  |
| 7418            | The Ornithological Council                      | Organization |
| 7463            | The National Parks and Conservation Association | Organization |

### 5.3.11 Correspondents Discuss the EIS Impact Analysis

#### 5.3.11.1 *The EIS should have analyzed the potential impacts of research specimen collection*

**Comment #7261:** The subjects of the commercial bioprospecting program are biological in nature and involve living park resources, with bioprospectors potentially searching over large geographic areas. The issues are physical and environmental and are directly related to the exploitation of natural resources.

**Comment #7418:** The analysis of impacts is inadequate because it never addresses the impact of the permanent removal of natural resources from the parks ...

We wish to make clear that we do not of course object to the removal of natural resources from the National Parks, whether under benefits-sharing agreements or for academic research.

**Comment #7492:** Each proposed specimen collection, or other intrusive research, whether subject to a benefits-sharing agreement, requires NEPA review. It is impossible for a programmatic NEPA document to anticipate, much less assess, the impacts of benefits-sharing agreements throughout the national park system.

**Response:** Implementation of benefits-sharing as proposed in Alternative B would not change the criteria by which all scientific research permit applications are evaluated. No benefits-sharing agreement would authorize the collection or extraction of natural resources from park units.

This EIS was developed to identify potential impacts from alternative ways to clarify the rights and responsibilities of researchers and National Park Service (NPS) managers in connection with the use of valuable discoveries, inventions, and other developments resulting from research involving research specimens lawfully collected from national parks. (See Section 5.3.6 for more information about the subject of the Benefits-Sharing EIS.)

Authorization to conduct scientific research in national parks is subject both to well-established NPS policies and regulations and to separate environmental review (NEPA) procedures. Actions analyzed in this EIS would not change the environmental review procedures under which research activities could be conducted. Therefore, the EIS does not discuss or analyze the impact of the alternatives on specific research activities in the National Park System.

| <b>Public Comment:</b> | <b>Commenter:</b>                                                                                                                      | <b>Affiliation:</b> |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| 7261                   | Edmonds Institute, Alliance for the Wild Rockies, Wilderness Watch, International Center for Technology Assessment, WildWest Institute | Organizations       |
| 7418                   | The Ornithological Council                                                                                                             | Organization        |
| 7492                   | Public Employees for Environmental Responsibility (PEER)                                                                               | Organization        |

### **5.3.11.2 The EIS should have analyzed potential impacts of benefits-sharing on the existence value of parks**

*Comment #1401:* The creation of new scientific knowledge in national parks is a significant benefit which is compatible with the conservation of the resource and undiminished public appreciation under this alternative.

*Comment #7261:* In this DEIS, the NPS has failed to discuss or analyze the impact of its proposed benefit sharing policies on the American people's perception of and regard for the National Park System, as well as on their aesthetic and recreational interests. Rather, the NPS on page 82 characterizes the social environment of potential impact as containing researchers and NPS personnel only, with no recognition of their plan's impact on the American public. In fact, the District Court provided the NPS with an opportunity to comprehend the significance of NPS's "dramatic shift in park management policy" and the impact it would have on the public users and owners of the National

Park System when the Court wrote, "This ignores the reality that the commercial nature of an activity can and does affect its impact on the subject environment and particularly on people's aesthetic and recreational interests in the Park. Although parkgoers may be willing to forgive the trespass of their national parkland when the goals of that trespass are scientific and educational, commercial exploitation of that same parkland may reasonably be perceived as injurious. This commonsense notion has not even been challenged in other contexts." The Court went on to say, "There is an undeniable reality that commercial activity is qualitatively different than scientific and educational activity of a similar nature, due to the very different forces and motivations that drive them."

The NPS has had a long time to consider the impact to the public perception of and regard for the NPS and the quality of its stewardship. The failure to assess the national precedent the commercial bioprospecting program would set is particularly egregious since, as the Court noted in its ruling, documents obtained through the Freedom of Information Act show that Park Service officials knew as early as 1996, ten years ago, that commercial bioprospecting would apply systemwide. Moreover, one memorandum stated "any precedent set will affect all parks, and may influence profitable resource access by other industries besides biotech/microbiology."

The importance of the impact of commercial bioprospecting - "profitable resource access" - on public perceptions of the meaning (and public nature) of the parks cannot be underestimated.

*Response:* The concept of existence value is recognized by the NPS. However, and more importantly, the NPS supports the right of visitors to hold their own individual points of view about the meaning of national parks.<sup>51</sup> NPS employees are instructed to present the facts and let visitors form their own intellectual, emotional, and physical connections to the meanings and values found in the parks. The NPS Interpretive Development Program makes it clear that visitors' conflicting opinions about the meaning of parks should be respected. Visitors have the right to ascribe whatever meanings they wish to the resources; the NPS must provide for the resources themselves to be protected. Therefore, the EIS does not discuss or analyze the impact of the alternatives on the American people's perception of and regard for the National Park System.

Correspondent #7261 quotes the District Court's March 1999 decision without reference to the clarifications given by the same court in April 2000 (the text of both court decisions

may be found in Appendix I).<sup>52</sup> The District Court provided its opinion on the significance of benefits-sharing when it made its April 2000 decision. In 2000, the court explained that the NPS had “determined that the potential scientific and economic benefits resulting from collaboration with private industry would support and strengthen the Park Service’s primary mission of resource conservation.”<sup>53</sup>

The memorandum quoted in Correspondent #7261 was the unsubstantiated opinion of a single employee without the authority to speak finally and officially for the agency and did not represent agency policy or decision-making. The phrase quoted by this correspondent, “profitable resource access,” is taken out of context and does not refer to any harvest or sales whatsoever of park resources for commercial uses. The memo, written in 1996, lacks the benefit of an informed perspective about the potential for research to lead to results with commercial application, which the NPS has gained in the intervening decade. After the analysis conducted for this EIS, the NPS has determined that such potential uses for research results are rare at best.

The proposal in Alternative B is not a “commercial bioprospecting” proposal, as Correspondent #7261 suggests. See Section 5.3.7.2 addressing the concern that benefits-sharing agreements might allow parks to approve research with purely commercial purposes.

| Public Comment: | Commenter:                                                                                                                             | Affiliation:  |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------|---------------|
| 7261            | Edmonds Institute, Alliance for the Wild Rockies, Wilderness Watch, International Center for Technology Assessment, WildWest Institute | Organizations |
| 1401            |                                                                                                                                        | Individual    |

### ***5.3.11.3 The EIS should have analyzed the potential impact of the alternatives on park values***

**Comment #102:** You have defined the scope of the investigation as extending beyond just the physical environment to a social one. Therefore you need to consider the ethical impact of your proposals on how the NPS carries out its mission, and the impact on the culture at large. On page 106 you describe the purpose of the NPS as conservation not only of park resources, but also of “park values.” What are these?

**Response:** The EIS “succinctly describe[s] the environment of the area(s) to be affected or created by alternatives under consideration” in compliance with regulations promulgated by the Council on Environmental Quality (CEQ).<sup>54</sup> CEQ regulations require the inclusion of social effects in an environmental analysis and as a result, visitor experience and enjoyment and the research community were included as topics for analysis. Neither CEQ nor NPS NEPA guidance include “ethical impacts” as a required analysis topic.

The NPS supports the right of visitors to hold their own conflicting opinions about the meaning of national parks. Visitors have the right to ascribe whatever meanings they wish to the resources: the NPS must provide for the resources themselves to be protected.<sup>55</sup>

The resources and values that NPS must protect are defined in the NPS Management Policies as follows:

- The park’s scenery, natural and historic objects, and wildlife, and the processes and conditions that sustain them, including, to the extent present in the park: the ecological, biological, and physical processes that created the park and continue to act upon it; scenic features; natural visibility, both in daytime and at night; natural landscapes; natural soundscapes and smells; water and air resources; soils; geological resources; paleontological resources; archeological resources; cultural landscapes; ethnographic resources; historic and prehistoric sites, structures, and objects; museum collections; and native plants and animals;
- Appropriate opportunities to experience enjoyment of the above resources, to the extent that can be done without impairing them;
- The park’s role in contributing to the national dignity, the high public value and integrity, and the superlative environmental quality of the national park system, and the benefit and inspiration provided to the American people by the national park system; and
- Any additional attributes encompassed by the specific values and purposes for which the park was established.<sup>56</sup>

| Public Comment: | Commenter: | Affiliation: |
|-----------------|------------|--------------|
| 102             |            | Individual   |

**5.3.11.4 The EIS analysis of the potential impact of the alternatives on the quantity of scientific research in parks was incomplete**

*Comment #7261:* The DEIS contains allegations apparently meant to steer people away from Alternative C. Sometimes this involves making broad claims, without documentation or substantiation.

The DEIS states elsewhere that approximately 99.5% of research in the parks would be unaffected by Alternative C. On page 150 it states: “At the Servicewide level, Alternative C is likely to result in only a slight change in the availability of new scientific knowledge about park resources.” Further, on page 122 the DEIS states: “No significant difference in the number of research projects conducted in any context was detected between the pre-benefits-sharing and post-benefits-sharing time periods.”

There is also no analysis of the effect a “major commercial” find might have on the number of bioprospecting permits issued. A “bioprospecting gold mine” might encourage a rush of commercial bioprospectors.

*Comment #7490:* Alternative C appears certain to make basic scientific research in the National Parks more difficult, and as stated in the EIS, there is the potential that this inhibition

of research could be major. This “hands-off” or “no access” approach has several adverse impacts, some of which are immediately recognizable, others adverse impacts will become evident over time. Does the NPS want to take responsibility for trying to discern which species might lead to commercially valuable information and which do not? Where would NPS draw the line? Discerning these issues will most likely require more capacity to evaluate research proposals than the NPS currently has. Although the report states that less than 1% of all research activities would be prohibited under Alternative C, any species could, theoretically, contain bioactive compounds, enzymes, or interesting properties that might later lead to commercial benefit. ...

Does this mean, for example, if a botanist identifies a plant to have medicinal compounds, that this botanist can no longer study this plant species in the National Parks? Would this prohibit all other researchers from researching this species in the NPS as well? Excluding certain species from study in the NPS appears to counteract conservation measures for species. How can species be conserved if basic research on its systematics, ecology, and population biology cannot be conducted? In addition, Alternative C could create perverse incentives for people to collect target species illegally in National Parks. When such research is done without approval, it would be more likely to be done in environmentally harmful ways.

*Response:* During initial scoping, several commenters suggested that implementing benefits-sharing could affect the quantity of research activities in parks, either by attracting or discouraging scientific research activities undertaken by bioprospectors. In an effort to determine whether any alternative would have an indirect effect on research activities in parks, the EIS analyzed the potential of each alternative to impact the amount of independent research conducted in parks using the best available information, as directed by NEPA. Data and discussion for this analysis are presented in Appendix F of the DEIS.

The NPS found no evidence to substantiate concerns that a “major commercial” discovery could potentially cause a “rush” of new research permit applications. For example, even after the prodigious success of Taq polymerase (a highly lucrative DNA fingerprinting enzyme first isolated from a microbe collected from a Yellowstone National Park hot spring and then successfully synthesized in a lab), only a few researchers have expressed interest in discovering similar research reagents through the study of newly collected park specimens or research. As Correspondent #85 said, researchers know that “bioprospecting is an activity that is rarely successful. Most bioprospecting campaigns end in failure.”

The NPS has not proposed to create a new kind of research permit, and there would be no such thing as a “bioprospecting permit.” No change is proposed to NPS’s long-standing research permit procedures. The NPS does not treat declared or potential bioprospectors differently from other researchers. They are all subject to the same strict research permitting procedures.

Under Alternative C, the NPS would not have to determine which projects might lead to research results with commercial applications. Researchers could qualify for and receive NPS research permits until and unless they identified or acknowledged their proposed specimen collections as being associated with potential development of research results for commercial purposes. Researchers who unexpectedly discover a commercial application for their research results would be prohibited from developing such discoveries for commercial

purposes unless the NPS Director determined the development of that discovery to be in the public interest. In any case, such researchers would be prohibited from acquiring any more NPS research specimens. Correspondent #7490 provides both concrete and speculative examples of potential adverse impacts of Alternative C, including effects on the quantity as well as the quality of scientific research. These types of effects are summarized in EIS Sections 4.5.2 and 4.5.4.

Alternative C in the EIS has been edited to clarify that the criteria parks would use to determine whether or not to approve proposed research activities hinges on the potential for commercial application of research results, not simply on their potential for being “useful.”

| Public Comment: | Commenter:                                                                                                                             | Affiliation:  |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------|---------------|
| 7490            |                                                                                                                                        | Individual    |
| 7261            | Edmonds Institute, Alliance for the Wild Rockies, Wilderness Watch, International Center for Technology Assessment, WildWest Institute | Organizations |

#### ***5.3.11.5 Other countries with benefits-sharing have discouraged research***

*Comment #7418:* The unfortunate outcome of the good intentions of those who have tried to protect the intellectual property derived from natural resources has been a serious barrier to noncommercial scientific research, as described at length in the attached New York Times article. Scientists ... are now experiencing difficulty obtaining permission to conduct scientific research in many countries due to concerns about benefits sharing. In particular, they are having tremendous difficulty obtaining permission to export scientific specimens even for entirely academic, noncommercial research. Some countries have come to be suspicious that scientists will “steal” the value of the intellectual property that is derived from the natural resources, or have become interested only in scientific research that has the potential to return benefits.

*Comment #7461:* The experiences from other countries trying to implement ownership based models of benefit sharing have all created large bureaucratic and procedural impediments to research and development, and few have seen any substantial flow of benefits to them. All have seen a decrease of research opportunities and a decrease in the many non-monetary benefits which flow from pro-research policies and procedures.  
Is there a less heavy handed and much more precise process which could be developed?

*Response:* Correspondent #7418 suggests that implementing benefits-sharing would discourage academic researchers from applying for NPS research permits and references a *New York Times* article about the difficulty scientists are experiencing in other countries that have implemented “Access and Benefit Sharing” (ABS) programs. The NPS is aware of the critiques of ABS programs outlined in the *New York Times* article. The NPS benefits-sharing proposal seeks to solve the problems described in the article by deliberately separating the research permit application process (“access”) from benefits-sharing. The NPS proposal is

not an ABS program, and it makes no changes to the criteria used to evaluate NPS research permit applications. The NPS proposed benefits-sharing agreements would not authorize research activities or collections, and therefore no scientist would be prevented or delayed from studying park resources simply because a benefits-sharing agreement was not in place. Researchers would not be required to enter into benefits-sharing agreements until and unless they provide information to the NPS that their research results could have potential, reasonably foreseeable commercial uses. Unlike most or all of the ABS programs referenced by the comment, the NPS proposal would not change research permitting procedures or policies (EIS Section 2.4.6.3). The potential for benefits-sharing would not be a factor in park evaluations of research permit applications or require NPS employees to “suspect” researchers of bioprospecting. Mitigation measures identified in the EIS would help protect research permit issuance decisions from being influenced by benefits-sharing considerations (see EIS Section 2.4.6). The benefits-sharing process would be precisely targeted to those researchers who actually discover a commercial application for their research results and would not affect the majority of researchers.

| Public Comment: | Commenter:                 | Affiliation: |
|-----------------|----------------------------|--------------|
| 7418            | The Ornithological Council | Organization |
| 7461            |                            | Individual   |

### ***5.3.11.6 Benefits-sharing and Material Transfer Agreements would be difficult for all researchers***

**Comment #95:** In the first place, the parks are publicly owned and paid for the by the public, many times over, through Federal taxes, entrance and camping/backcountry fees, and boating registrations. It seems pure and simple greed on the part of the NPS to expect more financial gain from work that does not destroy the environment, yet could serve the furtherance of science. Second, entering into an agreement for financial gain by the NPS is just more red tape for researchers to deal with, not to mention the law suits that would inevitably follow this greed.

**Comment #1903:** Agreements should not be so one-sided as to discourage scientific research within the parks.

**Comment #7241:** It is unacceptable that there is no penalty or incentive for the park to negotiate an acceptable benefit-sharing agreement swiftly. This section allows for a park to purposely slow negotiation to force the researcher in to a compromising position to accept a less than reasonable agreement to assure timely market entrance. If a product launch is delayed due to poor negotiation the company can potentially suffer substantial economic set back, encouraging violation of the agreement (or yet to be agreement). There must be an incentive or penalty built into Alternative B in relation to the park, if one exists for the researcher).

**Comment #7461:** With the proposed MTA, NPS is ... setting up elaborate, expensive, anti-science systems of control and oversight.  
More important are the resulting restrictions ... to the future when the necessary specimens

which document the National Parks in this day and age are not widely available due to the difficult and onerous conditions which this policy forces the NPS to take.

*Response:* Benefits-sharing agreements would be required, by law, to be equitable and efficient.<sup>57</sup> Because the NPS proposal provides that terms of benefits-sharing agreements would be negotiated and mutually agreeable to both parties, it is reasonable to expect that the potential impacts of an agreement would not rise above negligible for researchers or their institutions. It is anticipated that most declared bioprospectors would be affiliated with organizations such as academic institutions or corporations with experienced technology transfer offices. These researchers could rely on the technology transfer expertise already present in their institutions, thus reducing any adverse workload impacts on the researchers (EIS section 4.4.4.1). The NPS based its example CRADA and MTA on established models in part to further reduce workload concerns.

Additionally, the NPS views benefits-sharing as a two-way street, as an opportunity to encourage and improve collaborative relationships between researchers and NPS scientists that could have beneficial impacts for researchers. For example, the inadvertent bioprospector described in EIS section 3.4.3.2 explained that his discovery was based in part on a conversation with a park employee.

The purpose of a Material Transfer Agreement (MTA) is to track the location of NPS specimens and material originating as an NPS specimen. A request for an MTA requires no more than a phone call from the researcher, who already has NPS authority to study such material and therefore has the specimen on hand. The MTA is established between the third-party researcher and the park with a simple form based on the well-accepted form used by the National Institutes of Health, variations of which are used routinely by many scientific institutions. Use of this tracking system is routine in many institutions and would not constitute a substantial burden to researchers.

Finally, the benefits-sharing proposal would not affect an estimated 99% of researchers with NPS research permits. Benefits-sharing obligations would be triggered only when and if researchers provide information to the NPS that their research results could have potential, reasonably foreseeable commercial uses.

| Public Comment:      | Commenter: | Affiliation: |
|----------------------|------------|--------------|
| 95, 1903, 7241, 7461 |            | Individuals  |

### **5.3.11.7 How do you support the claim that Alternative C would reduce the amount of useful discoveries made from study of NPS resources?**

*Comment #7261:* For example, on page 58 the DEIS states: "Under Alternative C, researchers would be prohibited from conducting most research that could improve health, safety, and productivity." ... These blanket statements are nowhere substantiated.

*Response:* By regulation, an EIS must include a description of designated criteria used to determine the environmentally preferred alternative. These include describing each

alternative's potential to attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences.

EIS Section 2.5 indicates that "Under Alternative C, the NPS would prohibit research specimen collection for research involving any potential commercial applications in all units of the National Park System." As explained in EIS Section 2.8, under Alternative C researchers would be prohibited from conducting most research for applications that could improve health, safety, and productivity because most such discoveries are distributed to the public through the marketplace as commercially available products or services. Researchers would also be prohibited from developing unexpected research results for commercial applications that could improve health, safety, and productivity. Therefore, Alternative C would not attain as wide a range of beneficial uses of the environment as the other alternatives. A clarification has been made to the EIS specifying that the discoveries that would be prevented are those with commercial applications.

| Public Comment: | Commenter:                                                                                                                             | Affiliation:  |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------|---------------|
| 7261            | Edmonds Institute, Alliance for the Wild Rockies, Wilderness Watch, International Center for Technology Assessment, WildWest Institute | Organizations |

#### ***5.3.11.8 The administrative burdens on NPS operations for Alternative B was understated in the EIS***

**Comment #7241:** Discussion of FTE for research permit applications is not a valid as any type of indicator for negotiation of a benefits-sharing agreement. As outlined in the DEIS, the two events are separate. As a researcher in industry I am well aware that negotiation for sharing of profit takes a great deal more time than 1.6 hours. Timeframes of negotiation range from 1 month to 2 years.

**Comment #7261:** Further, according to DEIS estimates, negotiating a new CRADA will require a high-end estimate of 0.18 FTE staff time, and the more CRADAs, the less time spent per agreement. This amount of staff time is clearly inadequate for scientifically credible NEPA compliance.

**Comment #7463:** NPCA is concerned about the additional costs to be borne by individual parks and the agency as a whole as a result of implementation of Alternative B1. Not only will significant existing staff time and resources be required to develop and administer agreements, but NPS may need additional staff expertise that it currently does not have to assure NPS negotiates the best possible benefits sharing agreement. All staff time and all other costs associated with the negotiation, development and administration of benefits sharing agreements should be reimbursed and included in the benefits sharing agreement ...

**Comment #7490:** Although the administrative and other costs are evaluated quantitatively and concluded to be "negligible," this should be very carefully examined before committing to

a benefit-sharing program that is mandatory for both researchers and the NPS. If the NPS will need a team of lawyers and scientists to evaluate agreements, this may well have substantial costs. In summary, if it is possible that any benefit-sharing system may be more expensive than the value of the benefits brought in, then the NPS should evaluate critically the worth of applying benefit sharing to the National Parks.

**Response:** The EIS used the best available information to estimate the time required to enter into a benefits-sharing agreement, data reported by the Association of University Technology Managers (AUTM) in negotiating and entering into licenses regarding research and development of academic discoveries or inventions. Because the AUTM FTE figures included activities not included in the NPS benefits-sharing proposal, the 0.18 FTE is a generous estimate of the workload to execute a single new benefits-sharing agreement (see EIS Section 4.4.5).

As described in EIS Appendix G, the NPS recognizes that negotiation of benefits-sharing agreements would not happen all at once, but would be a process taking days and weeks over a period of months and sometimes years. The NPS estimated that 0.18 FTE (which is well over 300 hours) would be used during this drawn-out process.

Correspondent #7261 has probably not recognized the distinction between the proposed benefits-sharing agreement and its underlying research permit. As NPS proposed in the EIS, these are two very distinct and separate processes which the EIS indicates need to remain distinct and separate (EIS section 2.4.6.3). All research permit applications are evaluated under NEPA and the benefits-sharing proposal would not supersede or circumvent this policy.

NPS agrees with correspondent #7490 that the negotiated benefits should outweigh the expense of entering into and maintaining agreements.

| Public Comment: | Commenter:                                                                                                                             | Affiliation:  |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------|---------------|
| 7241, 7490      |                                                                                                                                        | Individuals   |
| 7261            | Edmonds Institute, Alliance for the Wild Rockies, Wilderness Watch, International Center for Technology Assessment, WildWest Institute | Organizations |
| 7463            | National Parks and Conservation Association                                                                                            | Organization  |

# 5.3.12 Miscellaneous Topics

## 5.3.12.1 Support research in parks

*Comment #7463:* Research in parks is among the most important means of demonstrating not only the value of preserving parks, but also of preserving other elements of our natural heritage. NPCA believes that the rigorous research permit review process currently used in Yellowstone, outlined on p. 144 of the dEIS, should be applied to the entire NPS system, with the addition of peer review of research proposals.

We request that research permits specify that no collection of duplicate samples, whose purpose is to collect more of the same material as previously collected, will be permitted.

*Comment #7488:* The Sierra Club is very supportive of scientific research occurring in our national parks and aware that on occasion biological resources will inevitably result in discoveries which may have economic, social or environmental values. Scientific research that occurs in the national parks on occasion may end up being important in the development of pharmaceuticals and other commercial products. The EIS should better describe that the benefits of permissible research.

*Comment #7490:* As implied in this EIS, the most important issues at hand are to insure that the NPS has measures in place to continue and to increase conservation of species and the “science for parks” in the NPS. The “science in parks” efforts will strengthen many fields of scientific research in the United States and improve the environmental management decisions made for the National Park System.

*Response:* NPS agrees that research is important in fulfilling the NPS mission. The fundamental purpose of parks includes deriving scientific knowledge from parks.<sup>58</sup> NPS encourages appropriately reviewed natural resource studies. These studies support the NPS mission by providing the NPS, the scientific community, and the public with an understanding of park resources, processes, values, and uses that will be cumulative and constantly refined. Natural resource studies provide a scientific and scholarly basis for park planning, development, operations, management, education, and interpretive activities.<sup>59</sup>

The NPS is pleased that these correspondents support research in national parks. However, the administration of park research is not the subject of this EIS. Authorization to conduct scientific research in national parks is subject both to well-established NPS regulations and to separate environmental review (NEPA) procedures. Actions analyzed in this EIS would not change the compliance procedures under which research activities could be conducted.

| Public Comment: | Commenter:                                          | Affiliation: |
|-----------------|-----------------------------------------------------|--------------|
| 7463            | National Parks and Conservation Association         | Organization |
| 7488            | Sierra Club--National Parks and Monuments Committee | Organization |
| 7490            |                                                     | Individual   |

### 5.3.13 New Alternative Suggestion

#### ***5.3.13.1 The EIS should have a “Science in the Public Interest” alternative to conduct bioprospecting, perform park research, and receive benefits***

##### ***The EIS should have examined alternative ways to increase park science***

**Comment #7261:** The NPS should have included a Science in the Public Interest Alternative. That alternative would have relied on federally and publicly funded researchers to make “beneficial” research discoveries ....

This approach would represent a clear and distinct alternative to reliance on commercial bioprospecting to fulfill the hoped-for research functions.

##### ***The EIS should have examined alternative ways to get benefits***

**Comment #7261:** Instead of including such an alternative, the DEIS narrowly cast the alternatives as a choice -- we would say a false choice -- between commercial bioprospecting with increased benefits to the Parks and society or no commercial bioprospecting and no increased benefits.

As posited in the DEIS, the central aim is to make additional research discoveries that will enhance NPS resource management and protection as well as enhance interpretive programs and signage for the increased enjoyment and understanding of the visiting public. But the DEIS does not consider all the options for achieving this.

##### ***The EIS should have examined alternative ways to conduct bioprospecting***

**Comment #7261:** The NPS does not present any information whatsoever to explain why it cannot hire its own microbiologists to conduct research and make discoveries that can improve health, safety, and productivity in the public interest.

**Comment #7497:** I am therefore surprised and dismayed to note in your DEIS that research, specimen collection and contractual arrangements for potential new commercial products derived from species found in the parks is “preferred” to be performed on a commercial basis.

**Response:** A reasonable alternative under NEPA must either solve or at least address the problem at hand. As stated in its first sentence, the central aim of the EIS is “clarification of the rights and responsibilities of researchers and National Park Service (NPS) managers in connection with the use of valuable discoveries, inventions, and other developments resulting from research involving research specimens lawfully collected from national parks.” In addition, the NPS developed three objectives, as stated in the EIS (section 1.4) “to help determine the reasonableness of each alternative, and to select the preferred alternative” and to aid in the selection of an “environmentally preferred alternative.” As stated in the EIS, the existing conditions that NPS wishes to address include and are characterized by the lack of clarity and confusion concerning “NPS’s interest in the financial and other benefits from the results of research involving park research specimens” and a desire to capture missed opportunities, as directed by NPOMA (16 U.S.C. Sec. 5931(4)) by encouraging use of national parks by researchers “for study to the benefit of park management as well as broader scientific value.”

The Council on Environmental Quality (CEQ, the agency of the President’s office considered as the “caretaker” of NEPA) defines reasonable alternatives as those that are technically and economically feasible (see CEQ’s “Forty Most Asked Questions Concerning NEPA Regulations”).<sup>60</sup> The alternative proposed in the comment would require NPS to begin a large and expensive program that is not necessary to meet the central aim or objectives of the EIS.

Additionally, the NPS has not proposed to begin or conduct bioprospecting. Commercially applicable research discoveries will inevitably result from park research, no matter what policy the NPS adopts regarding benefits-sharing. Under the proposal, any researcher could discover a commercial application for his or her research results; NPS has no preference regarding the affiliation of such researchers. The NPS has not proposed to rely on benefits-sharing as a major influence on “science for parks.”

| Public Comment: | Commenter:                                                                                                                             | Affiliation:  |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------|---------------|
| 7261            | Edmonds Institute, Alliance for the Wild Rockies, Wilderness Watch, International Center for Technology Assessment, WildWest Institute | Organizations |
| 7497            |                                                                                                                                        | Individual    |

### 5.3.14 EPA Comments

*Comment #7501:* We suggest that the Final EIS establish mechanisms to ensure proceeds are focused on protecting natural resources in the Parks.

*Response:* The benefits-sharing proposal specifies that all benefits received by the NPS under any type of benefits-sharing agreement would be dedicated to the conservation of resources protected and managed by the NPS. In addition, article 5.1 of the example CRADA specifies that all payments and non-monetary benefits received by the NPS may only be used for natural resource conservation purposes.<sup>61</sup> The example CRADA, once signed by all parties, is an enforceable contract and the NPS must use benefits for the stated purpose.

*Comment #7501:* We suggest that the Final EIS develop adequate enforcement protocols to ensure the terms of permits are followed so that natural resources would not be significantly impacted.

*Response:* The impacts of research activities authorized by an NPS research permit are out of scope of this analysis. Actions analyzed in this EIS would not change the compliance or enforcement procedures under which research activities could be conducted. NPS regulations state that the violation of the terms and conditions of a permit is prohibited and may result in the suspension or revocation of the permit.<sup>62</sup> Furthermore, violation of the research permit term and condition is also subject to penalties including fines or imprisonment not exceeding 6 months or both. Permit conditions designed to insure resource protection are enforced in project-specific and site-specific ways and are beyond the scope of this EIS.

**Comment #7501:** In addition, EPA suggests that the Final EIS include information to clarify the range of research that has been permitted over the last 5-10 years. Lastly, we suggest including a sample permit in the Final EIS to clarify what types of information are required for issuing research permits.

**Response:** Additional information about research permits is provided in Appendix H.

| Comment: | Commenter:                      | Affiliation: |
|----------|---------------------------------|--------------|
| 7501     | Environmental Protection Agency | Agency       |

## 5.3.15 Government-to-Government Comments

### 5.3.15.1 Comments concerning tribal intellectual property rights

**Comment #7467:** At risk are the Intellectual property rights of the Tribes from bioprospecting and benefits sharing. Plants, animals, minerals and landscape have and continue to be resources utilized for spiritual and subsistence to the Shoshone and Bannock people. Indian people have manipulated the landscape and environment through time to gain ecological benefits and in doing so have created an established ecological traditional knowledge base. This knowledge is considered “prior art” and its value is well known in the pharmaceutical industry as many medicines originated from “prior art” knowledge. ...

Simply stating in the DEIS that Intellectual Property Right Laws will be followed is not sufficient to assure the Tribes that our traditional knowledge is protected. ...

Section 2.2.3. Page 39 – Intellectual Property Rights will remain unaffected by commercialized knowledge created by research how will IP be monitored to ensure all IP laws are being met? It is documented the many of today’s medicines are derived from traditional knowledge held by Indian people. Also true is that future discoveries relating to human health may in fact be not a discoveries at all. Tribal people possess the knowledge but keep it within the traditional knowledge base this type of knowledge is known as prior art. ...

Section 2.6.1.7. Page 55 – Alternative A and B provide for tribal inclusion in benefits sharing, although the Alternatives are very different in how the tribes will participate. Not identified is how those tribes with treaty rights who do not participate in the research, and when the research utilizes the natural resources used by the tribes for subsistence or spiritual purposes will be mitigated. What mitigation measures provide for the loss of these cultural resources and intellectual property rights?

**Response:** The comments raise a serious concern. In some cases, these concerns relate more to the issuance of research permits than to actions proposed in this EIS. In the event that research activities involved the use of traditional knowledge or other valuable proprietary input from a Native American community or other source, it would be the responsibility of the park and the researcher to include such individuals or groups in any benefits-sharing arrangement (EIS Section 2.4.1.1).

As a programmatic document, this EIS has a broad scope and is general in nature. If the benefits-sharing proposal is implemented, more specific procedures would need to be developed after this EIS process. For example, existing tribal consultation processes could be used to assure that when a researcher identifies or acknowledges that traditional knowledge of the Shoshone-Bannock Tribes or other tribes provided input into the research process, the park and the researcher include the appropriate tribes in benefits-sharing.

| Comment: | Commenter:              | Affiliation: |
|----------|-------------------------|--------------|
| 7467     | Shoshone-Bannock Tribes | Tribal       |

### **5.3.15.2 Tribal considerations about research activities**

#### ***Research activities could have impacts***

**Comment #7467:** As identified in the DEIS, Yellowstone National Park has the greatest amount of researchers applying and receiving permits to do research in the park. Shoshone and Bannock people living in Wyoming, Montana, and Idaho have used the natural and cultural resources in the Greater Yellowstone area from time immemorial according to the tribal history and the archaeological record. Accordingly, Tribes view the Greater Yellowstone Area as significant aboriginal land that continues to contribute and play an integral part in maintaining cultural beliefs and traditional practices. Tribal ethnography of this area is indicative of the significance of the Greater Yellowstone Area.

Research in the Yellowstone National Park concerns the Shoshone and Bannock Tribes. Yellowstone ethnographic study (2006) identifies tribes that have historically used the Greater Yellowstone area for the procurement of natural resources for sustenance. Shoshone and Bannock tribal members have resided on the Yellowstone Plateau and procured natural and cultural resources from the Greater Yellowstone Area like many generations before present. Additionally, the Fort Bridger Treaty provides the Shoshone and Bannock Tribes gathering and hunting access on unoccupied lands of the United States. Presently our tribal members continue to go to the Greater Yellowstone Area and exercise their cultural and traditional heritage. Moreover, research may impact a sacred area used for medicinal or spiritual purposes. For example, the hot springs are spiritually and culturally significant. As noted in the draft ethnography of Yellowstone National Park (Walker 2006) the concern is when a spiritual place overused by other uses may impact the spirits associated with the place and cause them to no longer reside there, therefore the place loses the ability to provide the cultural and spiritual needs of the Shoshone-Bannock Tribes. How will Tribes be assured resources that are important to them will be preserved for their needs? ...

Recommendations ... 3. Establish a monitoring plan to identify when and if a particular location for research activity is placing stress on or creating an ecological condition that results in the changing of ecological environment?

Recommendations ... 4. Shoshone and Bannock people have the right to self-determination and sovereignty over their own lands of natural and cultural resources., Indian people have ownership rights regarding traditional knowledge, biodiversity and genetic resources.

Consultation needs to occur regularly regarding the research at Yellowstone National Park. Project information sharing will facilitate tribal monitoring of natural resource use.

**Response:** While these comments relate specifically to Yellowstone National Park, the concerns expressed by the Shoshone and Bannock Tribes could well be concerns held by other American Indians, Alaska Natives and Native Hawaiians regarding resources in other national park units. The mission of the National Park Service is to preserve and protect natural and cultural resources. The National Park Service values the concern of the Shoshone and Bannock Tribes and will work to protect park resources and to consult with American Indians, Alaska Natives and Native Hawaiians as stated in section 1.11 of the NPS Management Policies: “the Service will pursue an open, collaborative relationship with American Indian tribes to help tribes maintain their cultural and spiritual practices and enhance the Park Service’s understanding of the history and significance of sites and resources in the parks.” If benefits-sharing is implemented, and research activities involved the use of traditional knowledge or other valuable proprietary input from a Native American community or other source, it would be the responsibility of the park and the researcher to include such individuals or groups in any benefits-sharing arrangement as appropriate. The comments regarding research in Yellowstone were referred to the Chief of the Yellowstone Center for Resources.

National parks are important places of special and complex biological diversity that offer unique opportunities to study natural systems and living things. Because of this special status, the NPS expects that researchers will continue to seek out opportunities to study natural resources in the national parks. Concerning the general preservation of resources that may be used by or are of importance to tribes that also may be the subject of research, the EIS benefits-sharing proposal does not seek any changes to the well-established procedures used for evaluating research in parks. Current National Park Service regulations and policy protect the ecological conditions at research locations in several ways. Parks are required to evaluate all research permit applications for environmental impacts under NEPA before deciding whether or not to issue a research permit. Federal regulations specify that research permits cannot be issued for any activity that would damage natural or cultural resources. Each park is responsible for evaluating the potential impacts of individual research permit applications using information specific to the actual area where the research would occur. For example, Section 4.4.5.5 of the EIS provides a description of the way Yellowstone National Park reviews research applications (see Figure 1). Each park is also responsible for assessing the effects any activities may have on park resources. As an example, Yellowstone National Park periodically assigns staff to accompany researchers in the field to monitor their activities.

### ***Tribes may want to conduct research in parks***

**Comment #7467:** Recommendations ... 2. Tribes may in the future want to participate, as environmental researchers. Are provisions in place to accommodate the native researcher similar to affirmative action procedures?

*Response:* Any qualified researcher can apply for an NPS research permit. NPS Management Policies (Section 4.2) specify that researchers and scholars associated with tribal colleges and organizations can qualify for research permits.

| Comment: | Commenter:              | Affiliation: |
|----------|-------------------------|--------------|
| 7467     | Shoshone-Bannock Tribes | Tribal       |

### **5.3.15.3 Bioprospecting and natural resources**

*Comment #7467:* Another concern not identified in the DEIS, where does the NPS identify in the researcher application process or benefit sharing agreement if no synthetic version can replicated, will the raw material from the national park be used? This might apply if research discoveries are of great value and is a significant contribution to the advancement of human health. Where is this addressed?

*Response:* The sale or commercial use of natural products obtained from units of the National Park System would continue to be prohibited pursuant to federal regulation (36 CFR 2.1). No element of any alternative would authorize any consumptive use of any park resources, or otherwise change the existing general prohibition against consumptive harvesting of park resources for any reason (EIS Section 2.2.1).

The development and natural resource collections related to the cancer drug Taxol offer an example by comparison which speaks to the commenter's concerns. Research that led to the development and FDA approval of Taxol involved study and collection of large amounts of tree bark collected from lands outside the national park system. NPS regulations and policies would not allow the collection of these large amounts of tree bark or other natural resources. Raw material in parks cannot be used for production of products, not even new products that are still the subject of research. It's interesting to note in this case that the company developing Taxol developed a semi-synthetic version of the new drug, pursuant to the requirements of a Cooperative Research and Development Agreement (CRADA), which was based on trees that could be grown on tree farms. The need for wild-collected bark was brief and quickly overcome.

| Comment: | Commenter:              | Affiliation: |
|----------|-------------------------|--------------|
| 7467     | Shoshone-Bannock Tribes | Tribal       |

#### **5.3.15.4 Distribution of Benefits**

##### ***Comment about benefits potentially due to tribal members or communities***

**Comment #7467:** Section 2.4.1.1 Page 42. – Any tribe, tribal community or tribal member who has traditional or cultural knowledge that is associated with the research can be a participant in benefit sharing. This is a general statement and does not begin to address the complex issue of Indian tribes and their traditional uses of the Greater Yellowstone Area. Also problematic is if individuals are recognized as beneficiaries of benefit-sharing agreements how will this affect the tribe as a whole and do tribes recognize individual actions as representing the tribes as a whole.

**Response:** As a programmatic document, this EIS has a broad scope and is general in nature, and therefore does not resolve such specific issues. If the benefits-sharing proposal is implemented and it becomes appropriate to include tribes as a beneficiary of a specific benefits-sharing agreement, issues such as those described would be addressed and resolved through consultation.

##### ***Would benefits be used for conservation of cultural resources?***

**Comment #7467:** Section 2.8. Pages 59 – explain how cultural and historic aspects will benefit from the monies generated by the benefit sharing and what specifically is targeted under cultural and historic aspects.

**Response:** Section 2.8 of the EIS identifies the “environmentally preferred alternative,” which is selected by applying the six criteria found in Section 101 of NEPA. This comment likely references the fourth criterion, “Preserve important historic, cultural, and natural aspects of our national heritage. . . .” While the use of all benefits-sharing agreements has been suspended servicewide pending completion of this EIS, if this process concluded with a decision to implement benefits-sharing, a benefits-sharing agreement could be developed in relation to cultural or historic research in which non-monetary or monetary benefits could target cultural and historic aspects and resources. Any such agreement and distribution of benefits would need to meet the requirements of the Federal Technology Transfer Act of 1986 (FTTA). For example, the NPS unit involved must qualify as a “federal laboratory” as described by the Act, and any benefits must be provided toward the conduct of research and development efforts which are consistent with the missions of the laboratory. Section 2.4.3 of the EIS states that all benefits received by the NPS would be dedicated to the conservation of resources protected and managed by the NPS. If such an agreement was prepared, Article 5.1 of the example CRADA (Appendix A) specifying that all payments and non-monetary benefits received by the NPS may only be used for natural resource conservation purposes would be amended.<sup>63</sup>

The EIS focuses on the management of natural resources since, based on available data, it is reasonably foreseeable that biologists would be the most likely participants in benefits-sharing.<sup>64</sup> Secondly, the direction provided by the court that ordered this EIS suggested that

the NPS focus on natural resources, as did the issues which arose in the court case (see EIS Section 1.7.6 and Appendix I).

| Comment: | Commenter:              | Affiliation: |
|----------|-------------------------|--------------|
| 7467     | Shoshone-Bannock Tribes | Tribal       |

#### **5.3.15.5 Mitigation measures**

*Comment #7467:* Section 2.4.6. Page 47 – what are the mitigation measures? Include the measures in an appendix.

*Response:* Specific mitigation measures associated with the benefits-sharing proposal were explained in detail in EIS sections 2.4.6, 2.4.6.1, 2.4.6.2, 2.4.6.3, 2.4.6.4, 4.4.4.6, and 4.4.5.5.

| Comment: | Commenter:              | Affiliation: |
|----------|-------------------------|--------------|
| 7467     | Shoshone-Bannock Tribes | Tribal       |

#### **5.3.15.6 Material Transfer Agreements (MTAs)**

*Comment #7467:* Section 3.4.2. Page 84 – states there is no process or protocol to track third party researchers and the specimens they may have acquired. For park managers to effectively manage the researchers and the natural resources of the park the third party researchers must be monitored and at the very least park manager must have knowledge of where the research specimen are located and who has possession of them. This lack of control provides for an opportunity for researchers to take advantage of the science and possible economic gain at the expense of the parks resources, Indian tribes and the public.

Recommendations ... 1. NPS [should] establish a monitoring plan for transfer of cultured samples to third party researchers and in the case of pirating of natural resource from poachers whom may have the ability to replicate research for commercial application.

*Response:* The NPS agrees and the EIS proposes use of Material Transfer Agreements to monitor transfers of material originating as NPS research specimens (see EIS Section 2.4 and Appendix B). Poaching is against the law and would be dealt with by NPS law enforcement officers.

| Comment: | Commenter:              | Affiliation: |
|----------|-------------------------|--------------|
| 7467     | Shoshone-Bannock Tribes | Tribal       |

### 5.3.15.7 Do not destroy resources for commercial purposes

**Comment #6717:** The Bridgeport Indian Colony does not agree with benefit-sharing with scientists. There are too many great lands across our great country being destroyed as we speak. Allowing more destruction to continue for research to benefit only those involved for monetary gain is unforgivable. How can one allow what god created to be used for commercial purpose - just to extract what is left of our natural resources. For centuries, as documented in history, Native Americans suffered at the hand of generations of political gain even to the point of extermination. Don't do this to our beautiful lands. National Park Service was created to protect and preserve the national parks not to tear it up.

**Response:** Thank you for this comment. The NPS agrees that protection of natural resources is of paramount importance and certainly the most important consideration when formulating or deciding among the alternatives in the EIS. The EIS does not propose sale of natural resources, "biomining," logging, or any kind of mining or extractive processes. Benefits-sharing agreements and research permits would not authorize any such resource extraction. No harvest of natural resources could occur under the guise of "research" because the strict resource protection provision of NPS regulations would not allow it, and NPS Management Policies reinforce this prohibition. The benefits-sharing proposal would not change this practice. NPS Management Policies require all research permit applications undergo an environmental review pursuant to NEPA to avoid, minimize or mitigate any potential adverse impacts to park resources. Benefits-sharing agreements would not circumvent or supersede any NPS planning process, permitting authority, or other regulatory procedure or policy in place to protect park lands and resources. For example, benefits-sharing agreements would not authorize any research activities in parks that otherwise require a permit. This means that any kind of research proposal that would have required a research permit before benefits-sharing was implemented would still require the same permit (including an environmental review under NEPA) after benefits-sharing was implemented. Benefits-sharing would only apply to research results and would not authorize harvest, use or sale of NPS natural resources for product production or any other commercial purpose.

| Comment: | Commenter:               | Affiliation: |
|----------|--------------------------|--------------|
| 6717     | Bridgeport Indian Colony | Tribal       |

## Notes

### Section 5.1 Introduction

<sup>1</sup> 66 Fed. Reg. 33712, 33713.

<sup>2</sup> 67 Fed. Reg. 18034, 18035.

<sup>3</sup> This amount does not account for duplicates, e.g., those correspondences that were sent both via the Internet and the U.S. Postal System or identical correspondences that were sent multiple times.

### Section 5.2 Responses to Comments on the Draft Benefits-Sharing EIS

<sup>4</sup> 40 CFR 1503.4[5][b].

<sup>5</sup> National Park Service. 2001. Director's Order 12 and Handbook: Conservation Planning, Environmental Impact Analysis, and Decision Making, Section 4.6.

<sup>6</sup> This amount does not account for duplicates, e.g., those correspondences that were sent both via the

Internet and the U.S. Postal System or identical correspondences that were sent multiple times.

<sup>7</sup> Some of the non-form letter correspondents did not express a preference that could be characterized for this table. Other correspondents expressed conflicting opinions indicating support for both Alternative B and Alternative C.

<sup>8</sup> 40 CFR 1503.4.

<sup>9</sup> The full texts of the decisions in *Edmonds Institute, et al. v. Babbitt, et al.*, 93 F. Supp. 2d 63 (DDC 2000) and *Edmonds Institute, et al. v. Babbitt, et al.*, 42 F. Supp. 2d 1 (DDC 1999) are provided in Appendix I of this EIS.

### Section 5.3 Comment Summaries and Responses

<sup>10</sup> Federal regulation 36 CFR 2.5(b) states: “A specimen collection permit may be issued only [if such] collection is necessary to the stated scientific or resource management goals of the institution or agency.” *NPS Management Policies 2006*, 4.2.2 states “[Research] Projects will ... conform to current standards of scholarship.”

<sup>11</sup> *NPS Management Policies 2006*, page ii.

<sup>12</sup> 16 USC 1.

<sup>13</sup> 16 USC 5932.

<sup>14</sup> 16 USC 5931.

<sup>15</sup> 36 CFR 2.5.

<sup>16</sup> The United States Geological Survey (USGS) Organic Act of March 3, 1879 (ch. 182, section 1, 20 Stat. 394) codified at 20 USC 59.

<sup>17</sup> 16 USC 18f-2(a).

<sup>18</sup> NPS Outgoing Loan General Condition 3 and NPS Museum Handbook Part II (2000), Chapter 5.

<sup>19</sup> “The court finds that the Park Service reasonably determined that the Yellowstone–Diversa CRADA does not involve the ‘sale or commercial use’ of park resources within the meaning of [36 CFR 2.1]. ...[T]he Park Service determined that there was a critical distinction between researchers profiting from the sale of the actual specimens themselves, which is prohibited by [36 CFR 2.1], and profiting from a future development based on scientific discoveries resulting from research on those resources, which is permitted.... The CRADA, in turn, accords with the regulations because any ‘commercial use’ flowing from such research is limited to applications or products generated from the scientific study of the resources, not the resources themselves.” *Edmonds Institute, et al. v. Babbitt, et al.*, 93 F. Supp. 2d 63, 71–72 (DDC 2000) The full texts of the decisions in *Edmonds Institute, et al. v. Babbitt, et al.*, 93 F. Supp. 2d 63 (DDC 2000) and *Edmonds Institute, et al. v. Babbitt, et al.*, 42 F. Supp. 2d 1 (DDC 1999) are provided in Appendix I.

<sup>20</sup> 36 CFR Part 13.

<sup>21</sup> 36 CFR 2.2.

<sup>22</sup> 36 CFR 2.1.

<sup>23</sup> 16 USC 5931-5937 and 36 CFR 2.5.

<sup>24</sup> 16 USC 18f, 18f-2 and 18f-3.

<sup>25</sup> “The court finds that the Park Service reasonably determined that the Yellowstone–Diversa CRADA does not involve the ‘sale or commercial use’ of park resources within the meaning of [36 CFR 2.1]. ...[T]he Park Service determined that there was a critical distinction between researchers profiting from the sale of the actual specimens themselves, which is prohibited by [36 CFR 2.1], and profiting from a future development based on scientific discoveries resulting from research on those resources, which is permitted.... The CRADA, in turn, accords with the regulations because any ‘commercial use’ flowing from such research is limited to applications or products generated from the scientific study of the resources, not the resources themselves.” *Edmonds Institute, et al. v. Babbitt, et al.*, 93 F. Supp. 2d 63, 71–72 (DDC 2000). The full texts of the decisions in *Edmonds Institute, et al. v. Babbitt, et al.*, 93 F. Supp. 2d 63 (DDC 2000) and *Edmonds Institute, et al. v. Babbitt, et al.*, 42 F. Supp. 2d 1 (DDC 1999) are provided in Appendix I.

<sup>26</sup> *NPS Management Policies 2006*, 6.3.6.

<sup>27</sup> *Edmonds Institute, et al. v. Babbitt, et al.*, 93 F. Supp. 2d 63, 68-69 (DDC 2000). The full texts of the decisions in *Edmonds Institute, et al. v. Babbitt, et al.*, 93 F. Supp. 2d 63 (DDC 2000) and *Edmonds Institute, et al. v. Babbitt, et al.*, 42 F. Supp. 2d 1 (DDC 1999) are provided in Appendix I.

<sup>28</sup> *Edmonds Institute, et al. v. Babbitt, et al.*, 93 F. Supp. 2d 63 (DDC 2000). The full texts of the decisions in *Edmonds Institute, et al. v. Babbitt, et al.*, 93 F. Supp. 2d 63 (DDC 2000) and *Edmonds Institute, et al. v. Babbitt, et al.*, 42 F. Supp. 2d 1 (DDC 1999) are provided in Appendix I.

<sup>29</sup> S. Rep. No. 283, 99<sup>th</sup> Cong. Sess. 1, 11(1986).

<sup>30</sup> 40 CFR 1508.9.

<sup>31</sup> In April 2000, the federal court ruled on the assertion that the Yellowstone-Diversa CRADA was alleged to be a commercial use of Yellowstone resources. “The court finds that the Park Service reasonably

- determined that the Yellowstone–Diversa CRADA does not involve the ‘sale or commercial use’ of park resources within the meaning of [36 CFR 2.1]. ... [T]he Park Service determined that there was a critical distinction between researchers profiting from the sale of the actual specimens themselves, which is prohibited by [36 CFR 2.1], and profiting from a future development based on scientific discoveries resulting from research on those resources, which is permitted. ... The CRADA, in turn, accords with the regulations because any ‘commercial use’ flowing from such research is limited to applications or products generated from the scientific study of the resources, not the resources themselves.” *Edmonds Institute, et al. v. Babbitt, et al.*, 93 F. Supp. 2d 63, 71–72 (DDC 2000). The full texts of the decisions in *Edmonds Institute, et al. v. Babbitt, et al.*, 93 F. Supp. 2d 63 (DDC 2000) and *Edmonds Institute, et al. v. Babbitt, et al.*, 42 F. Supp. 2d 1 (DDC 1999) are provided in Appendix I.
- <sup>32</sup> *Edmonds Institute, et al. v. Babbitt, et al.*, 93 F. Supp. 2d 63, 71–72 (DDC 2000). The full texts of the decisions in *Edmonds Institute, et al. v. Babbitt, et al.*, 93 F. Supp. 2d 63 (DDC 2000) and *Edmonds Institute, et al. v. Babbitt, et al.*, 42 F. Supp. 2d 1 (DDC 1999) are provided in Appendix I.
- <sup>33</sup> *Edmonds Institute, et al. v. Babbitt, et al.*, 42 F. Supp. 2d 1 (DDC 1999).
- <sup>34</sup> Federal regulation 36 CFR 2.5(b) states: “A specimen collection permit may be issued only [if such] collection is necessary to the stated scientific or resource management goals of the institution or agency.” *NPS Management Policies 2006*, 4.2.2 states “[Research] Projects will ... conform to current standards of scholarship.”
- <sup>35</sup> In April 2000, the federal court ruled on the assertion that the Yellowstone–Diversa CRADA was alleged to be a commercial use of Yellowstone resources. “The court finds that the Park Service reasonably determined that the Yellowstone–Diversa CRADA does not involve the ‘sale or commercial use’ of park resources within the meaning of [36 CFR 2.1]. ... [T]he Park Service determined that there was a critical distinction between researchers profiting from the sale of the actual specimens themselves, which is prohibited by [36 CFR 2.1], and profiting from a future development based on scientific discoveries resulting from research on those resources, which is permitted ... The CRADA, in turn, accords with the regulations because any ‘commercial use’ flowing from such research is limited to applications or products generated from the scientific study of the resources, not the resources themselves.” *Edmonds Institute, et al. v. Babbitt, et al.*, 93 F. Supp. 2d 63, 71–72 (DDC 2000). The full texts of the decisions in *Edmonds Institute, et al. v. Babbitt, et al.*, 93 F. Supp. 2d 63 (DDC 2000) and *Edmonds Institute, et al. v. Babbitt, et al.*, 42 F. Supp. 2d 1 (DDC 1999) are provided in Appendix I.
- <sup>36</sup> 16 USC 3.
- <sup>37</sup> 36 CFR 2.5.
- <sup>38</sup> *NPS Management Policies 2006*, 4.2.
- <sup>39</sup> See Article 11 of the example CRADA in EIS Appendix A.
- <sup>40</sup> NPS Investigator’s Annual Reports are posted at <http://rprs.nps.gov/research/>
- <sup>41</sup> See, for example, <http://www.usgs.gov/usgs-manual/500/500-20.html>.
- <sup>42</sup> See <http://www.cdc.gov/od/science/techTran/> last accessed 4/6/07.
- <sup>43</sup> More information about patents can be found at the US Patent and Trademark Office website. <http://www.uspto.gov/web/offices/pac/doc/general/index.html#whatpat>
- <sup>44</sup> *Edmonds Institute, et al. v. Babbitt, et al.*, 93 F. Supp. 2d 63, 71–72 (DDC 2000). The full texts of the decisions in *Edmonds Institute, et al. v. Babbitt, et al.*, 93 F. Supp. 2d 63 (DDC 2000) and *Edmonds Institute, et al. v. Babbitt, et al.*, 42 F. Supp. 2d 1 (DDC 1999) are provided in Appendix I.
- <sup>45</sup> National Parks Omnibus Management Act (NPOMA) 16 USC Sec 5935, “The Secretary may enter into negotiations with the research community and private industry for equitable, efficient benefits-sharing arrangements.”
- <sup>46</sup> Department of the Interior Manual Part 516: National Environmental Policy Act of 1969.
- <sup>47</sup> EIS Section 3.1.
- <sup>48</sup> EIS Section 2.4.6.3.
- <sup>49</sup> Article 5.1 of the example CRADA is “Collaborator hereby agrees to make the payments and other contributions set forth in Appendix B, which shall be used by [name of collaborating unit of the National Park System] for natural resource conservation purposes only.”
- <sup>50</sup> National Parks Omnibus Management Act of 1998, Section 5932.
- <sup>51</sup> *NPS Management Policies 2006*, 7.1.
- <sup>52</sup> *Edmonds Institute, et al. v. Babbitt, et al.*, 42 F. Supp. 2d 1 (DDC 1999) and *Edmonds Institute, et al. v. Babbitt, et al.*, 93 F. Supp. 2d 63, 71–72 (DDC 2000). (See Appendix I).
- <sup>53</sup> *Edmonds Institute, et al. v. Babbitt, et al.*, 93 F. Supp. 2d 63, 71–72 (DDC 2000). (See Appendix I).
- <sup>54</sup> 1502.15 CEQ regulations.
- <sup>55</sup> NPS employees are instructed to present the facts and let visitors form their own intellectual, emotional, and physical connections to the meanings and values found in the parks.
- <sup>56</sup> Park resources and values are defined in *NPS Management Policies 2006*, 1.4.6.
- <sup>57</sup> The National Parks Omnibus Management Act (NPOMA), codified at 16 U.S.C. Sec. 5935 requires NPS benefits-sharing agreements to be equitable and efficient.

<sup>58</sup> *NPS Management Policies 2006*, 1.4.3.

<sup>59</sup> *NPS Management Policies 2006*, 4.2.

<sup>60</sup> Available at the following weblink: <http://ceq.eh.doe.gov/nepa/regs/40/40p3.htm>

<sup>61</sup> Article 5.1 of the example CRADA is “Collaborator hereby agrees to make the payments and other contributions set forth in Appendix B, which shall be used by [name of collaborating unit of the National Park System] for natural resource conservation purposes only.”

<sup>62</sup> 36 CFR 2.5 (h).

<sup>63</sup> Article 5.1 of the example CRADA states “Collaborator hereby agrees to make the payments and other contributions set forth in Appendix B, which shall be used by [name of collaborating unit of the National Park System] for natural resource conservation purposes only.”

<sup>64</sup> Every research project identified by the NPS that involved study of NPS research specimens and has or could have commercial applications for research results has been in the field of biology (see EIS Section 3.4.3.1).

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# **Representative Comments**

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# Form Letters

|           |                                                    |
|-----------|----------------------------------------------------|
| 12515-96  | Parks Not For Sale                                 |
| 12515-167 | National Parks and<br>Conservation Association     |
| 12515-152 | Letter modeled after<br>Parks Not For Sale website |

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12515-96  
page 1 of 1

BenefitSEIS  
National Park Service

I oppose commercial bioprospecting in our National Parks. Corporations should not be allowed to mine, exploit and profit from living organisms that we, the people, are supposed to be stewarding.

Therefore, I support Alternative C in the National Park Services Draft Environmental Impact Statement (DEIS) entitled Benefits-Sharing.

I do support the public interest research that takes place in the parks, but I am opposed to the National Park Services plans to enter Benefits-Sharing agreements with private corporations seeking to commercialize their research.

I believe that allowing commercial bioprospecting runs counter to the mission of our National Parks. The natural resources on our public lands must be preserved, protected and most importantly remain public for the public's benefit. That is why I oppose alternatives A and B in the DEIS. Alternative C, as its title implies, is the only option that Prohibits Research Specimen Collection for Any Commercially Related Research Purpose.

Sincerely,

Dee Warenyia



12515-167  
page 1 of 1

*Received January 12, 2007 via NPS's Planning, Environment  
and Public Comment (PEPC) website*

Dear PEPC Benefits-Sharing,

Please select Alternative B1 in the final NPS Benefits Sharing Plan. Alternative B1 best protects park resource and visitor experience, while assuring the public the right to review any agreement between NPS and a private researcher or company.

In addition, the following points are critical to include in any final Benefits Sharing plan:

- Park resources and visitor experience must not be directly or indirectly adversely affected.
- The public should have a right to view the entirety of any agreement.
- All scientific information resulting from any agreement must be shared with the park, and any compensation received should be used to benefit resource protection and research.
- No benefits sharing agreement should be developed that results in resources being used for commercial purposes. Any research contemplated under Benefits Sharing agreements cannot result in the direct commercial use of those samples removed from parks.

I urge you to select Alternative B1 to implement the Benefits Sharing Plan. Thank you for considering my views.

Sincerely,  
Sandy Sobanski

12515-152  
page 1 of 2

*Received December 31, 2006 via  
NPS's Planning, Environment and Public Comment (PEPC) website*

To Whom It May Concern:

I strongly oppose commercial bioprospecting in our National Parks. Corporations should not be allowed to mine, exploit, profit and even patent from living organisms that we, the people, are supposed to be stewarding. Life, biological organisms, proteins, DNA, RNA, or anything else that is produced by nature should not be allowed to be patented for private profit.

Therefore, I support "Alternative C" in the National Park Service's Draft Environmental Impact Statement (DEIS) entitled "Benefits-Sharing." Alternative C allows scientific research in the Parks, but will NOT permit research that is purely commercial in its purpose. Alternative C will ensure that wildlife and biological resources of the Parks not be exploited for commercial purposes. Yellowstone and the other national parks were designated as parks to protect them from exploitation and to ensure they "remain unimpaired for the enjoyment of future generations." Alternative C also let's Park scientific staff devote all their time to science in the public interest. They won't have to spend the time, effort, and budget necessary to negotiate Commercial Research and Development Agreements (CRADAs).

I strongly oppose all the versions of Alternative B, including the NPS' favorite, Alternative B2. Alternative B would allow commercial bioprospecting and encourage deal-making with commercial enterprises, allowing them to remove biological organisms from the Parks for purely commercial purposes. This undermines the basic mission of the Parks and is a direct threat to the public commons. Alternative B2 does not guarantee transparency in the deal making. CRADAs, the kind of deals NPS is proposing, allow either side to designate part of the deal as confidential business information -- outside the public view. By law, NPS would be forced to keep details such as royalty amounts and other financial information from the public. We wouldn't even be able to judge whether NPS was making good deals or not.

Alternative B also would require NPS research staff to devote part of their time to negotiating and managing CRADAs made for commercial purposes. This would take time away from research in the public interest. This would force NPS officials and outside contractors to travel and devote time and money to make CRADAs.

Finally, Alternative B sets a bad precedent that will open the door to more extractive

12515-152  
page 2 of 2

activities for commercial purposes. Alternative B would apply to all 84.4 million acres of the National Park System, including millions of acres now designated as Wilderness Areas.

I do support the public interest research that takes place in the parks, but I am opposed to the National Park Service's plans to enter "Benefits-Sharing" agreements with private corporations seeking to commercialize their research.

I believe that allowing commercial bioprospecting runs counter to the mission of our National Parks. The natural resources on our public lands must be preserved, protected and -- most importantly -- remain public for the public's benefit. That is why I oppose alternatives "A" and "B" in the DEIS. Alternative C, as its title implies, is the only option that "Prohibits Research Specimen Collection for Any Commercially Related Research Purpose."

Thank you for your consideration of my comments.

Christopher Lish

# **Representative Comments from Organizations**

|            |                                                             |
|------------|-------------------------------------------------------------|
| 12515-6711 | Montana State University,<br>Thermal Biology Institute      |
| 12515-7261 | Edmonds Institute                                           |
| 12515-7418 | The Ornithological Council                                  |
| 12515-7424 | University of Alaska,<br>Museum of the North                |
| 12515-7459 | American Society of Mammalogists,<br>President              |
| 12515-7463 | National Parks Conservation Association                     |
| 12515-7464 | American Society of Mammalogists,<br>Systematic Collections |
| 12515-7483 | The Washington Biotechnical Action Council                  |
| 12515-7488 | The Sierra Club, National Parks<br>and Monuments Committee  |
| 12515-7492 | Public Employees for<br>Environmental Responsibility        |
| 12515-7502 | Greater Yellowstone Coalition                               |

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November 30, 2006

Recently, the National Park Service released the Benefits-Sharing Draft Environmental Impact Statement for public comment. As members of the research community, the Thermal Biology Institute (TBI) of Montana State University (MSU) strongly supports the mission of the National Park Service in the protection of this valuable natural resource and feels that we have a responsibility to provide our input to the public review process on this important issue.

Yellowstone National Park (YNP) offers unparalleled research opportunities for faculty and students in Montana and across the U.S. These research opportunities are largely the result of over 130 years of protection for the natural biological and geological resources, many of which are found only at YNP. TBI conducts and promotes research and education focused on the biology and interrelated physical and chemical processes of geothermal environments in the Greater Yellowstone Ecosystem. Our scientific research has been encouraged by the NPS.

The preservation and vitality of YNP is critical to successful long-term scientific research. Likewise, ongoing research activity, such as that conducted by the TBI, generates data that is foundational to efforts by YNP personnel to manage and track park resources. **To continue this mutually beneficial research activity, TBI strongly supports the NPS Preferred Alternative, which would allow the implementation of benefits-sharing program with optional disclosure of all terms and conditions related to commercial development.** We feel that a "no action" alternative is not in the public's best long-term interest in that some recovery of commercial profits should be used to benefit the public and provide improved NPS stewardship of the public's resources. Further, we do not support the alternative that prohibits research specimen collection for commercially related research purposes for the following reasons:

1) Many commercial applications begin from fundamental scientific discoveries. Prohibiting specimen collection by researchers that might have commercial application would significantly limit scientific progress. Further, we agree with the DEIS where it specifically states that "Some of the independent research involving study of NPS research specimens will inevitably discover useful applications for research results that could have commercial applications."

**Thermal Biology Institute**  
607 Leen Johnson Hall  
P.O. Box 173142  
Bozeman, MT 59717-3142  
www.tbi.montana.edu  
Tel: (408) 994-7039  
Fax: (408) 994-7470  
Email: tbi@montana.edu

**Mountains & Minds**



2) Prohibiting specimen collection by known commercial interests eliminates the possibility of revenue streams to the NPS that would help accomplish its preservation and protection mission.

To be clear, TBI does not support or condone any specimen collection or scientific research that results, directly or indirectly, in any damage whatsoever to non-renewable NPS resources. In fact, TBI has developed educational materials for researchers that visit YNP to help insure that research activities cause no harm to the park.

TBI strongly supports NPS efforts to manage research activities conducted by any scientist who qualifies for an NPS research permit without regard to whether that scientist is affiliated with or funded by public or private sources.

Dr. John W. Peters  
Director, Thermal Biology Institute  
Montana State University

Dr. Brent M. Peyton  
Associate Director, Thermal Biology Institute  
Montana State University

**Thermal Biology Institute**  
607 Leen Johnson Hall  
P.O. Box 173142  
Bozeman, MT 59717-3142  
www.tbi.montana.edu  
Tel: (408) 994-7039  
Fax: (408) 994-7470  
Email: tbi@montana.edu

**Mountains & Minds**

Comments on  
National Park Service  
Benefits-Sharing Draft Environmental Impact Statement (Service-wide)

Submitted by:

(1) Beth Burrows, President/Director  
on behalf of:

**Edmonds Institute**  
20319-92nd Avenue West  
Edmonds, Washington 98020 USA  
telephone: 425-775-5383  
email: beb@igc.org

(2) Michael Garrity, Executive Director  
on behalf of:

**Alliance for the Wild Rockies**  
P.O. Box 505  
Helena, Montana 59624 USA  
telephone: 406-459-5936  
email: garritymichael@yahoo.com

(3) George Nickas, Executive Director  
on behalf of:

**Wilderness Watch**  
P.O. Box 9175  
Missoula, Montana 59807 USA  
telephone: 406-542-2048  
email: gnickas@wildernesswatch.org

(4) Joseph Mendelson, Legal Director  
on behalf of:

**International Center for Technology Assessment**  
660 Pennsylvania Ave., SE  
Suite 302  
Washington, DC 20003 USA  
telephone: 202-547-9359  
email: joemend@icta.org

(5) Jeff Juel, Ecosystem Defense Director  
on behalf of:

**WildWest Institute**  
P.O. Box 7998  
Missoula, Montana 59807  
telephone: 406-728-5733  
email: jeffjuel@wildrockies.org

I. Introduction and Summary

We respectfully submit the following comments concerning the National Park Service **Benefits Sharing Draft Environmental Impact Statement**, [1] hereafter referred to as the DEIS. We request that our comments be included in the official public record, carefully considered, and incorporated into the planning process, any further drafts, and the Final EIS/Plan and Record of Decision.

**These comments are submitted on behalf of** the following organizations:

- **Edmonds Institute**, a public interest, non-profit, 501(c)(3) organization committed to the health and sustainability of ecosystems and their inhabitants and focused on understanding and sharing information about environmental, social, legal, and economic impacts of technology;
- **Alliance for Wild Rockies**, a non-profit organization whose mission is to secure the ecological integrity of the Wild Rockies Bioregion through citizen empowerment, and the application of conservation biology, sustainable economic models and environmental laws;
- **Wilderness Watch**, a non-profit 501(c)(3) organization and the only national organization entirely dedicated to assuring that our great national heritage of Wilderness remains for future generations to know and enjoy;
- **International Center for Technology Assessment**, a non-profit 501(c)(3) organization devoted to exploring the economic, ethical, social, environmental, and political impacts that can result from the applications of technology or technological systems;
- **WildWest Institute**, an organization formed through the merger of the Native Forest Network and Ecology Center and designed to protect and restore forests, wildlands, watersheds, and wildlife in the Northern Rockies Bioregion.

The contact details for the above-named organizations and the names and titles of the persons submitting these comments on behalf of those organizations appear at the end of these comments, before the endnotes.

We believe the DEIS, as presented, is seriously flawed. It does not satisfy the District Court's Order in *Edmonds Institute et al. v. Babbitt, et al.*, nor does it meet the requirements of the National Environmental Policy Act (NEPA). Further, we consider that the DEIS makes proposals in violation of The Wilderness Act and National Park Service (NPS) regulations and we note that the DEIS has narrowly cast what should be a full range of alternatives into a false choice between commercial bioprospecting with increased benefits to the Parks and society, and no commercial bioprospecting with no increased benefits.

We believe it appropriate for the NPS to withdraw the DEIS, correct its deficiencies, and then issue a revised document for public review and comment as a Supplemental Draft EIS.

**We urge NPS to fully comply with NEPA by developing and fully analyzing a Science in the Public Interest Alternative.** We examine that alternative in some detail below.

Among the alternatives presented by NPS, we find Alternative C the most reasonable. Only Alternative C removes commercial bioprospecting from the National Park Service palette of permissible activities in the parks. **We offer conditional support for Alternative C. We specifically oppose the other listed alternatives, particularly Alternatives B1, B2 and B3. We are opposed to ANY commercial bioprospecting in the U. S. National Park System.** While we strongly support scientific research in the parks, we believe there should be no research within the park system that is expressly commercial except that which is deemed, through a process of public deliberation, publication, and comment, as research clearly beneficial to the public interest.

Commercial bioprospecting in general undermines the basic mission, purpose and spirit of the National Parks. Were commercial bioprospecting to be disallowed, as NPS itself points out in the DEIS, the amount of research likely to be foregone is less than one half of one percent of all research in the National Park System. Further, commercial bioprospecting and the use of Cooperative Research and Development Agreements (CRADAs) in relation to such bioprospecting open up the possibility that aspects of such endeavors may be sealed from public view and oversight. Whatever the intention of NPS, it will always be the right of the other parties to CRADAs to request that particular proprietary information be kept secret. Once secret, the only means for the public to access such information would be through Freedom of Information Act (FOIA) requests and, under FOIA, "trade secrets and commercial or financial information obtained from a person [that is] privileged or confidential" may be exempted from public disclosure. Because the benefit sharing under consideration concerns public lands, lands that belong to the people of the United States, it is of paramount importance that deal-making about these places be completely and totally transparent. None of the B alternatives can effectively make the necessary guarantee of transparency. **We cannot support any NPS management plan that allows agreements that are not totally and completely transparent.** In this regard, please note that our above-stated support for Alternative C is conditioned on the premise that the NPS Director makes any proposed exemptions the subject of extensive public notice and comment.

Finally, we note that seven years after the court decision that gave rise to the DEIS in question, NPS only gave the public 90 days to comment on a very lengthy document. We recommend that in the future, the comment period be extended.

## II. Historical Background

To understand why commercial bioprospecting may be considered inimical to the basic mission, purpose and spirit of the National Parks, and why commercial bioprospecting will be harmful to the regard in which members of the public holds the parks (and thereby detrimental to what may be termed the "existence value" of the parks), it is useful to review some of the history of the

parks.

### A. 1872 Yellowstone Park Act

Yellowstone National Park was created by an act of Congress and signed into law by President Ulysses S. Grant on March 1, 1872. [2] The Act clearly spelled out a preservation mandate for Yellowstone National Park, stating: "*Be it enacted by the Senate and the House of Representatives of the United States of America in Congress assembled*, That the tract of land in the Territories of Montana and Wyoming is hereby reserved and withdrawn from settlement, occupancy, or sale under the laws of the United States, and dedicated and set apart as a public park or pleasuring-ground for the benefit and enjoyment of the people."

Section 2 of the Act instructs the Secretary of Interior to develop regulations for the protection and management of the park, stating: "Such regulations shall provide for the *preservation, from injury or spoliation, of all timber, mineral deposits, natural curiosities, or wonders within said park, and their retention in their natural condition.*" (emphasis added) It also states: "He shall provide against the wanton destruction of the fish and game found within said park, and *against their capture or destruction for the purposes of merchandise and profit.*" (emphasis added)

### B. The Antiquities Act of 1906

The Antiquities Act pertains to national monuments and archeological sites, and the legal authority for the President of the United States to establish such monuments. [3] This Act allows for the collection of artifacts within National Monuments, but explicitly states, "That the examinations, excavations, and gatherings are undertaken for the benefit of reputable museums, universities, colleges, or other recognized scientific or educational institutions, with a view to increasing the knowledge of such objects, and that *the gatherings shall be made for permanent preservation in public museums.*" (emphasis added)

### C. National Park Service Act of 1916

The National Park Service Act states that the Park Service "shall promote and regulate the use of the Federal areas known as national parks, monuments, and reservations hereinafter specified by such means and measures as to conform to the fundamental purpose of the said parks, monuments, and reservations, which purpose is to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations." [4]

In Section 3 of the Act it states that: "no natural curiosities, wonders, or objects of interest shall be leased, rented, or granted to anyone on such terms as to interfere with free access to them by

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the public".

**D. General Authorities Act of 1970**

The General Authorities Act, which supplemented and clarified the provisions of National Park Service Act, [5] includes this statement: "The authorization of activities shall be construed and protection, management, and administration of these areas shall be conducted in light of the high public value and integrity of the National Park System and shall not be exercised in derogation of the values and purposes for which these various areas have been established, except as may have been or shall be directly and specifically provided by Congress."

**E. National Parks Omnibus Management Act**

The National Parks Omnibus Management Act of 1998, NPOMA, [6] established scientific research as a fundamental purpose of the parks and instructed the NPS to engage in cooperative research studies with other federal agencies and public institutions including universities. In § 5935(d) the Act states, "The Secretary may enter into negotiations with the research community and private industry for equitable, efficient benefits-sharing arrangements."

Pursuant to NPOMA, the NPS has implemented the Natural Resource Challenge, including the creation of Cooperative Ecosystems Studies Units (CESUs).

**F. Bioprospecting & Litigation**

In the mid-90's officials in Yellowstone National Park entered into a first of its kind CRADA with the Diversa Corporation of San Diego. [7] The CRADA allowed money to flow back to Yellowstone from commercial bioprospecting in the various ecosystems of Yellowstone. The CRADA allowed Diversa to remove biological samples including microbes, soils, fungi, trees, plants, rocks and other natural features.

The Edmonds Institute, joined by the International Center for Technology Assessment and Alliance for the Wild Rockies, sued the NPS in Federal District Court, challenging the CRADA. [8]

A decision and order was issued by District Judge Royce Lamberth, [9] dismissing several claims brought by the plaintiffs, but upholding the NEPA claim, thereby suspending the Diversa/Yellowstone CRADA until completion of a fully compliant NEPA analysis.

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**III. General Policy Arguments****Research for Purely Commercial Purposes is Inconsistent With the Original Purposes of the Park System and Individual Park Creation Acts**

NPS activities are legal to the extent they are consistent not only with NPS rules and regulations, but also with the original organic act of each park or monument. As the DEIS states on page 20, "Each unit of the National Park System is governed by its own enabling legislation, which provides specific legal authorities and direction for each park. Parks must review their park's enabling legislation to determine if it contains explicit guidance that would prevail over service-wide policy."

As noted above, the specific language in the creation acts for Yellowstone and the National Park Service clearly prohibits the removal of park resources for profit. For example, the Yellowstone Park Act of 1872 instructs the Secretary of the Interior to develop regulations for Yellowstone that "shall provide against the wanton destruction of the fish and game found within said park, and *against their capture or destruction for the purposes of merchandise and profit.*" (emphasis added) As small as biological organisms, or portions of organisms, may sometimes be, whether they are microorganisms or macroorganisms, they are part of the Park's wildlife and biological diversity, and there can be no question that "capturing" their DNA - whether thermophile, grizzly bear, or elk DNA - within a test tube for the "purposes of profit" is a direct violation of the Yellowstone Park Act. The point is that in commercial bioprospecting, something essentially has been "captured for profit." For example, were a grizzly bear to be trapped and subsequently tranquilized against its will, it is easy to see that it would have been "captured" and the results of that capture could not be allowed to lead to profit. Presumably, the same standard applies to all the wildlife, whatever the size, in the Park.

Similarly, the Antiquities Act, pertaining chiefly to archaeological sites and ruins, nonetheless states that any "gatherings shall be made for permanent preservation in public museums." The Act contains no provision that would allow commercial gathering, i.e., commercial bioprospecting for private profit.

As the District Court noted, the Park Service could find no statutory authority for commercial bioprospecting and, struggling to find a shoe that might fit, began to creatively stretch the language and the imagination in order to allow it by claiming that Yellowstone and other national parks are "federal laboratories" under the meaning of the Federal Technology Transfer Act (FTTA) of 1986. [10] While the Court ultimately accepted this interpretation, in the minds of the public, such an interpretation was at odds with basic logic and commonsense. [11] Moreover, the legislative history of the FTFA would indicate that Congress enacted the law for the named "national laboratories", such as Los Alamos National Laboratory, Oak Ridge National Laboratory, National Institutes of Health, etc. Nowhere does FTFA history suggest that the law

was enacted for the purpose of declaring the units of the National Park System as national laboratories under the definitions of the FTTA.

While NPS claims commercial bioprospecting is consistent with the original mission and purpose of the Parks, the District Court recognized that NPS has engaged in "a dramatic shift in park management policy." [12] In this regard, the Judge rejected the Park Service position that bioprospecting is no different than other research conducted in the parks, writing: "This ignores the reality that the commercial nature of an activity can and does affect its impact on the subject environment and particularly on people's aesthetic and recreational interests in the Park. Although parkgoers may be willing to forgive the trespass of their national parkland when the goals of that trespass are scientific and educational, commercial exploitation of that same parkland may reasonably be perceived as injurious. This commonsense notion has not even been challenged in other contexts." The judge went on to point out that, "There is an undeniable reality that commercial activity is qualitatively different than scientific and educational activity of a similar nature, due to the very different forces and motivations that drive them."

While the District Court dismissed several claims in the litigation, it expressed its concern over this "dramatic shift in park management policy," and did not predetermine an outcome. Nor did the Court grant the NPS *carte blanche* to proceed as it wished. Rather, the Court ordered the agency to conduct a fully compliant NEPA analysis in order to make a rational decision, based upon the facts established in the analysis and the administrative record, as to *what* it should do and *how* it should do it.

In advancing as its preferred alternative an alternative that allows commercial bioprospecting, the NPS has failed to include an alternative providing for research in the public interest and failed to recognize an important distinction between commercial research and research in the public interest, notably the difference in transparency and public access to the science that is done. For example, researchers pursuing advanced degrees, or those affiliated with public research facilities not only report in annual summaries to the NPS, but their research is generally intended to result in scientific papers submitted to peer-reviewed journals for publication or for (publicly available) M.S. or Ph.D. theses. The methods and results of such research are therefore widely available to the public and other researchers, allowing them all to benefit from advances in research methods and techniques, the free exchange of ideas and knowledge, and the broadened base of scientific literature. However, researchers employed by commercial bioprospecting companies do not as a rule submit their research for peer review and publication. To the contrary, the fruits of their research are most often intended to be "trade secrets", not to be shared with others unless permitted by the relevant companies. The information is not easily, if at all, available to the public and other researchers do not gain from advances in methods and free exchange of ideas as they do in research in the public interest. Indeed, under the NPS preferred alternative, commercial bioprospectors with CRADAs may keep sealed from public view any information they consider to be proprietary, potentially meaning any or all important elements of any CRADA. This

amounts to using the public commons (the parks) to generate private knowledge. All that the CRADA guarantees to the public is access to a commercially (derived) product and a portion of the profits from that product. There is no guarantee -- nor reasonable expectation -- of transparency and complete access to the knowledge that flowed from access to public resources in the first place.

Such potential limitation on science done in the Parks and on the knowledge gained from research in the Parks is not acceptable and amounts to an injury to the Parks' mission. Were such injury to be allowed to persist, it can be expected to result in a lessening of public harmony with the parks mission, a lessening of the public's enjoyment of the parks, and eventually, a lessening of the public's willingness to support the parks and to direct their representatives to support the park system.

#### IV. Specific Issues

##### A. The DEIS Does Not Satisfy NEPA Requirements or the Court's Order

The NPS, while presenting a lengthy rhetorical analysis, has not presented a sufficiently substantive analysis. The NPS has chosen to take a bureaucratic approach by concluding that the major affected environment of its benefit sharing policies will be itself and its own administration. This profoundly narrow view fails to reveal or analyze significant aspects of the potential impacts, particularly those that relate to natural resources, wildlife habitats, and aesthetic environments.

There are a host of issues which the DEIS has failed to analyze, or in many cases, even to mention. **It is our position that the DEIS does not fulfill or comply with the instructions contained in the District Court's Order. It fails to take the "hard look" which numerous courts have found the National Environmental Policy Act (NEPA) requires.**

NEPA requires federal agencies to prepare an environmental impact statement in connection with all "major federal actions significantly affecting the quality of the human environment." [13] The Council on Environmental Quality (CEQ), created by NEPA, has established extensive regulations describing the requirements of an EIS. [14] It is our position, described in detail below, that the DEIS has failed to comply with numerous sections of the NEPA regulations.

##### B. The Analysis is Biased in Favor of Commercial Bioprospecting

The tone of the DEIS is clear. NPS portrays commercial bioprospecting as the only means available to obtain information necessary for proper resource management. Pursuing this direction, the DEIS contains allegations apparently meant to steer people away from Alternative

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C. Sometimes this involves making broad claims, without documentation or substantiation. For example, on page 58 the DEIS states: "Under Alternative C, researchers would be prohibited from conducting most research that could improve health, safety, and productivity." And on page 59, the DEIS states: "Alternative C fails to meet this criterion because research that could be expected to lead to discoveries in health care, nutrition, agriculture, environmental management, or industrial fields would be prohibited. Accordingly, Alternative C would not attain the widest range of beneficial uses of the environment." These blanket statements are nowhere substantiated. Indeed, the DEIS states elsewhere that approximately 99.5% of research in the parks would be unaffected by Alternative C. On page 150 it states: "At the Servicewide level, Alternative C is likely to result in only a slight change in the availability of new scientific knowledge about park resources." Further, on page 122 the DEIS states: "No significant difference in the number of research projects conducted in any context was detected between the pre-benefits-sharing and post-benefits-sharing time periods."

In pursuing a policy favorable to commercial bioprospecting, the NPS years ago offered the debatable contention that parks such as Yellowstone are "federal laboratories". Now, the NPS has turned around and stated that these laboratories have no scientists or research equipment, and therefore it is necessary to bring in commercial enterprises to provide the expertise for them.

In further evidence of its bias towards the private sector, NPS tells us in the DEIS statement on page 77: "In a specific example of the contribution that independent researchers make to the NPS, the majority of new species currently being added to park biodiversity rosters are microbes, but the NPS does not employ permanent, full-time microbiologists to conduct microbial research and funds little research on microbes." Not only does the NPS not explain why it does not hire its own microbiological researchers or fund microbial research, but by not pressing for its own researchers, the NPS undermines its own position as to how crucial the microbial research information really is. If such research constitutes a central and vital purpose of the Parks, and if the benefits to the public are so potentially large, why has NPS not hired a single full-time microbiological researcher to conduct research for the NPS? The Service seems to be indicating that it is sitting on top of a virtual gold mine of biological diversity in Yellowstone and other parks and yet the Service has not seen fit to hire (or borrow from another agency) a single permanent full-time microbiological researcher.

In this regard the NPS has abdicated its responsibilities and come up with the weak claim that it must allow commercial enterprises to commercially exploit park resources in the name of filling a void that the NPS itself has apparently created.

### C. Specific NEPA Violations

## 1. Affected Environment & Lack of Impact Analysis

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Once having made the decision to produce an EIS, constituting major federal action, the NPS committed itself to the more rigorous and comprehensive standard of analysis, particularly given that that the ambit of the EIS is Service-wide, applying to 84.4 million acres.

The DEIS makes a major error in portraying the affected environment of the document as purely administrative and related to paper shuffling. On pages 106-107, under the subsection 4.2.5 titled Impairment, the DEIS makes these incredible statements: "Impairment analyses only apply to natural and cultural resource topics, and do not apply to topics involving visitor use, social resources, or park operations. Therefore, because this document does not carry forward natural or cultural resource topics, impairment will not be analyzed further in this DEIS."

These statements are erroneous as the research entailed is not a paper-oriented literature review. The subjects of the commercial bioprospecting program are biological in nature and involve living park resources, with bioprospectors potentially searching over large geographic areas. The issues are physical and environmental and are directly related to the exploitation of natural resources. The DEIS states on page 5 that commercial bioprospecting isn't limited to thermal pools: "Studies of park resources, including rare bacteria and unique plants and animals, expand beneficial scientific knowledge, and research results occasionally generate substantial commercial profits." There are numerous issues with the potential for actual physical impacts which the DEIS fails to analyze.

The Court has already noted that the Yellowstone-Diversa CRADA covered a wide array of park ecosystems and included trees, plants, soils, rocks and other park wildlife. [15] Yet the scant discussion of Servicewide Impacts on pages 124-126 of the DEIS contains no discussion of environmental impacts to natural resources and instead erroneously concludes that all impacts are informational and monetary, and can be described as beneficial.

By the NPS's own admission, the source areas for bioprospecting contain an untold number of unknown organisms and less than 1% are catalogued. [16] Given that admission, bioprospecting activities, using the language of NEPA, "involve unique or unknown environmental risks" with "highly uncertain effects." All organisms have population dynamics and habitat requirements, yet little if anything is known about these dynamics and requirements of the likely candidates for bioprospecting. Nevertheless, there are "reasonably foreseeable" potential impacts that must be revealed in the DEIS.

NEPA §1502.22(a) states that "agencies shall insure the professional integrity, including scientific integrity, of the discussions and analyses in environmental impact statements." The regulations mandate that when "there is incomplete or unavailable information" concerning "reasonably foreseeable significant impacts on the human environment," an agency must either: (1) if the information "is essential to a reasoned choice among alternatives" and the overall costs of obtaining it are not exorbitant, obtain and include the information in its analysis or (2) if the

information "cannot be obtained because the overall costs of obtaining it are exorbitant or the means to obtain it are not known," include in the EIS a statement making clear the unavailability of the information, use "existing credible scientific evidence which is relevant to evaluating the reasonably foreseeable significant adverse impacts on the human environment," and "evaluate impacts based upon theoretical approaches or research methods generally accepted in the scientific community." The courts have found this mandate to be binding. In *Fritio/son v. Alexander*, the Court noted, "NEPA requires that an agency candidly disclose in its EIS the risks of its proposed action." [17] The NEPA regulations in § 1502.22 state that an agency must make clear in an EIS that there is incomplete or unavailable information.

Yet, in this case, the DEIS contains neither a discussion of environmental and human impacts or a statement that there is unknown or unavailable information. It simply states there are no impacts and that NEPA is applied at the permit issuance level. By this tactic, the NPS attempts to evade the "hard look" required by NEPA. Further, according to DEIS estimates, negotiating a new CRADA will require a high-end estimate of 0.18 FTE staff time, and the more CRADAs, the less time spent per agreement. This amount of staff time is clearly inadequate for scientifically credible NEPA compliance.

If the NPS does not take the required "hard look" at the programmatic, service-wide level, then it will be forced to perform this extensive analysis at the individual CRADA level, requiring far more resources in time, staff, and money than the Service has revealed in the DEIS.

While the District Court declined to specify exactly what to study, the Court clearly instructed NPS to fully comply with the NEPA in preparing an environmental statement for public review and comment and also provided several pointed examples of the potential environmental impact and injury that commercial bioprospecting potentially represents. For example, the Court wrote: "...the introduction of commercial bioprospecting into the nation's parks represents a dramatic change in Park Service policy both in Yellowstone and more generally. With regard specifically to Yellowstone, the defendants have offered no persuasive counter to plaintiffs' assertion that the CRADA, on its face, allows for a tremendously broad range of activities spanning a broad range of ecosystems." The NPS has done little to address - and therefore much to exacerbate - the original concerns for the impacts from a potentially "broad range of activities spanning a broad range of ecosystems".

## 2. Cumulative Impacts & Effects

NEPA § 1508.25(c) requires a complete disclosure and analysis of cumulative effects. However, the discussion of Cumulative Impacts on page 112 of the DEIS, so central to NEPA compliance, contains no information to the cumulative impact of commercial bioprospecting on park natural resources even though the NPS knows that commercial bioprospecting will apply to "soils, trees, plants, animals...and may influence profitable resource access by other industries besides those

concerned with biotech/microbiology." Moreover, there is no discussion of the cumulative impact of perhaps several dozen simultaneous bioprospecting operations covering vast areas of national park system lands. There is also no analysis of the effect a "major commercial" find might have on the number of bioprospecting permits issued. A "bioprospecting gold mine" might encourage a rush of commercial bioprospectors. Inexplicably, the DEIS only describes cumulative impact relative to interpretive services provided by the NPS to park visitors.

With respect to cumulative actions, the courts have noted that CEQ regulations require connected, cumulative, and similar actions to be considered together in the same EIS. When proposals up for decision are functionally or economically related, those proposals must be considered in one EIS. The analysis must not only include impacts from actions that are merely being contemplated at this time, but also those that are "reasonably foreseeable." [18]

In respect to this DEIS, future commercial bioprospecting CRADAs are reasonably foreseeable and even likely. However, NPS states that NEPA analysis will be applied at the individual permit level, thereby ignoring the cumulative effects analysis of reasonably foreseeable actions the program is likely to precipitate service-wide.

The courts have also found that, "To consider cumulative effects, some quantified or detailed information is required. Without such information, neither the courts nor the public, in reviewing the Forest Service's decisions, can be assured that the Forest Service provided the hard look that it is required to provide." [19] Without such quantified and detailed information in this case, we are forced to come to a similar conclusion.

## 3. Irreversible and Irretrievable Commitments of Resources

On page 146, the DEIS presents its analysis of irreversible and irretrievable commitments of resources in one sentence: "Alternative B would not result in the temporary or permanent loss of any resources." NEPA requires far more than simple declarative statements. There must be some analysis presented to support such a sweeping declaration. After all, living organisms are being removed from their habitats.

If one accepts the NPS rationale that "research results" obtained from biological specimens removed from the National Parks can be commercially developed, then there is also no question that this process represents an "irreversible and irretrievable commitment of resources" under the language and regulations of NEPA. At a minimum, the "research result" or "valuable discovery" would be lost to the public domain. The rights to this discovery, and the majority of the potentially enormous profits it could yield, would flow to private commercial enterprise. It is in this sense that there would be an irreversible and irretrievable commitment of NPS resources. We will not examine the obvious case where individual organisms may be lost to the park.

#### 4. Lack of Reasonable Alternatives

NEPA § 1502.14(a) requires that agencies must "rigorously explore and objectively evaluate all reasonable alternatives." A primary purpose of NEPA is to prevent an agency from presenting only its own viewpoint concerning environmental impacts. "Perhaps most substantively, the requirement of a detailed statement helps insure the integrity of the process of decision by precluding stubborn problems or serious criticism from being swept under the rug." [20] Thus NEPA requires the NPS to objectively disclose and evaluate views or evidence which contradict its proposed course of action or preferred alternative. Under NEPA, the agency must discuss any "responsible opposing view." [21]

Yet this DEIS does not contain a discussion of opposing views. It simply states they have been incorporated into one of the alternatives, without identifying the specific opposing views or how they have been addressed within the given alternatives.

Based upon the public comment the NPS received and the existing mandate of NPOMA to create and participate in CESUs, the NPS should have included a Science in the Public Interest Alternative. That alternative would have relied on federally and publicly funded researchers to make "beneficial" research discoveries the benefits of which would reside in the public domain. Instead of including such an alternative, the DEIS narrowly cast the alternatives as a choice -- we would say a false choice -- between commercial bioprospecting with increased benefits to the Parks and society or no commercial bioprospecting and no increased benefits.

NEPA specifically requires an agency to consider a reasonable alternative: "Although there is no need to consider alternatives of speculative feasibility or alternatives which could be changed only after significant changes in governmental policy or legislation, the EIS must still consider such alternatives to the proposed action as may partially or completely meet the proposal's goal and it must evaluate their comparative merits." [22]

As posited in the DEIS, the central aim is to make additional research discoveries that will enhance NPS resource management and protection as well as enhance interpretive programs and signage for the increased enjoyment and understanding of the visiting public. But the DEIS does not consider all the options for achieving this. In particular, the DEIS is deficient in its omission of an alternative in which microbiological and other research in the public interest is conducted by park staff or staff from other public agencies. Even were we to grant the argument about the Parks being "laboratories," the NPS does not present any information whatsoever to explain why it cannot hire its own microbiologists to conduct research and make discoveries that can improve health, safety, and productivity in the public interest. NPS never even considers the public research possibility (or how that possibility might be realized). Perhaps it was this lack of considering this possibility that allowed the NPS to make the unsubstantiated claim in the DEIS that only through huge personal gain will researchers have the motivation and means to make

such discoveries. The NPS supposition about motivation and means completely ignores the motivation and accomplishments of many federal laboratories and research centers. It ignores the example of such agencies as the Centers for Disease Control, where public service scientists search for vaccines against such threats to public health and safety as the avian flu, and conduct extensive research in the public interest.

If, as the NPS claims, the National Park Service does not possess the required expertise, there is nothing to prevent the NPS from entering into cooperative research agreements with other federal agencies, and to receive, on loan, staff from other federal agencies with the desired skills and expertise. In fact, on pages 109-110 the DEIS describes how the NPS, acting through the NPS Natural Resource Challenge, participates in 17 Cooperative Ecosystems Studies Units (CESUs) to conduct research on NPS resources: "CESUs are yet another program supported by the Natural Resource Challenge and required by NPOMA which provides research, educational opportunities, and technical assistance in the biological, physical, social, and cultural sciences necessary to manage NPS natural and cultural resources. As of August 2005, there were 13 federal agencies, 160 universities, and 39 other partners involved in CESUs." Surely this array of public research assets and technical assistance would allow NPS to conduct its own scientific research in the public interest. And surely this approach would represent a clear and distinct alternative to reliance on commercial bioprospecting to fulfill the hoped-for research functions.

For the cost that the NPS projected for administration, including negotiation and management of CRADAs, the NPS instead could have (a) hired its own research grade biologists to conduct research in the public interest or (b) taken the option of working with the Cooperative Ecosystems Studies Units (CESUs) to obtain the necessary expertise while fulfilling its obligations under NPOMA. These approaches would have yielded the same benefits claimed under the B alternatives, but with all the benefits going to the public. Unfortunately, this Science in the Public Interest Alternative was not included in the DEIS, apparently because the NPS had a pre-decisional bias in favor of commercial bioprospecting.

A Science in the Public Interest Alternative could reap critically important benefits. It could: 1) protect the parks from commercial natural resource exploitation, 2) encourage scientific research in the public interest and domain, and 3) establish baseline data on thermophiles and other resources. The Science in the Public Interest Alternative would take the best of the projected benefits from Alternatives C & B, without at the same time adopting B's potential for keeping information from the public.

#### 5. Impacts on the Human Social Environment -National Precedent

Numerous courts have found that NEPA requires federal agencies to include meaningful consideration of fundamental factors within environmental impact analysis. [23] Under the Administrative Procedure Act, [24] an agency can be found to be "arbitrary and capricious" in its

NEPA analysis. In *Motor Vehicles Manufacturers Association. v. State Farm Mutual*, the Court ruled that, "Normally, an agency rule would be arbitrary and capricious if the agency has relied on factors which Congress has not intended it to consider, *entirely failed to consider an important aspect of the problem*, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise." [25] (emphasis added)

In this DEIS, the NPS has failed to discuss or analyze the impact of its proposed benefit sharing policies on the American people's perception of and regard for the National Park System, as well as on their aesthetic and recreational interests. Rather, the NPS on page 82 characterizes the social environment of potential impact as containing researchers and NPS personnel only, with no recognition of their plan's impact on the American public. In fact, the District Court provided the NPS with an opportunity to comprehend the significance of NPS's "dramatic shift in park management policy" and the impact it would have on the public users and owners of the National Park System when the Court wrote, "This ignores the reality that the commercial nature of an activity can and does affect its impact on the subject environment and particularly on people's aesthetic and recreational interests in the Park. Although parkgoers may be willing to forgive the trespass of their national parkland when the goals of that trespass are scientific and educational, commercial exploitation of that same parkland may reasonably be perceived as injurious. This commonsense notion has not even been challenged in other contexts." The Court went on to say, "There is an undeniable reality that commercial activity is qualitatively different than scientific and educational activity of a similar nature, due to the very different forces and motivations that drive them."

The NPS has had a long time to consider the impact to the public perception of and regard for the NPS and the quality of its stewardship. The failure to assess the national precedent the commercial bioprospecting program would set is particularly egregious since, as the Court noted in its ruling, documents obtained through the Freedom of Information Act show that Park Service officials knew as early as 1996, ten years ago, that commercial bioprospecting would apply systemwide. [26] Moreover, one memorandum stated "any precedent set will affect all parks, and may influence profitable resource access by other industries besides biotech/microbiology." [27]

The importance of the impact of commercial bioprospecting - "profitable resource access" - on public perceptions of the meaning (and public nature) of the parks cannot be underestimated. Proposed commercial bioprospecting has been the subject of at least two law review articles, including *Are National Park Resources for Sale?* and a lengthy piece in *Ecology Law Quarterly*. [28] Numerous major media articles have also been published.

The NPS could easily have obtained the services of an unbiased party to develop a survey to be presented to park visitors and other interested members of the public to help sample and

characterize this impact. Certainly, there are methods available that would have uncovered the information.

The Parks have meaning to the public and the effects of all the alternative policies on that meaning must be acknowledged and assessed.

## 6. Impacts on Congressional Appropriations

The DEIS claims that the document is not about appropriations. Yet the public comment record shows that many who commented were concerned that commercial bioprospecting might result in lower congressional appropriations and more pressure to commercialize park resources in order to obtain management and operating budgets. The NPS concludes that this issue is beyond the scope of the present analysis, conveniently forgetting that funding was one of the reasons for pursuing bioprospecting in the first place.

Further, should NPS proposals have adverse effect on public sentiment about the Parks, lowered levels of public commitment may lead, directly or indirectly, to lowered Congressional appropriations for the Parks.

## 7. Inadequate Mitigation Measures to Prevent Conflict of Interest

NEPA § 1502.14 (f) directs agencies to "Include appropriate mitigation measures not already included in the proposed action or alternatives." In this DEIS, however, NPS provides only an inadequate mention of mitigation measures, simply stating that they will be developed. Further, this section of the DEIS does not outline several areas of potential conflict of interest. For example, there are potential revolving-door issues in situations where an NPS employee working on a CRADA project may decide to leave the NPS and go to work for the company involved in the CRADA.

Another serious problem, one which would affect the NPS Preferred Alternative, involves a statement on page 44 of the DEIS: "Individual park units that are identified as federal laboratories would receive and use the benefits resulting from a benefits-sharing agreement." This policy of benefit apportionment represents a built-in system for potential abuse of discretion in the issuance of permits, favoring commercial bioprospectors and opening the door for conflict of interest in permit issuance and environmental impact review. The policy raises the prospect that research staff within the parks may be - or may perceive themselves to be - subject to performance evaluations based upon the number of CRADAs they successfully negotiate, thus biasing the entire Park research program towards commercial bioprospecting. The policy also raises the specter of individual park units with similar biota competing with each other for perspective CRADA partners, with all the potential such competition might engender for a race to the bottom in Park benefits. The DEIS does not examine these issues and so does not explain

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how they will be mitigated or resolved.

Unfortunately, the appropriate section of the DEIS neither outlines potential avenues for conflict of interest nor sets forth a procedure for developing the mitigation measures to come. With no vision of what needs to be mitigated, how mitigation measures will be arrived at, or how mitigation measures may play out differentially in the different alternatives presented, the NPS has made it difficult, if not impossible, to responsibly judge the impacts of each alternative.

#### 8. Cost/Benefit Analysis

NEPA § 1502.23 requires cost-benefit analysis when such analyses are important to evaluating the differences among alternatives.

The narrow analysis provided in the DEIS does not measure the differences between different approaches, in part because not all potential alternatives have been presented. For example, given the alternatives the DEIS presents (and the absence of a Science in the Public Interest Alternative), the public cannot know:

- the cost difference between the cost of administering commercial CRADAs and the cost of funding research in the public interest, using NPS and other federal employees; or
- the difference in benefits (both monetary and non-monetary) between benefits derived from discoveries made in the public interest and residing in the public domain and those made for purely commercial goals and residing firmly in the private domain.

NEPA requires that cost-benefit analysis take into account non-monetary values. We have already noted the absence in the NPS analysis of any consideration of the impact of the proposals on the public's perception of and regard for the National Park System itself -- what some economists might term the "existence value" of the Parks to the people of the United States. [29] Here, we note the absence of any cost/benefit analysis of changes to that existence value occasioned by each of the presented alternatives, or by the absent Science in the Public Interest Alternative.

The absence of any consideration of the potential cost to the meaning of the parks for the people and legislators of the U. S. is inexplicable, given that the existence value is hardly a new concept and that this DEIS has taken a very long time to be published.

Finally, the DEIS cost-benefit analysis is sorely lacking in its consideration of the costs associated with negotiating and administering CRADAs. Important aspects of the analysis are not provided. For example, the DEIS does not indicate what level GS employees will be required to work on the CRADAs or assist individual park research staff. This makes cost/benefit

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comparisons difficult. Further, NPS staff will have to come from the regional and national offices and so there may be extensive travel costs associated with their work. These costs are nowhere noted.

#### B. Commercial Bioprospecting Violates the Wilderness Act and NPS Management Regulations for Designated and Recommended Wilderness

The National Park System includes vast areas designated by acts of Congress as Federal Wilderness Areas. [30] Over 40 million acres of designated wilderness exists within the National Park System. Additionally, there are millions of additional acres that are eligible or "recommended for wilderness." The DEIS and its proposed policy fail to address the potential impacts to wilderness or even acknowledge that Wilderness exists within the national parks. This is a glaring oversight because the vast majority of national park lands are subject to wilderness laws and policies, which place these lands off-limits to commercial bioprospecting. As explained below, this prohibition applies to the more than 80 percent of national park lands that are designated as wilderness, recommended wilderness, and potential wilderness.

The Wilderness Act, § 4(c) states that, "Except as specifically provided for in the Act, and subject to existing private rights, there shall be no commercial enterprise within any wilderness area designated by this Act." [31] Exceptions for visitor services which support the recreational use of Wilderness apply primarily to guides for hiking, camping, fishing, hunting, climbing, and horseback riding. Commercial bioprospecting would clearly be a "commercial enterprise" that is prohibited within wilderness areas.

This prohibition applies even if the proposed activity might benefit non-commercial interests as well. The Court, in *Wilderness Society v. United States Fish and Wildlife Service*, [32] found that, "The language, purpose and structure of the Wilderness Act support the conclusion that Congress spoke clearly to preclude commercial enterprise in designated wilderness, regardless of the form of commercial activity, and regardless of whether it is aimed at assisting the economy with minimal intrusion on wilderness values."

In that same decision, the Court went on to note that the prohibition applies even if there was no impact from the commercial activity on the Wilderness or natural environment: "There is no exception given for commercial enterprise in wilderness when it has benign purpose and minimally intrusive impact." [33]

As already noted, National Park Service policies generally provide the same level of protection for and proscribe commercial enterprise on several categories of land, including eligible, study, proposed, recommended, potential and designated wilderness. [34] Combined, these categories of "wilderness" apply to more than 80 percent of the lands within the National Park System. In

Yellowstone National Park, for example, NPS policies would ban commercial bioprospecting on more than 90 percent of the park.

The DEIS needs to be modified to acknowledge the unlawful effects of the proposed action on wilderness lands within the parks. And, at a minimum, the proposed action and alternatives need to be modified to exclude from bioprospecting all designated wilderness lands, as well as all eligible, study, proposed, recommended and potential wilderness areas.

#### IV. Additional Problems

##### A. Transparency

Whatever the intentions of the NPS, the other parties to CRADAs may designate part of the CRADA as confidential business information. The public will have no effective means of accessing this information, not even the Freedom of Information Act.

The DEIS fails to contain a discussion regarding the likely lack of transparency associated with its proposals. For example, under the Freedom of Information Act, [35] there are several exemptions allowing agencies to withhold information from public view. Moreover, NPOMA § 207 states: "Information concerning the nature and specific location of a National Park System resource which is endangered, threatened, rare, or *commercially valuable*, may be withheld from the public in response to a request under section 552 of title 5, USC." (emphasis added) In this sense, and in the sense mentioned earlier in our comments, a CRADA will not be compliant with goals of complete transparency. Even the very geographic location of the activity may be made secret, and, under FOIA, kept secret. Thus, the public and independent scientists may have no way to objectively judge a project's impact on the environment. Potentially, the public may not even be able to know whether a project will take place within occupied endangered species habitat, or in designated or recommended wilderness, or whether the project will involve what is precluded in § 3 of the National Park Service Act, notably the lease, rental, or grant of natural curiosities, wonders, or objects of interest "on such terms as to interfere with free access to them by the public." The public will not be able to judge whether its own "free access" to certain areas will be precluded for unannounced commercial reasons. These are not trivial concerns and NEPA regulations require that they be disclosed in an EIS and their impacts analyzed.

It is doubtful that NPS has the authority, acting through a CRADA or any other vehicle, to override a commercial interest's desire to invoke FOIA and NPOMA exemptions. Thus any CRADA will effectively allow details to be withheld from the public at the discretion of a commercial party.

The DEIS should make clear that under any alternative that allows commercial bioprospecting,

the public will not have the right to view (or necessarily be able to access) all aspects of the CRADA and the subsequent scientific analysis, by-products and "research results", nor will NPS have the legal right to compel commercial bioprospectors to release such information against their will. Knowledge of this effect of allowing commercial bioprospecting and using of CRADAs is vital to the public's ability to objectively weigh the differing "benefit sharing" alternatives.

##### B. Enforcement Provisions

The DEIS does not outline crucial enforceability issues. It even states on page 41 that the burden of coming forth to negotiate a CRADA rests with the researcher. Such lack of assertive oversight could facilitate greater secrecy by researchers, particularly those with primarily commercial motives, than the law might allow. The DEIS must stipulate the methods for oversight and enforcement of CRADAs so that the public can judge whether any of the alternatives provided would feasibly operate in the public interest.

##### C. Benefit Sharing Options Not Mentioned

Throughout the DEIS analysis, only one form of benefit sharing agreement is considered: the CRADA. Given all the problems associated with this legal vehicle, particularly its lack of guarantee of transparency, and given the apparent NPS determination to proceed with commercial bioprospecting, the NPS should have considered other forms of benefit sharing, including the use of fully transparent contracts made available for public view. This is a particularly egregious omission.

##### D. Costs of Preparation

Since one of the costs of creating a "benefit sharing" policy at the NPS is the cost of designing the policy, including the cost of writing the DEIS, and since this DEIS is likely to be prelude to many other (larger and smaller) DEISs in relation to benefits-sharing, it would have been helpful for the public to know about the costs entailed in developing this policy and the cost entailed in writing this particular DEIS, including the costs for meetings, consultant fees, and transportation, and information about how all those costs were determined, distributed, and financed. Such considerations would help the public to decide whether all the hard work was worth it.

##### V. Conclusion

As written, the DEIS is deficient on numerous grounds and is in violation of numerous sections of the NEPA regulations. It is also in violation of The Wilderness Act and the Administrative Procedure Act. It is our view that this DEIS must be withdrawn, its deficiencies corrected, and the *improved* document circulated for public comment as a Supplemental Draft Environmental

Impact Statement. NEPA § 1502.9 provides for supplementing draft and final environmental impact statements. The test for deciding when to supplement is the same "significance" test used to decide whether to prepare an EIS. "In this respect the decision whether to prepare a supplemental EIS is similar to the decision whether to prepare an EIS in the first instance: If there remains 'major Federal action' to occur, and if the new information will affect the quality of the human environment' in a significant manner or to a significant extent not already considered, a supplemental EIS must be prepared." [36] Here, both the new and missing information constitute a "major federal action significantly affecting the human environment" and a supplemental DEIS should be prepared.

Lastly, we note the omissions in our own comments. We have discussed our concerns about the DEIS at some length and everywhere we have focused on what NPS has presented and what we have found lacking or incorrect in that presentation. We have hardly acknowledged what was for some of us our most profound disappointment, notably, the appearance of a lengthy environmental impact statement, seven years in the making by an agency with a mission of stewardship, that barely touched on issues of preservation and conservation. [37]

## VI. Submission Details

These comments are submitted by:

- (1) Beth Burrows, President/Director  
on behalf of  
Edmonds Institute  
20319-92nd Avenue West  
Edmonds, Washington 98020 USA  
telephone: 425-775-5383  
email: beb@igc.org
- (2) Michael Garrity, Executive Director  
on behalf of  
Alliance for the Wild Rockies  
P.O. Box 505  
Helena, Montana 59624 USA  
telephone: 406-459-5936  
email: garritymichael@yahoo.com
- (3) George Nickas, Executive Director  
on behalf of:  
Wilderness Watch

P.O. Box 9175  
Missoula, Montana 59807 USA  
telephone: 406-542-2048  
email: gnickas@wildernesswatch.org

- (4) Joseph Mendelson, Legal Director  
on behalf of:  
International Center for Technology Assessment  
660 Pennsylvania Ave., SE  
Suite 302  
Washington, DC 20003 USA  
telephone: 202-547-9359  
email: joemend@icta.org
- (5) Jeff Juel, Ecosystem Defense Director  
on behalf of:  
WildWest Institute  
P.O. Box 7998  
Missoula, Montana 59807  
telephone: 406-728-5733  
email: jeffjuel@wildrockies.org

## VII. End Notes

1. National Park Service U. S. Department of the Interior. Benefits-Sharing Draft Environmental Impact Statement, September 2006. Servicewide.
2. Yellowstone Park Act of 1872, 17 Stat. 32-33.
3. The Antiquities Act. 16 USC 431 et seq.
4. National Park Service Act. 16 USC 1.
5. General Authorities Act. 16 USC 1a-1.
6. National Parks Omnibus Management Act of 1998. 16 USC 5931.
7. Yellowstone-Diversa Cooperative Research & Development Agreement.
8. *Edmonds Institute, et al. v. Babbitt, et al.* 93 F. Supp. 2d 63 (DDC 2000).
9. *Edmonds Institute, et al. v. Babbitt, et al.* 93 F. Supp. 2d 63 (DDC 2000).
10. Federal Technology Transfer Act. 15 USC 3701
11. *Edmonds Institute, et al. v. Babbitt, et al.* 93 F. Supp. 2d 63 (DDC 2000).
12. *Edmonds Institute, et al. v. Babbitt, et al.* 93 F. Supp. 2d 63 (DDC 2000).
13. National Environmental Policy Act. 42 USC § 4332 (2)(C).
14. 40 CFR § 1502.1.
15. Yellowstone-Diversa CRADA.

16. *Edmonds Institute, et al. v. Babbitt, et al.* 93 F. Supp. 2d 63 (DDC 2000).
17. *Seattle Audubon v. Mosely*, 798 F. Supp. 1473, 1482 (W.D. Wash. 1992).
18. *Fritiofson v. Alexander*, 772 F.2d 1225 (5th Cir. 1985).
19. *Muckleshoot Indian Tribe v. U. S. Forest Service*, 177 F.3d 800, 809-10 (9th Cir. 1999)
20. *Silva v. Lynn*, 482 F.2d 1282, 1285 (1st Cir. 1973)
21. *Seattle Audubon Society v. Lyons*, 871 F. Supp. 1291, 1318, W.D. Wash. 1994.
22. *Natural Resources Defense Council v. Calloway*, 524 F.2d 79 (2d Cir. 1975).
23. *Foundation for North American Sheep v. U. S. Department of Agriculture*, 681 F.2d 1172, 1178 (9th Cir. 1982).
24. Administrative Procedure Act. 5 USC 701 et seq.
25. *Motor Vehicles Mfrs. Assn. v. State Farm Mut.*, 463 US 29, 43 (1983).
26. *Edmonds Institute, et al. v. Babbitt, et al.* 93 F. Supp. 2d 63 (DDC 2000).
27. *Edmonds Institute, et al. v. Babbitt, et al.* 93 F. Supp. 2d 63 (DDC 2000).
28. Michael D. Wood, 2000. Are National Park Resources for Sale?, *Public Land Law Review* 21, University of Montana School of Law, Missoula.
29. For those unfamiliar with "existence value" in economic analysis, see Frank Ackerman and Lisa Heinzerling. **Priceless: On Knowing the Price of Everything and the Value of Nothing.** The New Press: New York, 2004.
30. The Wilderness Act. 16 USC 1121 et seq.
31. 16 USC 1133(c).
32. Wilderness Society v. United States Fish and Wildlife Serv., 353 F.3d 1051 (9th Cir. 2003)(en banc)(amended 360 F.3d 1374 (9th Cir. 2004)).
33. Wilderness Society v. USFWS. (9th Cir. 2003).
34. NPS Management Policies 6.3.1
35. Freedom of Information Act. 5 USC 552.
36. *Marsh v. Oregon Natural Resources Council*, 490 U. S. 360, 109 S. Ct. 1851 (1989) 361, 373, 374.
37. The expectation was that potential environmental and population impacts related to bioprospecting (including increased bioprospecting over time), e.g., changes over time in population dynamics and constituents, would be addressed in this DEIS. See, e.g., Robert Lindstrom, Robert F. Ramaley, and Richard L. Weiss Bizzoco, 2002, Invisible Invasion: Potential Contamination of Yellowstone Hot Springs by Human Activity, *Western North American Naturalist*: 62:1, 44 ff.



#### PROVIDING SCIENTIFIC INFORMATION ABOUT BIRDS

American Ornithologists' Union  
Association of Field Ornithologists  
CIPAMEX (Sección Mexicana del Consejo Internacional para la Preservación de las Aves)  
Cooper Ornithological Society  
Neotropical Ornithological Society  
Pacific Seabird Group  
Tajmar Research Foundation  
Society for the Conservation and Study of Caribbean Birds  
Society of Canadian Ornithologists/  
Société des Ornithologues du Canada  
Vaucland Society  
Wilson Ornithological Society

David E. Blockstein, Ph.D.  
Chairman of the Board  
1707 H St., N.W., Suite 200  
Washington, D.C. 20006  
Phone: (202) 337-0004  
Fax: (202) 638-4311  
E-mail: doc@erdc.org  
http://www.nrmh.si.edu/BIRDNET

#### Comments on the Draft Environmental Impact Statement on Benefits-sharing

Submitted by:  
Ellen Paul, Executive Director  
Ornithological Council  
8722 Preston Place  
Chevy Chase, MD 20815  
Phone (301) 986 8568  
Fax (301) 986 5205  
E-mail: ellen.paul@verizon.net  
(Submitted via Benefits-sharing website with hard copy sent FedEx to Benefits Sharing DEIS Team, Yellowstone Center for Resources, Building 27, Yellowstone National Park, Wyoming 82190, contact number 307-344-2203)

The Ornithological Council submits these comments on the Benefits-sharing Draft Environmental Statement (DEIS). The Ornithological Council is a consortium of eleven scientific societies of ornithologists, seven of them in the United States. Among the members of these organizations are many scientists who conduct various kinds of specimen-based scientific inquiry, including taxonomic study, the documentation of biodiversity, and biochemical research. Some have worked or are working in the National Parks. The benefits-sharing policy may or may not apply directly to academic (noncommercial) research. We discuss this issue at length, below. However, even if it does not, the benefits-sharing policy will have impacts on the academic scientific community, as described below. For these reasons, we submit these comments on the DEIS and the benefits-sharing policy.

We have two concerns about the DEIS and the underlying benefits-sharing agreements: first, that the analysis of impacts is inadequate because it never addresses the impact of the permanent removal of natural resources from the parks; and second, that the analysis of impacts is inadequate because it does not recognize the possible impact on the NPS' ability to satisfy the Congressional mandate, under the 1998 National Parks Omnibus Management Act, 16 U.S.C. 1593-1956, that it encourage scientific research in the National Parks.

*The analysis of impacts is inadequate in failing to address the fundamental nature of the transaction, which involves permanent removal of natural resources from the National Parks.*

Ellen Paul  
Executive Director  
8722 Preston Place  
Chevy Chase, MD 20815  
Phone: (301) 986-8568  
Fax: (301) 986-5205  
E-mail: ellen.paul@verizon.net

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The impact analysis is based on a critical omission or faulty assumption about the exact nature of the transaction. The DEIS focuses only on the potential development of a commercially valuable product from the intellectual property derived from natural resources found in the parks, but overlooks the reality that the research and development can take place only if the NPS allows the removal of natural resources from the parks. The DEIS fails to explain to the public – who are the owners of these resources – that in many, if not most cases, the research and development process will result in the destruction of these resources and that it is unlikely that the resources will ever be returned to the parks from which they were taken.

Recent Supreme Court decisions make it clear that the NPS does not own wildlife found in the parks managed by the agency. “[I]t is pure fantasy to talk of ‘owning’ wild fish, birds, or animals. Neither the States nor the Federal Government... has title to these creatures until they are reduced to possession by skillful capture. *Douglas v. Seacoast Products, Inc.*, 431 U.S. 265, 284.” The opinion in *Edmonds I*, which ultimately led to the preparation of the DEIS, said the same: “In need of funds, and recognizing that potentially valuable natural resources were being removed from Yellowstone with no remuneration to the Park and its owners, the American people, see *Soukup Decl. ¶ 9; Edmonds Institute v. Babbitt*, 42 F. Supp. 2d 1, 4-9 (D.D.C. 1999). It should be noted that the declaration alluded to in this excerpt was a statement filed by NPS official Michael Soukup, Associate Director for Natural Resource Stewardship and Science.

The NPS has maintained, in discussions with the scientific community pertaining to the ownership of specimens taken from the parks under NPS-issued research permits, that it has, but cannot transfer ownership of specimens. That position is inconsistent with Supreme Court decisions, which are the law of the land. It is true that one cannot transfer what one does not have but the NPS’ position has been that it has ownership and is legally barred by the Organic Act and other statutory authorities from transferring ownership. The only formal expression of this NPS position is a condition imposed on permittees that reads: “Collected specimens that are not consumed in analysis or discarded after scientific analysis remain federal property... Because specimens are Federal property, they shall not be destroyed or discarded without prior NPS authorization.” The scientific community has objected to this provision for nearly two decades but has not succeeded in persuading the NPS to eliminate it from the permit conditions. The NPS continues to insist that it has ownership and is legally prohibited from transferring ownership.

For the sake of argument, if the NPS is correct in alleging that it has ownership but is legally barred from transferring ownership (and we must say most emphatically that this assertion is not correct because the NPS does not, according to the Supreme Court, have ownership and because there are no laws barring transfer of ownership), then the benefits-sharing proposal must fail in its entirety. The fact is that the transaction that triggers benefit-sharing is the removal of natural resources from the parks; the transactions contemplated by the benefits-sharing proposal involve research and development, usually in a manner that consumes (destroys) the resource. Thus, the NPS is giving full dominion and control over the resource to the researcher. The CRADA (Appendix A) does not specify that the NPS retains ownership of the physical specimen or any part of the specimen that is the underlying basis for the agreement. The CRADA does not prohibit destruction or consumption of the specimen, or any part of it, nor does the CRADA require return of the specimen or any part of the specimen that is not consumed, destroyed, or altered in research or development. The CRADA, in fact, talks only of the intellectual property, ignoring the fact that without the transfer of a physical specimen, with all the rights of ownership, there could be no CRADA. In fact, they are part and parcel of one transaction; to

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discuss the impacts of benefits-sharing without discussing the impacts of the underlying transaction is misleading.

The NPS benefits-sharing policy has to rest on the factually and legally implausible basis that giving personal property with full authority to make such use of that property as the recipient may wish, including destruction of the property, falls short of a transfer of ownership. Again, our position is that the Supreme Court has made it clear that the NPS does not own the property in the first place, so it does not matter if this transaction, in this manner, constitutes a transfer of ownership. We belabor the point only to demonstrate that under the NPS’s [mis]interpretation of the law, it cannot transfer ownership of park resources, and therefore, these transactions are legally prohibited and that furthermore, the DEIS is inadequate.

We recognize that the DEIS states that the benefits-sharing agreement does not modify existing regulation. That is true, but only because there is no regulation providing that the NPS has ownership, or retains ownership, of natural resources removed from the parks for research purposes. It is only through a permit condition – which we maintain is based on a faulty legal assertion of ownership – that the NPS imposes this requirement.

The DEIS is thus factually and legally inadequate in describing impacts in that it fails to make clear that natural resources will be removed from the parks, virtually always permanently and in a manner that constitutes a relinquishment of dominion and control so as to constitute a transfer of whatever ownership the NPS has or claims to have.

The CRADA, in fact, does not address the physical resources at all. Instead, it focuses on the value of the intellectual property or commercial value of the applications developed from the scientific study of the specimen. No commercial use may be made of the specimen itself, i.e., rocks or plants collected in the parks may not be sold. Nonetheless, the fact remains that in allowing the researcher to remove a specimen from the park, to study it with methods that may destroy or modify all or part of the specimen, and to retain the specimen permanently, the NPS has, in fact, transferred ownership of the specimen. That the DEIS fails to acknowledge this in its analysis of impacts or elsewhere in the document is a failing of the analysis itself. In fact, section 4.4.6 (at p.146) states, “Alternative B would not result in the temporary or permanent loss of any resources.” This is a physical impossibility in cases where the materials removed from the park are destroyed or altered in the course of the scientific research – which is likely to be the case in CRADA-related transfers.

We wish to make clear that we do not of course object to the removal of natural resources from the National Parks, whether under benefits-sharing agreements or for academic research. Such transfers must, of course, be consistent with NPS stewardship obligations under the Organic Act and other laws. It is our contention that the permanent and professional curation and storage, as well as professional scientific services that document the biodiversity of the parks – fully satisfies the stewardship obligation. The researchers we represent and the institutions with which they are affiliated provide these services to the NPS. If the removal and eventual destruction of park resources can be consistent with good stewardship, then surely the professional and permanent curation of the physical specimen and the scientific knowledge it yields is also consistent with good stewardship practices. However, an analysis of impacts that fails to acknowledge that the activity entails the permanent removal of natural resources from the National Parks and to assess the impacts of that activity is a faulty analysis.

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*The impacts analysis is inadequate in failing to discuss the potential impacts of the benefits-sharing agreements on non-commercial scientific research in the National Parks*

In discussing the preferred alternative at ES.2.2 (page xiii), NPS states that the NPS has identified four types of non-monetary benefits that could occur under some or all benefits-sharing agreements. These are: knowledge and research relationships, training and education, research-related equipment, and special services, such as laboratory analyses. These are all benefits provided by the research community to the NPS as outcomes of the scientific collecting of research specimens. Researchers perform the specialized and costly analyses of specimens and through their professional curation, safeguard the specimens and preserve the knowledge derived from those specimens. Even the storage space provided for the millions of specimens collected in the parks – space that the NPS itself does not have – is a benefit provided to the NPS. The NPS pays for none of these services, except in very rare instances. Thus, in the case of research specimens that are not collected for commercial purposes, most of the benefits flow to the NPS. The NPS itself appears to recognize this fact in saying (at p.77) that “The NPS has statutory direction to inventory park biodiversity, and over the long term the contribution of personal services toward this effort by non-NPS scientists and experts has been significant. Much of the funding has come from non-NPS sources, as well.” The NPS also acknowledged that these scientists generally provide the largest single input of new knowledge parks receive. Regardless of the direction and balance of the flow of benefits, however, the point is that it appears that this DEIS may apply as much to the scientists we represent and to their research activities as it does to commercial interests such as bioprospectors.

There is good reason to be concerned that the benefits-sharing policy will discourage this academic, non-commercial research, and thus reduce the flow of benefits to the NPS. The sharing of benefits derived from intellectual property resulting from the scientific investigation of natural resources has been a focus of international policy at least since the Convention on Biological Diversity, which addresses the concerns of nations about the exploitation of their natural resources without compensation. While these concerns are valid and need to be addressed, the unfortunate outcome of the good intentions of those who have tried to protect the intellectual property derived from natural resources has been a serious barrier to noncommercial scientific research, as described at length in the attached New York Times article. It has been the experience of the scientists who are the members of the societies that comprise the Ornithological Council, and of other scientists, that they are now experiencing difficulty obtaining permission to conduct scientific research in many countries due to concerns about benefits sharing. In particular, they are having tremendous difficulty obtaining permission to export scientific specimens even for entirely academic, noncommercial research. Some countries have come to be suspicious that scientists will “steal” the value of the intellectual property that is derived from the natural resources, or have become interested only in scientific research that has the potential to return benefits.

Congress, by way of the 1998 National Parks Omnibus Management Act §§ 1593-1596 mandated that the NPS encourage scientific research in the National Parks. As we have stated publicly and to the NPS directly, the NPS has generally done an admirable job in meeting that mandate. The Natural Resource Challenge created many opportunities for scientists to work in the National Parks and has largely succeeded in establishing and implementing the “parks for science” principle.

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It is plausible, if not likely, that the benefits-sharing agreements will have a detrimental effect on the efforts of academic (noncommercial) researchers to conduct research in the National Parks. First, they may be discouraged or daunted by the prospect of having to enter into a benefits-sharing agreement because the research may lead to commercial developments in the future. Second, the NPS itself, with its ever-diminishing funding and staffing, will have to divert resources and staff to managing the benefits-sharing system. They may give priority to the administration of research that involves a benefits-sharing agreement over research that does not. Third, and most significantly, the NPS must consider the environmental impact of all permitted activities. If two (or more) proposals would impact the same resource, the NPS may give priority to the activity that involves a benefits-sharing agreement over one that does not. Thus, creation and implementation of a benefits-sharing program may lead to the reduction of non-commercial scientific research in the National Parks – which surely contravenes Congressional directive and intent and that will undermine the NPS very laudable Natural Resource Agenda.

Furthermore, the potential impact of the benefits-sharing policy on noncommercial research may reduce the very substantial flow of benefits, described above and acknowledged by the NPS in the DEIS, to the National Parks. In order to perform the inventories mandated by the Omnibus Act, for instance, the NPS may have to contract with scientists to perform the services and provide the expertise that are currently provided at no cost to the NPS. The NPS may not have the necessary funds to do so, leaving inventories incomplete.

Of concern to the scientific research community and to the public is the potential loss of the value of the intellectual property derived from the natural resources in the parks. If noncommercial researchers are precluded or discouraged from working in the parks, these resources may never be studied. Valuable information that could benefit society in myriad ways may be left undiscovered. The benefits-sharing agreements may also encourage the NPS to limit access to natural resources for academic study, because the prior discovery of valuable information in non-commercial research may undermine the value of benefits-sharing agreements. There is a very real incentive for the NPS to favor research involving benefits-sharing agreements over academic research.

It is not entirely clear if the DEIS and the benefits-sharing agreements contemplated by the National Park Service (NPS) pertain to the noncommercial, academic research conducted by the members of the organizations we represent. The DEIS originated from the intent of the NPS to engage in the issuance of CRADA under the Federal Technology Transfer Act (FTTA). The NPS issuance of a CRADA to the Diversa Corporation in 1998 spurred litigation that resulted in a decision by the United States District Court for the District of Columbia that the NPS must first prepare an environmental impact statement. *Edmonds Institute, et al., v. Babbitt, et al.*, 42 F.Supp.2d 1 (DDC 1999). This history, together with the 21 June 2001 benefits-sharing newsletter [“Usually, “benefits-sharing” refers to agreements between biodiversity prospectors (sometimes called bioprospectors) and the National Park Service that return benefits to the park when the results of cooperative research lead to the development of something that is commercially valuable”] suggest that the NPS is focusing primarily on research conducted for the purpose of identifying commercially valuable resources. Further, the need for a benefits-sharing agreement is explained under the Preferred Alternative (Alternative B) in terms of commercial applications: “...if research activities involving research specimens collected from units of the National Park System resulted in useful discoveries, inventions, or other

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commercially valuable applications, a benefits-sharing agreement would be required to provide the terms and conditions for sharing with the NPS benefits resulting from their further development and use." (*emphasis added*). Section 2.4.1, at page 41. In other places, however, the DEIS is less clear. For instance, at page 12, it states that the benefits-sharing guidance is needed to address "the NPS's interest in the financial and other benefits from the results of research involving park research specimens." This distinction between financial and "other" benefits implies that the benefits of academic research are among those that will or may be covered by benefits-sharing agreements. Further, section 2.7.3 (page 57) relates an alternative that was considered but not analyzed: Exempt Academic Researchers from Benefits-sharing Agreements. This section states that "Because many university researchers are supported or otherwise affiliated with corporate or other for-profit research institutions, there is no rational basis for an across-the-board benefits-sharing exemption for academic researchers...To exempt all academic researchers from benefits-sharing agreements could also create unintended loopholes for those supported or otherwise affiliated with corporate or other for-profit research firms."

The potential commercial value of a resource may not be contemplated or recognized at the time the resource is first collected. The DEIS implies that a CRADA (which we use here to refer to all benefits-sharing agreements, whether arising under the FTA or otherwise) may or will be required for every collection of resources, for all purposes, including the development of noncommercial (i.e., traditional, academic) scientific knowledge.

#### Conclusion

The natural resources found in the National Parks, which are owned by the American people, should be made available for scientific research, subject to the stewardship obligations of the National Park Service imposed by the NPS Organic Act and other statutory authorities. A benefits-sharing policy, however, may not in the best interest of scientific research or to the public that benefits from that research and may prove detrimental to the NPS' effort to meet the Congressional mandate to make the National Parks available for scientific research. This DEIS fails to accurately assess the impacts both to the natural resources and to scientific research.

We hope that our input proves useful to the NPS in completing the development of its benefits-sharing policy, and thank the NPS for considering our comments.

Sincerely,



Ellen Paul  
Executive Director

May 7, 2002, Tuesday

#### SCIENCE DESK

### Biologists Sought a Treaty; Now They Fault It

By ANDREW C. REVKIN (NYT) 2000 words

A treaty enacted nine years ago to conserve and exploit the diversity of species on earth is seriously impeding biologists' efforts to catalog and comprehend that same natural bounty, many scientists say.

They say the treaty has spawned paralyzing biological bureaucracies built on the widespread belief that any scientist collecting samples -- whether for a drug company or a dissertation -- is bent on stealing genetic material and making a fortune.

As a result, biologists say, in many tropical regions it is easier to cut a forest than to study it.

"Something that was well intentioned and needed has been taken to an illogical extreme," said Dr. Douglas C. Daly, a curator of Amazonian botany at the New York Botanical Garden, who has worked in Brazil for 20 years in partnerships with Brazilian scientists, but recently had to wait a year and a half for a new research visa.

"The net result has been that it's kept biologists out of the forests," Dr. Daly said. "That plays into the hands of the forces of uncontrolled development. If a tree falls in the forest and there's no biologist there to hear it, it definitely doesn't make a sound."

Some officials in restrictive countries have begun to concede as much. For example, Brazil, which in 2000 stopped all exports of biological samples, even to Brazilians working abroad, has convened a National Council of Genetic Resources charged with finding a way to resume controlled exchanges.

The parties to the treaty, the Convention on Biological Diversity, met last month in The Hague and adopted voluntary guidelines aimed at distinguishing between "bio-prospecting" and basic science. But the parties, numbering 183, have yet to negotiate the details, and even after they are complete, signers are free to maintain existing rules.

The United States was involved in the talks, and the Clinton administration signed the treaty. But the Senate, lobbied by agriculture and drug companies, has never approved it. The Bush administration is reviewing whether to pursue ratification.

Scientists and some officials from restrictive countries agree that the solution is a regulatory system that is more streamlined for scientists who cede any right to profit from their findings. But creating such a system may be nearly impossible, because many universities, botanical gardens and other research institutions, besides conducting basic studies, also seek to exploit discoveries and, sometimes, have partnerships with drug companies.

In many countries, the fight against what is called biopiracy has proved politically popular, linking the interests of conservative nationalists, indigenous tribes and antiglobalization groups. In the hinterlands, the police and, sometimes, rural villagers have detained or chased out scientists.

Over the decades, there have been just enough examples of furtive expropriation of natural resources to fuel such fears, scientists say. Those include Brazil's loss of its rubber monopoly to Britain in the 19th century -- rubber trees thrived in British-controlled Malaysia -- to recent efforts by some companies to commercialize substances from tropical plants and animals without seeking permission or paying royalties.

Some countries are so eager to thwart biological thievery that they are going beyond the vague terms in the treaty.

At a meeting in February in Cancún, Mexico, representatives of Brazil, China, India, Mexico and nine other countries -- together controlling perhaps 70 percent of the world's biological diversity -- formed the Group of Allied Mega-Biodiverse Nations. The coalition would, among other activities, certify "the legal possession of biological material" and negotiate terms to transfer it.

Existing and proposed restrictions in countries with biological resources are all aimed at controlling research by drug and biotechnology companies. But evidence has grown that they are harming the most basic field work, even observational studies of wildlife in which nothing is taken away. The restrictions not only affect northern scientists probing southern forests, but also local scientists.

Dr. Ricardo Callejas, a professor at the University of Antioquia in Medellín, Colombia, specializes in the 2,000 species in the black pepper family. Dr. Callejas said fears of biological theft seemed particularly intense in South America, adding that it was "much, much easier to get permits for collecting in the Philippines and Vietnam" than in Colombia.

His discipline is taxonomy, basic analysis of the subtle differences among species and a field with little commercial appeal. Even so, Dr. Callejas said, he and his graduate students had been accused of biopiracy and booted from one village while on a collecting trip. He added that he longed to collect in a dizzyingly rich area in western Colombia, the Choco forests, but that the treaty had made the effort impossible.

"If you request a permit," Dr. Callejas said, "you have to provide coordinates for all sites to be visited and have to have the approval from all the communities that live in those areas. Otherwise, go back to your home and watch on Discovery Channel the new exciting program on dinosaurs from Argentina. I am still waiting after 14 months for a permit for collecting in Choco."

Delays, fees and research restrictions in countries like Brazil and provinces like Sarawak, the Malaysian part of Borneo, have caused many scientists simply to abandon the critical, difficult work of charting the still largely unexplored maze of species.

In some cases, scientists have been detained and their collections destroyed. In the Brazilian Amazon in 1998, an American geographer studying the forest for hints of ancient cultivation

methods was placed under house arrest by the federal police in Santarem, and his boat, equipment and samples were seized.

The scientist, Joseph M. McCann, who now teaches at the New School for Social Research in Manhattan, had all the appropriate permits and visas. He said that he eventually got back his gear and the title to his old riverboat, but that most of the collection of pressed plants rotted because the police had stored it outside. The plants had been destined for a Brazilian herbarium, not a pharmaceutical laboratory, he said.

Graduate students and postdoctoral researchers have been affected most of all, from both developing countries and from the North.

At the New York Botanical Garden in the Bronx, André M. Amorim, a visiting botany professor from the State University of Santa Cruz in Bahia, Brazil, has had trouble completing his doctoral research because of the ban on shipping even the tiniest leaf fragment.

His work focuses on Brazilian lianas and related vines and shrubs, and it requires advanced molecular and genetic analysis using equipment in New York.

"This is a real problem when Brazilian researchers are working in other countries," Mr. Amorim said.

In some places, restrictions have forced biologists to pack up and leave or to avoid the least-studied regions like the Amazon, where the classification of species lags, and focus on more accessible places like Hawaii or Puerto Rico.

In Sarawak, Dr. Navjot S. Sodhi of the National University of Singapore abandoned a project to survey the bird species in several national parks after tighter research restrictions took effect in 1998.

"Sarawak is the best place on earth to work, because there's so much rain forest left and the people are so nice," Dr. Sodhi said. "They provided free workers to help us, and we trained them in return and hired local guides. We were only collecting blood samples from birds to look for parasites and also collecting bird feces to study their diets."

But word spread that a potential AIDS drug had been discovered in the region. New rules greatly complicated his program, he said. "Now, to collect bird feces we had to get an export permit."

Officials began harassing his students.

"I couldn't take the nonsense any more, and we pulled out," Dr. Sodhi said. "I was willing to sign anything saying that we were not doing any bioprospecting."

But there was nothing to sign.

Officials at some companies that are sifting ecosystems for potential profits say it is appropriate that scientists from universities and other academic institutions play by the same tight rules.

"Academics have been kind of naïve to the question of ownership of genetic material," said Eric J. Mathur, senior director for molecular diversity at Diversa, a company in San Diego that works around the world to find enzymes and other substances that could make valuable drugs or other products. "They think that under the guise of academia they can do whatever they want. But if their work results in any kind of invention -- and most come serendipitously -- you can be sure their institution will want to own it and make money from it."

Mr. Mathur said that the last year or so had finally seen the biodiversity convention "start to come of age." In a growing number of countries, he said, the general precepts of the convention have translated into workable contracts that, for the first time, clarify who owns what and how any benefits will be shared.

But many scientists and some officials say there is clearly the need for a system with two tracks, to separate and simplify work that clearly has no commercial application.

The impetus for the treaty, scientists note ruefully, arose largely from biologists, who in the late 1980's powerfully promoted the notion that rain forests could turn out to be medicine chests for the world. But the promise has rarely turned into profits, with just a handful of drugs and products reaching markets.

"It's never really panned out and was totally oversold," said Dr. George Amato, director of the conservation genetics program at the Bronx Zoo.

Dr. Amato's program has frequently been stymied in helping foreign researchers identify animal species and strains through using genetic analysis, because no material can be sent abroad. In one such effort, aimed at identifying a strain of yellow-headed Amazon parrots, the DNA ended up being tracked down in a stuffed museum specimen.

The worst side effect of the biology restrictions, many experts say, is that young researchers are being driven away from important ecosystems and fields of study.

In 1999, Christiane Ehringhaus, a German botanist pursuing a doctorate at Yale, was teaching Brazilian students and studying plants in the state of Acre in the Brazilian Amazon when newspapers implied that she was collecting seeds and insights from indigenous people in pursuit of potential drugs.

Although she is still in Acre, Ms. Ehringhaus said the resulting difficulties had prompted her to abandon botany altogether and shift to social and economic studies.

"First," she said, "they drove me completely away from medicinal plants and now from plants, period."

Prof. John H. Barton of the Stanford Law School, an expert on the biodiversity treaty, said the biggest weakness in the pact was its focus on biology as property. "It is much more about sharing the profits from genetic resources than it is about conserving biodiversity, about science," Professor Barton said.

Around the world, that focus has translated into warped expectations and suspicions, Dr. Callejas said in Colombia.

"I have trouble convincing my closest friends that what I do is because of passion, curiosity, a desire to know more about a group of organisms," he said.

Everyone around him, he added, is convinced, with all the talk of property rights and miracle drugs, that it is about money.

"The convention," Dr. Callejas said, has produced a "distorted view of what science is and who scientists are. And so now, we are the problem, not the solution."

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*Received 1/26/2007 via NPS's Planning, Environment  
and Public Comment (PEPC) website*

I, Kevin Winker, Curator of Birds of the University of Alaska Museum of the North (the State of Alaska's bird collection), submit the following comments on the Benefits-Sharing Draft Environmental Impact Statement (DEIS):

I am very frustrated by the NPS's apparent inability to deal effectively with the highly contentious specimen ownership issue. Many in the museum community have been at odds with this issue for many years. NPS assertion of ownership is unique among the Federal land management agencies that I regularly deal with, and, as the comments from the Ornithological Council demonstrate, stem from a dubious legal basis. The cloud that this issue causes to overshadow NPS relationships with scientists has strong negative effects: it discourages specimen-based scientists from working on NPS lands the opposite effect intended by the 1998 National Parks Omnibus Management Act, which encouraged scientific research in National Parks.

The benefits that NPS is spurning by not effectively dealing with scientists on this issue are myriad. Two publications treat just some of these benefits: Suarez, A. V., and N. D. Tsutsui. 2004 (The value of museum collections for research and society. *BioScience* 54:66-74); and Winker, K. 2004 (Natural history museums in a postbiodiversity era. *BioScience* 54:455-459).

To see specimen-based scientists treated fundamentally differently than other consumptive users of NPS flora and fauna is insulting, and it operates against the interests of NPS itself in obtaining an improved understanding of these resources. And these are renewable resources. Fishermen, subsistence hunters, berry pickers, and now commercial developers of NPS biological resources are apparently all more important to NPS in this regard than scientists who collect specimens to learn more about our public resources. This has to change! It clearly discriminates unfairly between user groups that have similar consumptive effects on Park resources.

The DEIS further undermines the role that museum researchers might play in enhancing our understanding of national biological resources. The Ornithological Council comments provide pages of detail on how this is likely to play out; the New York Times article appended to the OC's comments shows how similar directions in permitting have greatly hampered biodiversity scientists elsewhere.

Several years ago, Dan Gibson and I assessed the specimen-based knowledge of birds in Alaska's National Parks and found that this index was AN ORDER OF MAGNITUDE

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LOWER in Alaska's National Parks than on other Federal lands in this state. This reflects a longstanding rift - in part due to ownership issues - between specimen-based scientists and NPS. Insofar as this rift seriously retards the development of important new information about avian resources (at least) on National Parks (again, an order of magnitude lower than other Federally managed lands in this state), NPS needs desperately to re-examine how its policies in this arena are working directly against its missions to be effective stewards of public resources and to promote scientific investigation in National Parks.

In sum, this DEIS has fundamental flaws stemming from ownership issues that need to be effectively dealt with BEFORE (not after) development of a new permitting structure aiming at commercial bioprospectors. Ultimately, NPS cannot continue to unfairly discriminate between different consumptive users of the biological resources in our National Parks. Policies that presently put noncommercial scientists who return substantial benefits to the NPS well behind fishing, subsistence hunting, and bioprospecting are in the long run damaging to our public resources.

Sincerely,

Kevin Winker

Curator of Birds and Associate Professor  
University of Alaska Museum of the North  
907 Yukon Drive  
Fairbanks, Alaska 99775  
ffksw@uaf.edu

## American Society of Mammalogists



ROBERT M. TIMM, President  
Department of Ecology & Evolutionary Biology  
University of Kansas Natural History Museum  
Lawrence, KS 66045-7651  
(785) 844-4180 FAX: 844-5335  
Email: btmim@ku.edu

SUZANNE B. McLAUREN, President-Elect  
O'Hair Research Center, Carnegie MNH  
5600 Baum Blvd.  
Pittsburgh, PA 15206-3708  
(412) 624-2613 FAX: 624-2751  
Email: mclauren@carnegieMNH.org

MICHELLE J. HAMILTON, Vice-President  
439 Life Sciences West  
Oklahoma State University  
Stillwater, OK 74078  
(405) 744-5555 FAX: 744-7164  
Email: mhamilton@okstate.edu

DEANNA M. REIDER, Recording Secretary  
Department of Biology  
University of Illinois at Chicago  
Lawrenceburg, IL 61827  
(708) 377-1208 FAX: 577-3527  
Email: dreider@uic.edu

RONALD A. VAN DEN BURG, Secretary-Treasurer  
Department of Zoology  
Oklahoma State University  
Stillwater, OK 74078  
(405) 744-5555 FAX: 744-7164  
Email: ron.van\_den\_burg@okstate.edu

EDWARD J. HESSLE, Journal Editor  
Illinois Natural History Survey  
1816 South Oak Street  
Champaign, IL 61820  
(217) 244-2773 FAX: 333-4949  
Email: edhessle@uiuc.edu

29 January 2007

NPS Benefits-Sharing EIS  
PO Box 168  
Yellowstone National Park, WY 82190

To Whom It May Concern:

The following is a response on behalf of the American Society of Mammalogists to the Benefits-Sharing Draft Environmental Impact Statement issued by the National Park Service in September 2006. The American Society of Mammalogists was founded in 1919. It is the world's oldest and largest organization devoted to the study of mammals. We strongly support the conservation and responsible use of wild mammals based on current, sound, and accurate scientific knowledge. We have a long history of adopting positions on issues concerning the responsible management of mammals, their habitats, scientific collecting, care of research collection, and conservation issues based on our collective scientific expertise.

We feel that this Environmental Impact Statement is flawed because the underlying assumptions concerning ownership of all items (including wildlife) located on parks are erroneous. National Park Service policies based on those false assumptions create significant hardships for the scientific community. These policies also are counterproductive for the National Park Service because they hinder the acquisition of information necessary for management of the biological resources found within the parks. Management and conservation decisions need to be based upon data collected and analyzed by the scientific community working in conjunction with park managers and the National Park Service should be establishing policies that encourage scientific study in the parks.

Although operational definitions of "wildlife" differ from state to state, the underlying concept concerning the ownership of wildlife in the United States is that the People (citizens) own wildlife, which is under the stewardship of the individual states for the benefit of their citizens. Stewardship exceptions focus upon migratory, threatened, rare, or endangered species found in the United States that are regulated (but not owned) by the federal government. The Office of the Solicitor, U.S. Department of the Interior must be aware that this concept is well established.

American Society of Mammalogists RE: NPS Benefits-Sharing EIS Page 2

Implicit in the document under review is the concept that the National Park Service owns wildlife on the lands that it manages. If this false premise were true, the National Park Service would be unique among all land-owning, land-managing, and tenant institutions, organizations, and individuals having control of land in the United States. Current policy of the National Park Service appears to be based on the false precept that anything (including wildlife) found on federal lands is, *ipso facto*, federal property.

Current National Park Service policy concerning scientific collections of wildlife clearly must be considered an action that restricts research activities that could improve understanding of park resources (see statement under ES.3.1 on page xvi). Researchers, especially those based in colleges and universities, are reluctant to expend time, effort, and money (especially scarce state and federal funds) to work on National Park Service lands when the specimens vouchering their work are claimed as property by the National Park Service.

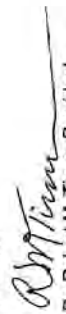
Reference note 27 (cited on page 13 of Chapter One and explained on page 32) states, "Collected specimens that are not consumed in analysis or discarded after scientific analysis remain federal property." Aside from the non-scientific and anti-science implications in that statement, current National Park Service policy requires that the specimens must be kept with National Park Service labels and apart from other collections; that National Park Service permission must be obtained before any researcher can examine them; and the specimens cannot be transferred to a third party. This perception of ownership is maintained even when non-National Park Service public or private funds are used to support the research vouchered by the specimens themselves.

The National Park Service false premise of ownership of wildlife and subsequent control of biological specimens collected on National Park Service lands also is contradicted by the language in the Organic Act of the United States Geological Survey. There is nothing in the NPS Organic Act that implies ownership of wildlife. Management responsibility yes, but not ownership.

If an alternative must be chosen, it would have to be Alternative A. However, as explained here such a decision is based primarily on the erroneous perceptions concerning National Park Service "ownership" issues. Instead, if a benefits-sharing partnership were to be established based on the commercialization of wildlife or any wildlife derivative, that partnership should be with the governments of the States involved for the benefit of their citizens who are the real "owners" of wildlife in the United States.

Thank you for your consideration of these issues. The American Society of Mammalogists would be happy to provide additional information as you continue with your efforts to develop sound management policies for our national parks.

Sincerely,

  
Dr. Robert M. Timm, President  
American Society of Mammalogists



# **National Parks Conservation Association** *Protecting Our National Parks for Future Generations*

Benefits-Sharing DEIS Team  
P.O. Box 168  
Yellowstone National Park, WY 82190

January 29, 2007

Dear Reviewer:

On behalf of the National Parks Conservation Association, we appreciate the opportunity to submit comments on the Benefits Sharing draft Environmental Impact Statement.

Formed in 1919, NPCA's mission is to protect and enhance America's National Park system now and for future generations. NPCA and our 325,000 members have a long-standing interest and involvement in the Benefits Sharing issue, as it applies to icon national parks such as Yellowstone, and across the national park system.

**Northern Rockies Regional Office**  
P.O. Box 1173  
Jackson, WY 83001  
406.495.1560  
406.495.1559  
northernrockies@npca.org

**Gardiner Field Office**  
P.O. Box 4405  
Whitish, MT 59937  
406.862.6722  
406.862.6753

**Grand Teton Field Office**  
P.O. Box 1173  
Jackson, WY 83001  
307.733.4601  
307.734.9470

**Yellowstone Field Office**  
109 W. Calender St., Ste 3E  
Livingston, MT 59047  
406.222.1567  
406.222.4478  
406.222.7460

**National Office**  
1300 19th St. NW, Suite 300 - Washington, D.C. 20006  
202.223.6722 - fax: 202.629.6099 - toll-free 800.628.7275  
www.npca.org

The nation's parks contain some of the world's most pristine natural resources, many of which are found nowhere else in the world. A substantial number of these resources have not yet been adequately studied. For example, a rough estimate tells us that 99 percent of Yellowstone's microbes have not been studied or named. The study of life in our national parks is an important use of national parks.

NPCA believes that the parks should be available for such research, subject to appropriate limitations. Research in parks is among the most important means of demonstrating not only the value of preserving parks, but also of preserving other elements of our natural heritage.

We appreciate the willingness of NPS staff, especially from Yellowstone (Sue Mills in particular), who have been generous with their time and expertise in answering our questions on this issue.

Following are NPCA's general and specific comments and concerns regarding the dEIS:

## **I. General**

The notion of developing Benefits Sharing agreements raises many significant, and legitimate, questions and concerns relative to exploitation and commercialization of parks. We believe that the alternative that best upholds NPS policy and regulation, protects parks and visitor experience and also provides for full public disclosure of Benefits Sharing agreements is Alternative B1. NPCA's general position on the Benefits Sharing issue is as follows, and several points will be more specifically addressed following the general comments.

The National Parks Conservation Association supports benefits sharing agreements between the National Park Service and research entities as described under Alternative B1, under the following conditions:

- 1) Park resources will not be directly or indirectly adversely affected as a result of implementation of a benefits sharing agreement. Further, research activities cannot diminish visitor experience. All park resources must remain unimpaired for future generations.
- 2) The NPS process for negotiating and entering into benefits sharing agreements must be transparent - fully open and accessible to the public. The public should have the right to view any agreement, including the agreement's financial terms and the underlying research permit. NPS serves as the trustee of these national treasures that belong to the public. Only through an open process governed by full public disclosure can NPS hope to alleviate skepticism and concerns regarding commercialization of these treasures, and gain public support.
- 3) Any and all scientific information resulting from any agreement must be provided to the NPS. While monetary compensation should be a part of a benefits sharing agreement, the NPS should focus on securing benefits that help NPS and the public protect park resources and further understanding of our natural environment. Furthermore, it is imperative that NPS assure any final decision includes foolproof internal mechanisms which suppress any

temptation of park managers to enter into such an agreement based upon park financial needs in other operational areas.

4) Monies that are received as a result of benefits sharing agreements should be employed to directly benefit resource protection, as opposed to other park needs or other general government budget items. They cannot and should not be viewed as a revenue stream that substitutes for Congressional budgetary support of the park.

5) No benefits sharing agreement should be developed that results in resources being used for commercial purposes in violation of 36 CFR § 2.1 (c)(3)(v). Any research contemplated under Benefits Sharing agreements cannot result in the direct commercial use of those samples removed from parks.

## II. Specific Issues and Concerns

### 1) Disclosure of Benefits Sharing Agreements

A) *Reasons given in the 'impact analysis' regarding negative impacts of Alternative B1 do not comport with the Purpose and Need for the EIS.*

Pages 122-123 of the DEIS disclose possible effects of alternative B1, including: 1) limiting payment equitability, 2) creating an artificial 'rate ceiling,' 3) discouraging some research, and 4) discouraging establishment of benefits-sharing agreements. The DEIS also states that "mandatory disclosure would limit the NPS's ability to negotiate 'equitable' performance-based payment rates..." The DEIS also suggests that full disclosure "...could affect the amount and timing of monetary benefits actually provided to the NPS." Finally, the DEIS suggests that alternative B1 could reduce the number of benefits sharing agreements because researchers would not want to disclose certain information, and that this alternative *may* require disclosure of information "...that could otherwise be exempt from disclosure under Exemption 4 of the Freedom of Information Act (FOIA)..."

The stated "Objectives of the Proposal and its Alternatives (The Purpose of the EIS)" (DEIS, pp. 14-17), include: 1) Identify the role, if any, of the NPS in the event a researcher wishes to commercialize his/her research results involving study of NPS research specimens, 2) Strengthen conservation and protection of resources managed by the NPS by deepening understanding of biodiversity and physical and biological processes, 3) Ensure that the NPS research permitting process is independent, objective and unaffected by actions proposed in this DEIS.

The impacts disclosed regarding alternative B1 focus on the possibility that NPS may not be able to gain the maximum dollar return in a benefits sharing agreement and the possibility that some researchers would be discouraged from either research or pursuing a benefits sharing agreement.

Given the stated purpose and need for this EIS, none of the stated impacts are valid reasons for not selecting alternative B1. Maximizing profit and maximizing research in the park is not the stated reason for undertaking this EIS, in fact, they may even run counter to the purpose and need for the EIS.

NPCA supports a plan that provides a consistent, fair and open process for developing benefits sharing agreements that assure park resources and visitor experience are not impacted, and one that makes the conscious decision with promoting appropriate research with the public's right to understand the full details of agreements. Alternatively, we would be gravely concerned about a plan that is driven by a focus on maximum monetary gain and/or maximizing research at the expense of one or more of these core issues. As such, it is clear that the stated impacts of Alternative B1 are not consistent with the Purpose and Need for the EIS.

Despite the stated concern over less revenue, the DEIS then closes its impact analysis on p. 123 by declaring that "...it is anticipated that any potential loss of monetary benefits is captured within the estimated range of monetary benefits presented in this DEIS."

B) *Alternative B1 Impact analysis issues are not significant enough to warrant selection of a different alternative.*

National Parks are set aside as icons of America's history and natural wonders. The public has a tremendous stake in these special places, owned by every American, and the duty to preserve an open government and provide a full understanding of the details of the government's negotiations on the public's behalf, and with the public's resources, is absolutely essential to this process. Full disclosure is even more important as it applies to Benefits Sharing, given the significant amount of existing public skepticism over the potential for inappropriate commercialization and the need to continue building public support for the program.

The DEIS suggests that full disclosure could go beyond FOIA's requirements, and that some sensitive information could be made available in the public realm and possibly fewer benefits sharing agreements could be developed and less revenue could be generated under Alternative B1. NPCA believes that, were these the real 'impacts' of selecting alternative B1, that would be an acceptable tradeoff. Because of what they are—national treasures that must remain intact for future generations—the impacts listed are certainly an acceptable tradeoff. The tradeoffs discussed for alternative B1 are acceptable when weighed against the public's right to know the full details of benefits sharing agreements that involve national park resources.

C) *Types of information that should be disclosed to the public*

NPCA understands that there may be some items relative to disclosure that may be of no interest to the public but may be the type of information that could be damaging to a researcher. It is appropriate to further define the types of information that should be disclosed.

However, we disagree with 2.3.4, "Protected CRADA Information" in the Model CRADA (Appendix A, p. 190), and we believe that language should be struck from the model CRADA. We believe that this language would allow a researcher to shield important information related to financial terms that would make it difficult for the public to understand the financial terms of the agreement. We are similarly concerned about 10.3, "Protected CRADA Information" (DEIS, p. 199), which we believe could result in the loss of the knowledge gained from the research conducted under the CRADA to the public. Since sharing the results of research conducted using park resources is one of the most

important benefits to be gained in the benefits sharing agreements, we oppose being able to designate any "Generated Information" as "Protected CRADA Information." This section should be rewritten to assure all research conducted under the terms of the CRADA and research permit are available to the NPS and the public.

NPCA is not interested in the public release of trade secrets or personal information, tax records, or information about the researcher's company or organization, such as Background Intellectual Property (as defined on p. 189), or other inventions that have no direct connection to the research, for which the research permit is issued.

In addition to the terms set forth in the Model CRADA (other than the points mentioned above), Appendix A (dEIS p. 185), NPCA is specifically interested in the agreement's financial terms, including royalty rates, up front payment rates, and the underlying metrics used to derive an agreed upon cash payment. It is also important to understand a detailed description of the biological materials, the discovery or development, process, function, anticipated use and market for the product. We would also like to see a detailed description of the non-monetary benefits provided to the NPS to be included in the CRADA. Finally, all reports made by the company and all subsequent audits (as described in the Model CRADA, 4.4 "Records", p. 193) conducted by NPS, or NPS agent, must also be made available for public review.

#### D) Third party review/audits

Section 4.4, "Records" provides NPS the opportunity to select an auditor to examine a collaborator's books and records to verify reports by the collaborator. NPCA requests that this provision be extended to an agency or organization acting in the public interest. Third party scrutiny and oversight will assure the public that agreements are being followed and the public is receiving the full benefit described in the CRADA.

#### 2) Guarding against inappropriate influence and commercialization

NPCA supports the provisions of alternative B1 that help guard against inappropriate influence of potential benefits on the issuance of research permits and also measures proposed to guard against commercialization of parks. While it is clear that commercial use of park resources is already expressly prohibited, we remain concerned that this prohibition could be eroded with the wrong decision. We therefore support the ongoing commitment to separate the research permitting process from the negotiation of benefits sharing agreements. In addition, we support the additional mitigation measures identified for Alternative B1 that will further secure against motivation to issue research permits based on benefits sharing agreements. This includes:

- 1) The assurance that separate individuals would manage preparation of research permit issuance and benefits sharing negotiations.
- 2) Full compliance with NEPA and public disclosure for each Benefits Sharing agreement. Only through a full, transparent and open vetting process will the public be able to understand the impacts, benefits and tradeoffs associated with individual benefits sharing agreements.
- 3) Full compliance with NPS regulations and policy directives to assure that park resources are protected against impairment or other adverse impacts.

- 4) NPCA believes that the rigorous research permit review process currently used in Yellowstone, outlined on p. 144 of the dEIS, should be applied to the entire NPS system, with the addition of peer review of research proposals.
- 5) Assuring that research permit issuance precedes the development of a benefits sharing agreement.

In addition, we request that NPS consider additional mitigations that will help guard against inappropriate, repeated collection of park materials. We are particularly concerned about the possibility of a researcher returning to the park with a request for a new research permit following successful development of a commercial application from research conducted on samples previously collected. To avoid this, we request that research permits specify that no collection of duplicate samples, whose purpose is to collect more of the same material as previously collected, will be permitted.

Also, the research permit review process outlined on p. 144 provides only for an internal NPS review. We request that this review process explicitly state that NPS will also seek outside academic peer review of research permit applications prior to approval of permit applications. While this may be deemed outside the scope of this EIS, we hope NPS will consider it as appropriate.

#### 3) Types of Benefits to be Shared

We support a focus on assuring for a range of the types of benefits identified under alternative B1. Non-monetary benefits will include: Knowledge and research relationships, training and education, research-related equipment and special services. It is critical that all monetary benefits be dedicated to protection and/or restoration of park resources. While any monetary benefits should be negotiated to assure that the park in question receives a fair return for the use of the public's resources, NPCA is most interested in assuring that the non-monetary benefits described are secured as a first priority, as we believe it is a critical tool to provide the public with new scientific knowledge about park resources. Through the sharing of research, training, education and equipment, non-monetary benefits will provide the greatest overall benefit to the parks and the American public who own these lands.

#### 4) Park Funding and Benefits Sharing

NPCA is acutely aware of the funding shortfall prevalent throughout the national park system and the temptation to view Benefits Sharing as a new revenue stream for parks. We believe that language in the final decision that assures any monetary benefits from an agreement goes towards resource protection or restoration activities and not towards day-to-day operations will help prevent inappropriate use of monetary benefits. However, we would appreciate a more rigorous look at this issue and additional provisions included in the final EIS that will provide better assurances park units cannot use Benefits Sharing revenues for day-to-day operations.

- 5) Exclusion of NPS units where such activity is otherwise prohibited. Please conduct and disclose appropriate analysis to understand which NPS units may have enabling legislation that contains guidance that would prevail over this service-wide policy.

12515-7463  
page 7 of 7

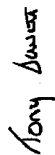
6) Additional Costs associated with development of Benefits Sharing agreements NPCA is concerned about the additional costs to be borne by individual parks and the agency as a whole as a result of implementation of Alternative B1. Not only will significant existing staff time and resources be required to develop and administer agreements, but NPS may need additional staff expertise that it currently does not have to assure NPS negotiates the best possible benefits sharing agreement. All staff time and all other costs associated with the negotiation, development and administration of benefits sharing agreements should be reimbursed and included in the benefits sharing agreement, or as provided for under the Federal Technology Transfer Act of 1986.

7) Full NEPA analysis, disclosure and public review  
All benefits sharing agreements/CRADAs must undergo full NEPA analysis, disclosure and appropriate public review in order for the NPS and the public to understand the potential environmental impacts of each agreement.

8) Compliance with Wilderness Act  
Please assure the final selected alternative and EIS complies with all provisions of the Wilderness Act of 1964.

On behalf of the National Parks Conservation Association and our 325,000 members, we appreciate the opportunity to provide these comments on the Benefits Sharing Draft Environmental Impact Statement.

Sincerely,



Tony Jewett  
Senior Director  
Northern Rockies Regional Office



Tim Stevens  
Yellowstone Program Manager

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ROBERT M. TIMM, President  
Department of Ecology & Evolutionary Biology  
University of Kansas Natural History Museum  
1940 Jayhawk Blvd  
Lawrence, KS 66045-7591  
(785) 864-4180 FAX: 864-6335  
Email: bttimm@ku.edu



SUZANNE E. McJAREN, President-Elect  
Department of Biology  
5800 Baum Blvd  
Pittsburgh, PA 15206-3706  
(412) 665-2615 FAX: 665-2751  
Email: smcjarne@carnegieMNH.org

MEREDITH J. HAMILTON, Vice President  
Department of Zoology  
430 Life Sciences West  
Oklahoma State University  
Stillwater, OK 74078  
(405) 744-5555 FAX: 744-7824  
Email: mmeredith.hamilton@okstate.edu

26 January 2007

NPS Benefits-Sharing EIS  
PO Box 168  
Yellowstone National Park, WY 82190

To Whom It May Concern:

The Systematic Collections Committee of the American Society of Mammalogists (ASM) offer these comments on the Benefits-sharing Draft Environmental Impact Statement (DEIS). The mission of the Systematic Collections Committee is to advise curators worldwide in matters relating to collections administration, curation, and accreditation, and to maintain a directory of all mammal collections in the western hemisphere. The Committee also surveys existing collections approximately once each decade and maintains a list of curatorial standards for managing a collection-accreditation program under the auspices of the Society.

While we feel the ideas set forth by this proposal for a benefits-sharing policy may have some merit, particularly with regard to the development of commercial products, we are concerned that the proposal is worded to the effect (and in fact, much of the ideas presented are based on the premise) that the National Park Service (NPS) owns the wildlife (and products derived from this wildlife) for which it has stewardship and responsibility. An example of such wording is found in reference note 27 (cited on page 13 of Chapter One and explained on page 32) which states,

"Collected specimens that are not consumed in analysis or discarded after scientific analysis remain federal property. The NPS reserves the right to designate the repositories of all specimens removed from the park and to approve or restrict reassignment of specimens from one repository to another. Because specimens are Federal property, they shall not be destroyed or discarded without prior NPS authorization....The sale of

2

collected research specimens or other unauthorized transfers to third parties is prohibited."

Such conditions have direct implications for the institutions that house natural history collections that include specimens collected from within national parks. Some (but not all) of the specific potential ramifications of this premise of NPS ownership of specimens collected in national parks include: the recall at any time of any or all specimens ever collected in a National Park by any NPS employee; the need to segregate and separately manage such specimens from other specimens in an accredited scientific collection; the need to obtain permission from the NPS to allow qualified scientists to examine such specimens, or to make available data from such specimens to other parties; and the inability to transfer such specimens to third party scientists or scientific institutions.

These ramifications severely jeopardize the integrity of scientific research collections, the activities they support, and the ability of museum administrators, collection managers, and curators to effectively study and manage these irreplaceable resources. A fundamental tenet of specimen-based scientific research is that specimens should be made freely available for all relevant and appropriate scientific uses; that specimens be sent on loan to researchers at other institutions as standard policy and managed by the museum that houses the specimens; that collections at a single institution be housed in a manner that is integrated and effective for their curation and management; and that specimens not be transferred out of a scientific institution/collection by a governmental or other agency except when there is a clear case for misconduct or mismanagement. Indeed, the policies proposed by NPS could significantly hinder the study and conservation of the biodiversity housed within U.S. national parks by substantially inhibiting the normal conduct of scientific research.

Some years ago, the American Society of Mammalogists passed a resolution (2003, *Journal of Mammalogy* 84(4): pg. 1485) calling for the Department of the Interior and the National Park Service to work with the scientific community in developing a policy that allows the permanent retention of biological specimens collected on National Park Service lands by accredited institutions with a history of curatorial responsibility in maintaining scientific collections. We urge the NPS to address this issue and to work with the scientific community to resolve a policy that is not only unacceptable to that community, but also dangerous for the study and conservation of the irreplaceable resources housed within our national parks. We invite administrators of the NPS to tour an ASM accredited collection and discuss this issue with collection managers and curators of that institution to get more details on why we view this issue as extremely important.

Until this issue of ownership is resolved, the Systematic Collections Committee of the ASM would urge the selection of Alternative A as proposed in the DEIS.

Sincerely,

*William Stanley*

William T. Stanley  
Chair, Systematic Collections Committee

**Comments**  
Park: Washington Office  
Project: Benefits-Sharing in the National Parks (ID: 12515)  
Document: Benefits-Sharing Draft Environmental Impact Statement (ID: 18763)

**Comment Form**

City: SEATTLE State/Province: WA

Postal Code: 98144

First Name: PHILIP Middle Initial: L

Last Name: BEREND

Organization: WASHINGTON BIOTECHNOLOGY ACTION COUNCIL

Member: Official Representative: VICE-PRESIDENT

Address 1: 3827 S. Mc Clellan ST. Seattle, Wash. 98144

Address 2: USA

Country: phberend@washington.edu

E-mail: phberend@washington.edu

☐ Keep my contact information private

**Rationale:**

Topic Questions Instructions

Topic Questions

Comments or Requests: ATTACHED

Many of the National Parks are unique not only in their beauty but in their biodiversity. It is not surprising, therefore, that some species may be found only within them. Some of these species do have properties which can be utilized for human health and well-being. The Washington Biotechnology Action Council (WashBAC), a 16 year old NGO involved in State, national and international issues concerning biotech, has long opposed the NPS-Diversa sort of agreement, an egregious example of the privatization of a public good. Corporate give-aways along these lines are inconsistent with the purposes of the National Parks, and should not be tolerated. We therefore, welcomed the 1998 litigation and the 1999 court decision; it is outrageous however, that it has taken NPS 7 years to do a draft EIS.

The alternatives presented by the NPS do not include the approaches that WashBAC would favor. The modest use of a park's resources for human benefit can be unobjectionable. In the Diversa example, the taking samples of micro-organisms in no way disrupted Yellowstone's ecological stability. The problem was that substantial benefits have flowed to a very limited number of private interests, and this is not a suitable use of a public treasure.

Therefore, among the possibilities presented to us, WashBAC favors Alternative C. We could support a variant of Alternative B which included the following characteristics: a) there would be no ecological disruption from the activity; b) there is FULL public disclosure (no claims of CBI in regard to the public's property); c) the term "commercial" is replaced by the term "private sector"; and d) the proportion of direct monetary benefits is high and significant. We would also not oppose a public entity following such criteria. Since the NPS alternative B does not adhere to these elements, we reject it and urge you to do so as well. We are particularly concerned that NPS has labeled one approach the "environmentally preferred" option when the preference appears to be based on ideological, not environmental considerations.

*Philip Berend*  
Vice-President  
Jan 16, 2007



## National Parks and Monuments Committee

2801 Oakton Manor Court  
Vienna, VA 22124

January 26, 2007

NPS Benefits-Sharing EIS  
P.O. Box 168  
Yellowstone National Park, WY 82190-0168

Dear EIS Team:

These comments are offered on the Benefits-Sharing Draft Environmental Impact Statement.

Units of our national park system represent major ecoregions that are home to the vast majority of the species that make up our natural world. The Sierra Club is very supportive of scientific research occurring in our national parks and aware that on occasion biological resources will inevitably result in discoveries with may have economic, social and environmental values. However, the Sierra Club believes that wildlife and biological resources of the national parks should not be exploited for purely commercial purposes. Yellowstone and the other national parks were designated as national parks to protect them from exploitation and to ensure they are managed "in such manner and by such means as will leave them unimpaired for the enjoyment of future generations."

At present economic benefit arising out of national park research or its resultant commercial use is not required to be shared with the public. The proposal assessed by the Benefits Sharing Draft EIS attempts to address this issue. The Sierra Club recognizes that national parks as repositories of biodiversity, and that scientific research that occurs in the national parks on occasion may end up being important in the development of pharmaceuticals and other commercial products. Since our national parks are owned by the American public, the American public should profit from any commercial applications developed from research in national parks. However, we believe that scientific research permitted in the national parks should be geared to pure science and not commercially-driven science.

The Sierra Club is concerned that the size of the National Park Service scientific staff is very limited at present and that this staff needs to focus its time on science in the public interest, not developing, negotiating and managing Commercial Research and Development Agreements (CRADAs). The Sierra Club has concerns regarding how much time would be taken away from research in the public interest, while NPS officials and outside contractors devote time and money to drafting CRADAs and then monitoring the CRADAs.

The EIS should make clear that the proposed action does not change research permitting procedures and that the findings of all permitted research under all alternatives will continue to be accessible to the public.

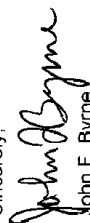
The EIS should emphasize the need for permitted research for:

1. Revision in management practices to accommodate species adaptation, habitat change and other factors that have already resulted or will result from climate change;
2. Revision in the management of parts of ecosystems outside national parks necessary to stop, reverse or mitigate adverse impacts, including those that have already resulted or will result from climate change; and
3. Educational use at grade school, high school and university levels, and for the general public.

The EIS should better describe that the benefits of permissible research. The Sierra Club is very concerned over impacts that extractive activities for commercial purposes would have on the 84.4 million acres of the National Park System, including millions of acres now designated as Wilderness Areas.

Thank you for the opportunity to comment. The Club wholeheartedly backs the continuation of important scientific research occurring in our national parks. We, however, have concerns that research with commercial applications, not end up dominating scientific research in national parks because of the financial incentives the National Park Service would receive from this research. Scientific research permits need to be based on the importance of the work not on financial returns to the National Park Service.

Sincerely,

  
John F. Byrne  
Chair



Public Employees for Environmental Responsibility

2000 P Street, NW • Suite 240 • Washington, D.C. 20036 • 202-265-PEER(7337) • (fax) 202-265-4192  
e-mail: info@peer.org • website: www.peer.org

January 25, 2007

National Park Service  
Benefits Sharing DEIS Team  
P.O. Box 168  
Yellowstone National Park, WY 82190

Dear National Park Service (NPS) Benefits-Sharing Team:

Public Employees for Environmental Responsibility (PEER) offers the following comments on the Benefits-Sharing Draft Environmental Impact Statement (DEIS):

#### A. Points of Agreement

##### 1. The NPS May Enter Into Benefit-Sharing Agreements.

PEER agrees that the National Parks Omnibus Management Act of 1988 (NPOMA) authorizes the Secretary to "...enter into negotiations with the research community and private industry for equitable, efficient benefit-sharing agreements," resulting from scientific study in the national park system. 16 U.S.C. 5395 (112 STAT. 3500).

##### 2. This DEIS Cannot Cover All Prospective Benefit-Sharing Agreements.

The DEIS acknowledges that the National Park Service (NPS) cannot adopt a single EIS that covers all future benefit-sharing agreements. Each proposed specimen collection, or other intrusive research, whether subject to a benefit-sharing agreement, requires NEPA review. It is impossible for a programmatic NEPA document to anticipate, much less assess, the impacts of benefit-sharing agreements throughout the national park system.

#### B. The DEIS Ignores Relevant Laws.

The DEIS misapplies the Federal Technology Transfer Act (FTTA) and disregards the Wilderness Act. We examine each law separately.

##### 1. Federal Technology Transfer Act of 1986

The DEIS states that each national park is a "laboratory" in the meaning of the FTFA. Thus, the DEIS reasons, benefit-sharing agreements should take the form of a Cooperative Research and Development Agreement (CRADA), as authorized by the FTFA. PEER does not dispute that the NPS may enter into benefit-sharing agreements (BSAs) under NPOMA. PEER asserts that CRADAs are now an improper instrument for several reasons.

The DEIS quotes the FTFA's definition of a laboratory as "a facility...owned by a Federal agency, a substantial purpose of which is the performance of research, development, or engineering by employees of the Federal Government." 15 U.S.C. 3710a(d)(2). While one could stretch the research aspects of the NPS to transform each park into a "laboratory," there is no evidence that the 1986 Act, or its amendments, meant to include each national park system area as a "national laboratory." Nothing in that Act's language or its legislative history refers to a national park system or its areas as "laboratories."

A review of the legislative history reveals that Congress enacted FTFA for the named "national laboratories." Among these are "facilities" operated by the Department of Energy (e.g. Los Alamos National Laboratory, Sandia National Laboratory, Lawrence-Livermore National Laboratory etc.), the Environmental Protection Agency research laboratories, the National Institutes of Health and the Agricultural Research Service in the Department of Agriculture.

If the 1986 FTFA covered the NPS and each park is a "laboratory" in the meaning of the law, then the enactment of benefit-sharing language of NPOMA in 1998 would be unnecessary. Each national "laboratory" park could have entered into CRADAs without the enactment of the NPOMA section that authorizes "benefits-sharing agreements." The DEIS, by relying on the FTFA and CRADAs, implicitly posits that Congress acted superfluously when it enacted NPOMA section 205(d). NPOMA itself makes no reference to CRADAs and the FTFA.

Neither the NPS Director nor the Secretary of the Interior was aware, in the period contemporaneous with the FTFA, that the FTFA governs the national park system as laboratories. If the FTFA governs the national park system as laboratories, the NPS has been in substantial noncompliance with several provisions of that law. In brief the FTFA did the following:

- Made technology transfer a responsibility of all federal laboratory scientists and engineers.
- Mandated that technology transfer responsibility be considered in employee performance evaluations.
- Established principle of royalty sharing for federal inventors (15% minimum) and set up a reward system for other innovators.
- Legislated a charter for Federal Laboratory Consortium for Technology Transfer and provided a funding mechanism for that organization to carry out its work.
- Allowed current and former federal employees to participate in commercial development of the research fostered by the CRADA, to the extent there is no conflict of interest.

The National Park Service, governed by the FTFA since 1986 (if we were to trust the DEIS), has yet to implement a single one of the above actions:

- Where is the "technology transfer responsibility" found in the performance evaluations of employees? The answer, in short, is "NOWHERE."
- Does the NPS Director sit as a member of the Federal Laboratory Consortium for Technology Transfer? NO.
- Has the NPS set up a mechanism to allow current and former federal NPS employees to participate in commercial development of the research fostered by the CRADA? NO

In short, the NPS disregards the CRADA provisions of the FTTA, expect for that portion that may provide a revenue stream or monetary benefits to the negotiating park ("laboratory").

The FTTA language on CRADAs also requires that "an agency shall make separate determinations of the mission or missions of each of its laboratories." 15 U.S.C. 3710a(e). Where is the NPS determination of the mission or missions of the Yellowstone National Park Laboratory, or the Sequoia National Park Laboratory? NOWHERE. The NPS has never made the required FTTA determinations of the mission or missions of each of its nearly 400 separate "laboratories."

The FTTA-CRADA "shoe" does not fit. As the DEIS states, the concept that parks may employ CRADAs arose in Yellowstone in 1998. We suspect it was developed in a burst of creative zeal as the Lab Director (superintendent) of Yellowstone National Laboratory sought a way to reap monetary and other benefits from DIVERSA Corporation's research on thermophiles in hot springs. Yes, a federal Court ruled early in 1999 that parks could enter into CRADAs under the FTTA. But, that stretch of the FTTA occurred without any reference by plaintiffs, defendants or the court to enactment of NPOMA in December 1998. NPOMA now governs "benefits-sharing agreements," (BSAs) not the FTTA. The NPS must leave behind the inappropriate CRADA tool found in the FTTA and use the more relevant, current and park specific law – NPOMA.

## 2. The Wilderness Act

Over 40 million acres of the national park system are designated wilderness. The Wilderness Act states that in wilderness, "there shall be no commercial enterprise," except for "commercial services" necessary for realizing the recreational or other wilderness purposes of the Act. The exception covers guide services for hikers, horsemen, fishermen and, in non-NPS wilderness, hunters. Commercial bio-prospecting for commercially viable products by a business enterprise, as authorized in the NPS-DIVERSA CRADA, does not qualify for the "commercial services" exemption.

The Wilderness Act prohibition on commercial enterprises precludes commercially motivated bio-prospecting by commercial enterprises. Yet the DEIS makes not a single mention of the Act. The DEIS doesn't care to discuss, let alone apply, the Wilderness Act prohibition.

Let us accept, for arguments' sake, that FTTA and CRADAs were the applicable law, then the FTTA "does not limit or diminish existing authorities of any agency." 15 U.S.C. 3710a(f). Thus, the Wilderness Act mandate imposed upon the NPS is neither limited nor diminished by the FTTA. FTTA does not repeal or overrule the Wilderness Act prohibition on "commercial enterprise."

Should the NPS alternatively decide that NPOMA is the authority for BSAs, rather than the FTTA, NPOMA provides no explicit exception to the commercial enterprise prohibition of the Wilderness Act. As a general rule of statutory interpretation, any notion that NPOMA (or the FTTA) implicitly repeals the commercial enterprise prohibition of the Wilderness Act is highly disfavored.

## C. Alternative C Protects the Parks.

PEER endorses Alternative C. Alternative C allows the NPS to enter into benefits-sharing agreements. Alternative C differs from Alternative B in that it disallows agreements with entities whose research is commercial in nature, motive and purpose. There is a significant distinction between independent scientific research that fits under the NPS research mandate to conserve the parks and that could yield a commercial application down the road, and research that is strictly commercial in nature. An example of the former is the development of the multimillion-dollar polymerase chain reaction process. Alternative C recognizes that distinction. Under Alternative C, the NPS would not sign a benefits-sharing agreement that is a purely commercial undertaking.

No one in or outside of the NPS can logically dispute that bio-prospecting, like other forms of prospecting, while a relatively new method of resource exploitation, is exploitation nonetheless. There is a commonsense distinction between commercial exploitation and purely scientific investigation. Commerce is qualitatively different from educational or scientific activity of a similar nature due the very different forces that drive it.

## D. Alternatives B Fail to Protect Parks.

The DEIS fails to erect a system for managing BSAs to ensure that agreements serve the protection of national park system resources. For example, Exxon-Mobil researchers could approach a park manager seeking a BSA to conduct seismic surveys in a park to determine oil deposits in and around the park. Alternative C would bar a BSA with Exxon under the described circumstances. But, without a doubt, this type of BSA could occur under Alternatives B. If we are wrong, then the Final DEIS must state so and explain why. Otherwise the DEIS is a vague and unformed document whose results have neither been sufficiently plumbed nor assessed.

The seismic research example given above could occur under both of the B Alternatives because neither B Alternatives bar any commercially motivated research. Seismic research is only one of many conceivable scenarios where research by commercial

Perhaps the NPS is willing to subject the parks to commercial exploitation in the name of research just to get a few of the monetary crumbs that fall from the table. We oppose that as a legitimate rationale for commercialization of the parks. But, at a minimum, if the NPS adopts either of the B Alternatives, the NPS must make clear that any BSA with a commercial enterprise, for research whose purpose is commercial, may not take place in designated wilderness.

#### **E. Alternative B2 Can Lead to Implications of Corruption.**

If the NPS adopts any B Alternative, we urge that the NPS adopt Alternative B1. Under that alternative, there must be full public disclosure of the benefits, monetary or non-monetary, that are exchanged between the parties to the BSA. Keeping such information secret is a despicable betrayal of the public trust.

For the park employees' sake, keeping such information secret will lead to inevitable suspicion of corruption. The long history and time honored reputation of the NPS must not be subjected to any such suspicion. NPS signatories to BSAs may trade away the public interest for their own enrichment, either in their current positions, or after retirement, through the "revolving door." When powerful commercial interests are at stake, such practices have occurred on a large scale in other agencies. Don't fool yourself, NPS employees are not all Boy or Girl Scouts. There is no legitimate justification for keeping secret the benefits, monetary or non-monetary, that are exchanged between the parties to the BSA.

#### **F. Benefits Must Go to NPS Headquarters.**

A means to ensure that park managers meet the highest professional standards in negotiating and approving BSAs is to direct all monetary benefits to a central account in the NPS Headquarters in Washington, D.C. Perhaps that account should be under the management of the Chief Scientist, and/or the NPS Leadership Council. The central account should be devoted solely to the research needs of the national park system. In this way, the Service's most pressing research needs are supported first.

Deposit of monies from BSAs in the generating park has some distasteful attributes. Keeping monetary benefits in one park contributes to a "soft" corruption of doing sweetheart BSAs because the monetary benefit accrues to "my account." If the account is not the beneficiary, the manager will be more circumspect ("honest" may be a better word) about whether a given research proposal will impair park resources. For example, one of the methodologies used by bio-prospectors involves "in situ enrichment selection." By "in situ enrichment selection" PEER means enrichment of hot springs with any substance, or altering the pH of any body of water, for the purpose of finding an organism that thrives and/or outcompetes other organisms in the artificially induced state. Such experiments aim to locate organisms or enzymes whose genetic composition makes them best suited for specific industrial practices. This is a fundamental impairment of the body of water. Yet, if the approving official counts the monetary benefits that could accrue

directly to his/her account, will their judgement not be affected? Saying "NO" becomes that much more difficult.

Scientific study is a two-edged sword. Research, including research that involves the collecting of biotic resources, is important to further the conservation mandate that Congress imposed on the NPS. However research also raises more than a theoretical potential for harm to park resources for purposes that are unrelated to the NPS mission. Another recent example involved proposals to research drill in the wilderness of Katmai National Park in Alaska. All scientific research is not allowable within parks. Research, especially research that disturbs or removes biological fabric or involves activities prohibited by the Wilderness Act (16 U.S.C 1131(b)), must surmount a high hurdle before the NPS may permit it. Some research cannot meet the legally applicable tests.

The national park system is one system. It is not an amalgam of affiliated areas, each one open for business. Sending monetary benefits to a central account reinforces the unity and common purpose of the national park system. Nothing in NPOMA mandates that the benefits from BSAs be deposited in the individual park.

#### **G. NPS Must Establish Principles of Federal Employee Participation.**

PEER suspects that at the end of this DEIS comment period, the NPS ignores our remarks and continue to insist that its conduct is authorized by the FTAA. If so, then NPS conduct is also governed by the FTAA. The FTAA mandates two things as discussed earlier in these comments. The FTAA:

- Established principle of royalty sharing for federal inventors (15% minimum) and set up a reward system for other innovators.
- Allowed current and former federal employees to participate in commercial development of the research fostered by the CRADA, to the extent there is no conflict of interest.

Ethics issues relating to the FTAA are complex and numerous. Agencies that are actually governed by the FTAA (not like the NPS, which imagines that it is) have developed such ethics standards. The NPS has not even thought about it. That is but one indication that the NPS never actually believed the FTAA applied to it until the DIVERSA Agreement led it to grasp this flimsy rationale.

Before entering into a single benefits-sharing agreement, including the DIVERSA-Yellowstone CRADA, the NPS must adopt standards to implement these parts of the FTAA that guard against conflicts of interest or corruption. The ethics standards must be reviewed by the Department of Justice and be placed before the public.

#### **H. Alternative B Is Unworkable.**

Researchers who develop commercial applications derived from NPS research permits have no incentive to seek out or enter into CRADA agreements with NPS. The

cumbersome 30-page model CRADA with profit-sharing as well as detailed reporting requirements is something an entrepreneur would seek to avoid at all costs. Why would an industry seek out a government agency as a non-contributing profit-sharing partner?

Under Alternative B, the issuance of research permits would be unchanged. Researchers are not required to enter into any contracts to implement a CRADA. Rather, the obligation to enter into a CRADA only arises when or if useful discoveries are developed. That event may well take place long after the research permit has expired.

The DEIS spells out no means by which NPS tracks or learns that a useful discovery with potential commercial application has occurred. Thus, it is unlikely NPS will be able to enter into a CRADA before the discovery is commercially exploited.

In the event that NPS was able to discover the discovery, it lacks any legal means to force the commercial researcher to negotiate a CRADA with it. This legal impotence will be particularly pronounced if the researcher has entered into contracts with third-parties who have no contractual connection with NPS.

As a consequence, it is unlikely that NPS will ever realize a monetary revenue stream from the CRADA alternative it proposes.

If you have any questions about our comments, please feel free to call me at (202) 265-PEER.

  
Jeff Ruch

Executive Director



## Greater Yellowstone Coalition

P.O. Box 1874 • Bozeman, Montana 59711 • (406) 586-1593 • fax (406) 556-3839 • gyc@greateryellowstone.org

Benefit-Sharing DEIS Team  
Yellowstone Center for Resources  
P.O. Box 168  
Yellowstone National Park, WY 82190

January 29, 2007

Dear Benefit-Sharing DEIS Team,

Please accept these comments from the Greater Yellowstone Coalition on the Benefit-Sharing DEIS. We appreciate the opportunity to comment on this document. While a decision on benefit-sharing will have service-wide implications we recognize that Yellowstone National Park is the park likely to be most impacted by this decision.

**GYC recommends the National Park Service (NPS) select Alternative B1: Benefit-Sharing with Mandatory Disclosure of All Terms and Conditions.** This alternative should be implemented in a manner that insures park resources remain unimpaired, the process for entering into benefit-sharing agreements is transparent, and clear guidelines are established to insure park managers do not enter into benefit-sharing agreements under pressure to meet budget or fundraising targets.

National parks should be open and available for research, with appropriate limitations. Increasing knowledge through research in national parks is an important value of our parks and one that the public understands and respects. New knowledge of our parks and their natural heritage assists in demonstrating the value of preserving pristine areas for conservation.

At this time, separate NPS policies and regulations exist to guide research agreements between parks and researchers. It is critical that the research permitting process remain separate from benefit-sharing agreements and that research permits not be awarded based on their potential to provide revenue or other benefits to the park. As currently written, Alternative B1 does not undermine the current NPS research-permitting process.

Current NPS regulations (36 CFR 2.1) prohibit the commercial use or sale of research specimens. Alternative B1 does not conflict with these regulations. Given that the commercial use of knowledge derived from specimens via research is not prohibited, benefit-sharing as proposed under Alternative B1 has the potential to benefit our parks by increasing the knowledge about our parks and the ability NPS has to share new knowledge with the public.

Holzer Falls Office • 162 North Woodruff • Idaho Falls, Idaho 83401 • (208) 522-7927 • fax (208) 522-0448  
Cody Office • 1209 Shoshone Ave., Ste. 215 • Cody, Wyoming 82414 • (307) 527-0211 • fax (307) 527-0250  
Jackson Office • P.O. Box 8057 • Jackson, Wyoming 83001 • (307) 734-6004 • fax (307) 734-6019

[www.greateryellowstone.org](http://www.greateryellowstone.org)

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Benefits-sharing agreements between NPS and commercial entities should be supported under the following conditions:

- 1) Park resources should not be directly or indirectly adversely affected by the research or specimen collection process. Also, visitors and their experience and enjoyment of parks should not be adversely affected by research conducted within parks. Park resources must remain unimpaired for future generations.
- 2) The process for entering into benefits-sharing agreements must be open to the public and transparent. The public ought to be provided with an opportunity to comment on the agreement and the final agreement must be available to the public. If this process is not done openly, the public will lose faith that NPS is acting on its behalf and the public will lose its ability to advocate for and ensure the best interest and outcome for our parks.
- 3) Any financial compensation that results from a benefits-sharing agreement should be dedicated to the conservation of resources protected and managed by NPS. In general this should include scientific research within the park and educating the public about park resources. No monies from benefits-sharing agreements should leave NPS, nor should they be used to support general park operations and maintenance that is the fiduciary responsibility of the US Congress. NPS must adopt and enforce clear guidelines and procedures to ensure that park managers are not tempted to enter into agreements to meet existing budgetary needs within parks.

NPS should consider placing a percentage of all royalties into a funding pool that could benefit parks that don't have the opportunity to enter into benefits-sharing agreements, but have demonstrated research needs. The funding pool could be administered and shared at the regional level.

It is conceivable, albeit unlikely, that any one park could enter into a benefits-sharing agreement that provided royalties that exceeded the research budget of a park. NPS should prepare for such an instance, and develop a process for sharing royalties with other park units within the given park's region. This could benefit parks that have small research budgets and would otherwise never be able to undertake special research projects.

- 4) Above and beyond any financial compensation or non-monetary benefits received from commercial entities, NPS should benefit from the sharing of all knowledge gained from the research.
- 5) Scientific research and specimen collection activities in national parks should continue to be governed by existing NPS regulations and through the existing NEPA process.
- 6) The NPS should review the benefits-sharing program every five years to assess lessons learned, evaluate opportunities to strengthen the program, ensure the research permitting process remains insulated from the benefits-sharing agreements, and demonstrate that any benefits accrued are not negatively affecting congressional

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spending on park programs. The public should be given the opportunity to comment on the reviews and view the final reports.

The Park Service currently supports Alternative B2 with optional disclosure of the terms and conditions governing benefit-sharing agreements. GYC does not support this alternative, and urges NPS to designate Alternative B1 as its preferred alternative in the Final EIS.

Thank you for the opportunity to comment on this document. If you have any questions about these comments, you can call me at 406-586-1593.

Respectfully,

  
Amy McNamara  
National Parks Program Director

# Representative Comments from Individuals

|           |                   |            |                           |
|-----------|-------------------|------------|---------------------------|
| 12515-4   | Rick Pierides     | 12515-150  | Martha B. Ashton-Sikora   |
| 12515-6   | Jo A. Schaper     | 12515-166  | N/A                       |
| 12515-21  | Jonathan M. Frey  | 12515-1401 | Don Masterson             |
| 12515-32  | Brent Eubanks     | 12515-1903 | Mary Jo Veverka           |
| 12515-36  | Daniel Toman      | 12515-4602 | Karen Eble                |
| 12515-37  | Kathleen Moon     | 12515-5083 | Gordon Rands              |
| 12515-38  | Louis F. Good     | 12515-6718 | George & Frances Alderson |
| 12515-39  | Alicia Siegel     | 12515-6719 | Seven Dunsmore            |
| 12515-56  | Kept Private      | 12515-6721 | Necia Refes               |
| 12515-59  | Kept Private      | 12515-6724 | Edwin J. Potts            |
| 12515-61  | Craig C. Zandstra | 12515-6733 | Michael Roberts           |
| 12515-68  | R. Ferguson       | 12515-7116 | Laura Pace                |
| 12515-69  | Kept Private      | 12515-7241 | Jennifer Vollmer          |
| 12515-71  | Kept Private      | 12515-7429 | Robert Moss               |
| 12515-74  | Sue Voelkel       | 12515-7444 | Katie La Salle-Lowery     |
| 12515-79  | Chad E. Adams     | 12515-7455 | Jesse Turner              |
| 12515-83  | Ryan T. Minton    | 12515-7461 | Leonard P. Hirsch         |
| 12515-84  | Kathy Freeman     | 12515-7466 | Oren Kennedy              |
| 12515-85  | Philip Skehan     | 12515-7473 | Alan Carlton              |
| 12515-88  | Rob Kimmich       | 12515-7476 | Stephen Brown             |
| 12515-89  | Nancy C. Jacques  | 12515-7477 | Noah Jackson              |
| 12515-92  | Kept Private      | 12515-7485 | June Anna-Fey             |
| 12515-95  | Pam Racow         | 12515-7487 | Mary Ellen Anderson       |
| 12515-102 | Kept Private      | 12515-7490 | Michael Powers            |
| 12515-105 | Eric Prescott     | 12515-7497 | Frances Lamberts          |
| 12515-112 | Jonathan Matthews |            |                           |

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*Received 9/29/2006 via NPS's Planning, Environment  
and Public Comment (PEPC) website*

I held research permit OZAR-00006 on Riverways for my undergraduate thesis work. I prefer alternative B3, which both benefits NPS and gives some flexibility in negotiation with researchers regarding financial matters.

One thing which I would like clarified would be the word 'commercial.' What comes to mind first, of course, is the PCR research from Yellowstone in which information derived from actual samples are those generating substantial revenue for the researcher and his or her company.

What does not seem to be addressed here is a case where information recovered in the course of research is sold for its editorial (not scientific or manufacturing) value.

For example, I've written and sold articles and photographs about my study site for insignificant amounts of money--less than \$100 total. Not all research on the parklands ends up in scientific journals, (which are generally no-pay or you pay venues).

I note in your summary that you are required to abide by intellectual property rights laws--presumably this would allow me (and others) to continue to incorporate research information obtained from researchers in informational, non-technical articles without requiring a fee payment to the NPS, and continue to permit publication of such information with a modest profit to the writer where the primary intent is information, entertainment, education or persuasion, not manufacturing or testing.

Other than this clarification, if the NPS can get some compensation back from ventures where samples taken from the park are then used to make piles of money, AND that money then goes back to NPS sites affected, or at least, back into resource management at the parks, I am all for Alternative B3.

Jo Schaper

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*Received 9/28/2006 via NPS's Planning, Environment  
and Public Comment (PEPC) website*

The height of absurdity, government needs and must be open and I strongly object to any language that would prevent terms of any agreement from being kept secret from the public. These are our parks and our heritage. They do not belong to large pharmaceuticals, lest of all, foreign corporations. As a member of the public I have the absolute right to know who is making money off our parks. Secret arrangements, behind our backs, does not do justice to the American people!

Rick Pierides

*Received 10/06/2006 via NPS's Planning, Environment  
and Public Comment (PEPC) website*

Bioprospecting is an important means of advancing our society. Prospecting in the deep seas has led to pharmaceutical advances ranging in drugs which treat inflammation and arthritis to those which help in the treatment of HIV. However, it is the way in which bioprospecting is done which must be carefully scrutinized.

If the plan is to examine the features of the parks such as Yellowstone's thermally active areas, but not deface or alter in any way their current state, then bioprospecting should be allowed to proceed. What humanity may learn from organisms which have the ability to survive such extremes in environment could be enormous. However, if the exploration and collection of such species and minerals is not watched carefully you run the risk of altering a landscape and ecosystem to the point of destruction.

I completely support bioprospecting in the parks as long as there is a close eye, and complete scrutiny, and the prospecting being done.

You cannot expect an ecosystem to survive, or for humanity to learn for such prospecting, if the prospecting involves gouging the earth.

I hope this issue will be resolved with the utmost respect it deserves.

Sincerely,

Jonathan Frey

*Received 10/22/2006 via NPS's Planning, Environment  
and Public Comment (PEPC) website*

In principle I support allowing commercial bioprospecting in our National Parks. However, any such scheme must make protection and preservation of the wild ecosystem an utmost priority. This includes requiring whatever environmental impact statements and field oversight are necessary to ensure the collecting is done in an ecologically sensitive manner.

Secondly, and such scheme must be transparent and open the the public. First and foremost, the terms and conditions of the agreements between the Park Service and the companies in question must be available for review. The Parks Service represents taxpayers and citizens such as myself, and acts on our behalf to protect and nurture the Parks. If you wish to negotiate agreements concerning the parks, those agreements MUST be part of the public record.

Brent Eubanks

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*Received 11/04/2006 via NPS's Planning, Environment  
and Public Comment (PEPC) website*

Thank you for to opportunity to respond.

I support option 2, shared benefits, with two caveats...

I did not find in any of your document details on guidelines and/or rules for extraction, when and if a material of interest is discovered. It is one thing to allow commercial access for research, but in the event of a viable discovery, how will the park protect its philosophical and physical mission to the public when extraction begins?

Secondly, having been in the film industry and knowing how easy it is to hide profits from shareholders, it is imperative that the benefits-sharing criteria is spelled out clearly and a third party review board is in place to insure proper reporting on the part of the commercial party.

Kathleen Moon

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*Received 10/31/2006 via NPS's Planning, Environment  
and Public Comment (PEPC) website*

I am writing to express my opposition to the commercial exploitation of our National Parks. Our government has an honorable history of making its scientific research available to all citizens, in the public domain, like the USGS survey maps I use often. Opening our National Parks to private economic gain, with no thought of the public good, is directly opposed to this tradition. Scientific research is a laudable endeavour, but only if conducted in the open so the knowledge gained may be shared by all, and not locked away by private greed. I strongly support Alternative C and oppose all forms of Alternative B, or any other avenue that would not require public ownership of the knowledge gained from public land.

Daniel Toman

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*Received 11/07/2006 via NPS's Planning, Environment and Public Comment (PEPC) website*

On the surface this appears to be a good idea, Alternative B. But one aspect of it is a very bad idea and could lead to unintended consequences. That aspect is the part of the proposal that states that any benefits should flow to the park where the project takes place. That is a terrible idea.

Yes, the taxpayers are due some of the benefits that would accrue from any commercial exploitation of park resources. But the money should go into a national NPS pool and not to one park or area. Then individual parks would submit proposals for interpretive and resource management projects on an annual basis. The money should only be used for those purposes.

Otherwise there is a very clear conflict of interest for individual park superintendents, especially in these times of tight budgets. There would be a much more objective review of proposals if parks knew they were not going to get all of the money generated but would have to compete for it. One example would be cave resources, particularly newly discovered caves or caverns. Who knows what is in them that might be of use someday? Some career driven superintendents just might look much more favorably upon some sort of exploitation proposal if dollars were dancing around in their heads.

So I'd say this proposal is fatally flawed. If you change it so that all of these proposals are reviewed and approved nationally by a team of primarily scientists, and that any benefits go into a national pool, I'd say do it. But not this proposal which is nothing more than Yellowstone's greed thinly disguised as some sort of national program. Don't do it! Revise it and re-issue. As written and proposed now, this is a bad, bad idea that will cause more problems than any money generated will ever solve.

Louis F. Good

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*Received 11/11/2006 via NPS's Planning, Environment and Public Comment (PEPC) website*

I support alternative C of the EIS. Research conducted on publicly owned lands should be done by public employees, non-profit researchers, or academics (including students) strictly for the benefit of the general public who own them.

I strongly oppose any plan to allow extraction of biological, chemical, or mineralogical material from our national parks by any private or publicly-traded corporate entity for commercial/profit-driven purposes. In such cases, the public subsidizes private profits by incurring at least some of the costs; raw materials in the current instance. Beyond the monetary value of the extracted material is the potential loss of revenue from tourism. Visitors come expecting to see aesthetically pleasing landscapes. Commercial collection activities may involve disturbing the park grounds. Most importantly, the land will require time to recover and may never return to its original condition.

Over the past two decades, commodification has been the lens through which many aspects of our lives in America are viewed. How much is it worth? How much will it cost? How much will be made? But not everything is meant to be exploited for financial/material gain.

Our national parks have a value which far exceeds any potential monetary worth. Theodore Roosevelt knew this when he wisely established the national park system nearly one-hundred years ago. Yellowstone and all the other national parks are natural treasures to be enjoyed by all Americans, by visitors from around the world, and especially by future generations.

I am opposed to Alternative B2. Not only for the reasons stated above, but others as well. This option treats public park lands as though they are private property. Resource collection/extraction activities would be conducted in accordance with a confidential agreement between the corporate entity and the NPS. But the NPS is a public agency, created to preserve, maintain, and protect our national parks and national monuments on behalf of the public. Any agreement involving a public agency that lacks transparency is unacceptable.

Under Alternative B2, NPS staff will be responsible for negotiating, processing, and managing all Commercial Research and Development Agreements (CRDAs). This will consume a considerable portion of time and resources, especially as more companies learn about the program.

The more applicants there are, the more effort required to vet them, to negotiate and handle CRDAs, and to schedule and monitor collection activities. There is a potential for

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increased disturbance of wildlife and wildlife habitats. And as stated above, commercial collection activities will leave the land disturbed. It may take years to recover, if it recovers at all.

Alternative B2 stipulates that should the commercial research company turn a profit, the NPS will receive a portion of the funds. It's possible that the cost of processing the applicant(s) may equal or exceed the payment amount. The NPS may need to conduct a cost/benefit analysis.

It's possible that the private entity may not turn a profit immediately. Can the NPS absorb the cost of doing business on this scale? How long?

It's possible, in the interim between resource collection and final production, that the corporate entity decides to retain a greater share of the profits. In a worse-case scenario, the corporate entity may fraudulently claim not to have earned a profit. In either situation, it's possible that the terms of the confidentiality agreement may force the NPS into binding arbitration. Otherwise, the NPS may be forced to file suit to receive the monies owed. It's not likely that the financial compensation would sufficiently exceed all the costs incurred by the NPS (normal costs plus legal expenses).

RECAP: Research on publicly-owned lands should involve public, non-profit, or academic researchers. The goal of any of these groups should be to further the scientific body of knowledge in their field, benefitting the general public.

Research conducted on publicly-owned lands should not have the profit motive as its paramount concern. Whether it's the collection of biological material, extraction of oil or other mineral resources, or collection of lumber - the private companies benefit disproportionately from government giveaways or inexpensive leases. Other costs to the NPS involve interaction with private sector entities throughout the process. Finally, either failure to turn a profit, corporate attempts to renege on the agreed distribution of profits, or corporate fraud must be evaluated in terms of the cost to the NPS. Legal representation may be required, adding to the costs incurred by the NPS to administer this program.

Any agreement that does not include automatic public disclosure and instead seeks intentionally to keep all documents confidential is unacceptable when the property in question belongs to the American public and one of the parties to the agreement is a publicly funded federal agency.

Commercial collection activities are more likely to cause damage to native landscapes and disturb resident wildlife. The resulting damage will be visually unaesthetic, possibly causing a decline in regular tourist activity. Ecological recovery may be an issue.

Thank you for your time.

Alicia Siegel

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*Received 11/28/2006 via NPS's Planning, Environment and Public Comment (PEPC) website*

I am writing to support the alternative that prohibits scientific research involving NPS specimens if associated with the development of commercial products.

The parks are not meant to be commercial resources, nor are they meant to be self-supporting in any way.

Other federal lands have been and are used as commercial resources by the public and by businesses. Let's not sell our parks too.



Kept Private

12515-59  
page 1 of 1

*Received 11/28/2006 via NPS's Planning, Environment  
and Public Comment (PEPC) website*

As a concerned United States citizen, I am firmly opposed to patenting life forms or any type of genetic material. The notion that this process could be allowed in our National Parks, I find very disturbing. Accordingly, I am dismayed that, without public debate, the Environmental Impact Statement on so-called "Benefit-Sharing" provides only 3 options, all of which assume that such patenting and exploitation for private gain will take place. Why is there no option to rule out bioprospecting altogether?

Since the option I would prefer has not been placed on the table, I can only advocate option C, to allow exclusively "noncommercial or public interest research." In so-doing I recognize that our National Parks are common property of the people of this nation, set aside to be preserved in good stewardship for all time. As such, only the public interest should be served by any research on these lands. Commercial prospecting would not only entail some inevitable damage to our Parks, but violates the mission and spirit for which they were inaugurated.

Kept Private

12515-61  
page 1 of 1

*Received 11/28/2006 via NPS's Planning, Environment  
and Public Comment (PEPC) website*

To Whom It May Concern,

As a citizen, I'm submitting my comment as part of the public comment period for the September 15, 2006, court-ordered (EIS) on the document, entitled "Benefits-Sharing".

I do not agree with any of three options given. As a result, I ask for you to resubmit this comment period to allow a fourth choice. This would be "D" to not exploit the parks genetic treasures now or in the future. Privatization has been gaining strength for past number of years in the Park Service. This is bad because the people who work for the parks do so for the love they have for our national treasures, and are willing to work in a government job that pays less then the private sector. We do not want corporations to patent genetic codes, plant, and animal life from public lands for their own benefits.

Please rethink this shortsighted proposal and thank you for your time.

Craig C. Zandstra

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*Received 11/29/2006 via NPS's Planning, Environment  
and Public Comment (PEPC) website*

I used to work on intellectual property (IP) issues for the National Center for Supercomputing Applications and have some familiarity with how businesses manage IP.

Bioprospecting transfers value from the public domain to private hands. What is in the public domain should remain in the public domain, therefore no private IP should be allowed from bioprospecting in national parks.

Bioprospecting effectively takes public assets and limits access to their benefits so that some individual and institutional investors can benefit.

That is an unfair tradeoff which does not serve the public interest.

If the science is really compelling, leave the resulting IP in the public domain to maximize public benefit.

R. Ferguson

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*Received 11/30/2006 via NPS's Planning, Environment  
and Public Comment (PEPC) website*

The very idea that genetic codes can be patented is unethical to begin with, and the practice should not be encouraged or facilitated. Patents are supposed to be used to protect inventions and to encourage innovation. Allowing patenting of already existing genetic codes accomplishes neither.

That aside, if a corporation obtains patents on genetic patterns of plants and animals that live in the national parks, then they could attempt to enforce those patents and monopolize access to the plants and animals possessing the genetic patterns. This would effectively remove or restrict public access to the national parks. This is not acceptable.

Kept Private

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*Received 12/01/2006 via NPS's Planning, Environment  
and Public Comment (PEPC) website*

I am strongly opposed to bioprospecting in our national parks.

These public lands were set up in the public interest, as indicated by these statements, among many others: (1) Public lands were to be set aside "for the benefit and enjoyment of the people." (2) A single national park system is to be "preserved and managed for the benefit and inspiration of all people of the United States." (3) The purpose of the national park system is "to conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations."

The purpose of the national park system, the public interest, and the public trust would be violated by allowing private interests to exploit the resources of our national parks for their own gain.

Ample experience has shown that large corporations trying to patent life forms and biological/genetic material do not have the interests of the public at heart, but are seeking to maximize profits at almost any cost.

Please preserve our national parks as havens rather than as raw material for commercial exploitation. Do not allow such an invasion of our publicly safeguarded areas to occur under any circumstances.

Kept Private

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page 1 of 1

*Received 12/01/2006 via NPS's Planning, Environment  
and Public Comment (PEPC) website*

Please consider this electronic transmission as my formal commentary on the DEIS - Benefits Sharing in National Parks.

First and foremost, the notion of National Parks is a unique American ideal that stood as an example for other nations to emulate.

National Parks, as places for self-willed nature and humans to interact in non-consumptive ways must not be compromised with for profit activities that most likely will harm biological diversity, ecological integrity and ecosystem integrity.

Commercial activities that "fit" with the park ethic include visitor services such as overnight accommodations, food services, guide and packer services. When the overcommercialization of National Parks, I would argue that these activities ought to be withdrawn, and left to the private sector land that is already compromised with development.

Therefore, I am in favor of Alternative "C". Cease all commercialization of park biodiversity including but not limited to soil organisms, plants, insects, amphibians, reptiles, birds, mammals, bacteria, fungi, protists, algae and minerals. This is part of the Commons, held and protected in perpetuity for future generations of humans and non-humans.

The for profit motive, short-sighted, adolescent and greedy corporate psyche ought not to be the tail that wags the dog in America's National Parks. Wildlife Refuges ought to be treated in the same manner.

Sincerely,

Danielle M. Wirth

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*Received 12/01/2006 via NPS's Planning, Environment  
and Public Comment (PEPC) website*

As a former student of environmental resource management, I must say how appalled I am at the prospect of the National Park Service entering into agreements with companies that would patent natural organisms for private profit. The truth of the matter is that the NPS has no legal right to sell off the natural resources that it holds in the public interest. That's like the CEO of a company deciding to sell the company without getting the approval of the shareholders first.

I don't care that bioprospecting is already going on; it should be halted altogether. Let me be clear: I am not against research. People do research on public lands all the time. But research done on public lands should be done for the public good only; therefore, I support alternative C of the DEIS for the "benefits-sharing" program. Ideally, though, it should be amended to explicitly state that research done on public lands is for the public good only.

I oppose alternative A and all versions of alternative B of the DEIS.

The NPS is entrusted by the American people to carry out the mission of ensuring the health and survival of our natural resources for future generations. Selling these resources off to private companies is the surest way to fail in this mission. Companies are not beholden to the public. The conflict of interest here is glaring.

If the NPS is not getting enough funds to sustain our parks, then it is our government's responsibility, not that of private companies, to come to the rescue. That's what our tax dollars are for.

And what's more, selling exclusive rights to organisms, essentially, to life itself, is immoral, and no one on earth has the right to do it. It's madness.

Some things are simply not for sale. Keep our public lands public. Don't sell our children's backyard to ACME.

Sue Voelkel

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*Received 12/06/2006 via NPS's Planning, Environment  
and Public Comment (PEPC) website*

I agree the preferred alternative should be adopted as expressed in the DEIS - that is allowing benefits-sharing agreements. If benefits-sharing agreements are not allowed for any reason, my second choice would be to not allow the persons or companies to continue their research in the national parks. A person or company should not be allowed to benefit from their research in a national park, without having to share some of that benefit with the NPS. A wise private landowner would certainly require some sort of benefit-sharing agreement from the same persons if the private landowner allowed such research on their property. United States citizens who use and enjoy the national parks, as I do, should not be denied similar benefits. I consider the money received from benefit-sharing agreements a benefit to all US citizens, not just to the NPS, when it is used for the maintenance and continued preservation of the national parks.

It was not clear, and I perhaps missed something in the document or it is beyond the scope of the document, as to where the money received from the benefit-sharing agreements is to be used once received. Does this money go into a fund to be distributed to NPS as a whole, or is money received from research in a specific park, for example Yellowstone, returned for the benefit of that particular park? Whether or not addressed in the statutory scheme allowing for benefits-sharing, this should be addressed if only for public information in the DEIS.

chad e. adams

*Received 12/08/2006 via NPS's Planning, Environment  
and Public Comment (PEPC) website*

First, let me say that I am pleased to see that the issues of benefits sharing is still being considered in Yellowstone. It is certainly a beneficial way to encourage a responsible stewardship towards bioprospecting. Kudos.

Second, it needs to be stated that in regards to sustainable development, bioprospecting could not be closer to fitting the bill. Despite the detritus circulating among fanatical pseudo-environmental groups, bioprospecting is NOT an exploitation of our public lands or the wildlife inhabiting them (as purported by the Edmonds Institute). The impact to our environment in regards to bioprospecting is negligible; in some cases, it is nonexistent.

Furthermore, I would like to note that I view bioprospecting as being consistent with the NPS mandate, that is, to preserve and conserve (in not so many words). The knowledge gained through bioprospecting activities far outweighs its environmental "impact" (if it can be stated as such) and in a world slowly falling to the loss of microbial diversity, bioprospecting does well to work against these decreases while at the same time providing for sustainable solutions to a number of industry problems (including but not limited to the development of alternative fuels and efficient, non-synthetic industrial processes).

As for the issue regarding commercialization of the Park: it is moot, for regardless of benefits sharing, there will always be researchers in the Park, searching for and finding the small bit of microbial diversity to meet their own ends. In my mind, benefits sharing does nothing to detract from this; instead, it makes it more legit and more regulatory, and allows the Park to work directly with scientists, thus establishing healthy relations between the public and private sectors of this facet of the scientific industry.

Now, on to the EIS:

To be short and sweet, I will state that I support Alternative B3, allowing for benefits sharing through bioprospecting with no disclosure of rates.

B1 would be my second choice, but in light of B3, B1 could potentially stalemate the Park in terms of their negotiating power for benefits sharing agreements.

B2 is my last pick of this alternative, and seems to me a product of uncertainty. Making disclosure of terms and rates optional could potentially lead to further complications on this matter; thus, I would shy away from it.

Thank you for considering my comments in this matter. Best of luck in closing the EIS process with regards to benefits sharing!

Ryan T. Minton

*Received 12/08/2006 via NPS's Planning, Environment  
and Public Comment (PEPC) website*

I strongly support Alternative C. I oppose all versions of alternative B. There should be no bioprospecting in national parks. The mission of the NPS is to protect parks and everything they consist of for future generations. The mission is NOT for parks to turn a profit. The brilliant decision to form a national park system to protect our natural heritage should not be undermined in any way.

Kathy Freeman

*Received 12/10/2006 via NPS's Planning, Environment and Public Comment (PEPC) website*

I would like to offer comments on the National Park System's (NPS) Draft Environmental Impact Statement (DEIS) on benefits-sharing with those conducting research in America's National Parks.

The Benefits-Sharing DEIS is a comprehensive document that confronts a serious issue concerning Park resource usage: whether the Park System should receive a share of commercial benefits derived from activities conducted either within the Park System or using Park resources.

The DEIS describes the policy options that are available for addressing this issue, and does a very good job of presenting and documenting the pro's and con's of the several policy options that are available.

1. The Park's Missions. My understanding is that the primary mission of most NPS Parks is the biological conservation of unusual and important ecosystems, and that its secondary missions are to promote Park-related education, recreation, and scientific activities.

These functions are different, and sometimes conflict with one another. It is the responsibility of Park management to strike a sensible balance between these sometimes conflicting activities.

2. Research at National Parks. The National Park System has for decades permitted scientific research to be conducted on its lands and with specimens and samples collected in its Parks.

Most of this research has been curiosity-oriented, basic research conducted by academic and government researchers funded primarily or exclusively with public monies.

However, some applied research has been conducted in the Parks, or with Park resources, either by for-profit firms funded by private capital or by government funded academic and government scientists some of whom may be interested in commercializing their findings and discoveries.

The proposal to allow applied research by profit motivated researchers will change nothing about Park research activities provided these activities are governed by the same set of rules that govern existing basic research.

3. Benefits Sharing. The Federal Government, and it's several departments and agencies, are fiduciaries for the citizenry of the United States. As such, their first responsibility is to act in the best interest of the American People.

To allow a person or organization to use government facilities, resources, personnel, or finances for personal profit without capturing a reasonable share of that profit stream for the Nation is a clear violation of the Government's fiduciary responsibility to its People. Scenario A clearly violates that responsibility, and is therefore unacceptable.

To prohibit commercially oriented research which could lead to important economic, health, or technological benefits to the nation simply because it is commercial in nature is equally a violation of the Government's fiduciary responsibilities. Thus Scenario C is also unacceptable.

The only responsible NPS policy is some flavor of Scenario B: the authorization of for-profit research with benefits-sharing between the Parks and outside researchers.

4. CRADAs and MTAs. Research activities fall broadly into three classes: (1) those with no obvious possibility of commercialization; (2) those designed deliberately to be commercial; and (3) those which are not intended to be commercial, but could possibly result in a commercial application.

Because it is impossible to know in advance whether a research activity will generate a commercial product, all researchers should be required to sign CRADAs and MTAs with the NPS. No research activity by any non-NPS entity should be permitted on Park domains until a CRADA has been signed, and no samples or specimens should leave Park facilities without a signed MTA.

These agreements are the documents which protect the NPS's legal rights to a share of the financial and material profits that derive from either research activity on Park property or the use of Park resources.

CRADAs and MTAs are long-standing and proven procedures used widely by government and academic institutions both for commercializing their knowledge and intellectual properties and for ensuring that they capture a fair share of the profit streams that result from such commercialization.

5. Bioprospecting. Bioprospecting is an activity that is rarely successful. Collecting campaigns typically require that between 5,000 and 100,000 samples be collected and screened for each sample that becomes a serious candidate for commercialization. Most bioprospecting campaigns end in failure.

Since R&D costs escalate exponentially following preliminary drug discovery screening, industry does its best to terminate unsuccessful drug candidates as early in the process as possible. This is not always true of academic bioprospectors.

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6. Bioprospecting Sample Requirements. Preliminary screening of biological samples for a bioactivity of interest can be accomplished with small amounts of material in the range of a few grams to a few tens of grams for macro-organisms, and even smaller amounts for most microorganisms.

Early stage R&D activities require larger amounts of material, typically in the kilogram range. Mid and late stage R&D require very much larger quantities of material, often hundreds or thousands of kilograms.

7. Environmental Impact. The chemicals and macromolecules that generate bioactivities of interest are of three sorts: (1) molecules that can be produced by self-replicating cells or organisms, for example, microbial fermentation or tissue culture; (2) molecules that can be manufactured, for example by chemical synthesis or genetic engineering; and (3) molecules that can only be obtained by isolation from cultivated or wild-harvested material.

Self replicating cells and organisms require minimal, often near microscopic, amounts of initial sample; thereafter, their bioactive agent(s) can be produced in the laboratory by fermentation or tissue culture. The collection of such samples has negligible environmental impact.

Molecules manufactured from non-self replicating sources require substantially greater amounts of material, often in the kilogram range or greater, to accomplish the chemical structure elucidation or gene isolation that is prerequisite to manufacture. The kilogram collection of material can have a serious negative environmental impact when the species of interest is small and uncommon.

Materials that can only be wild-harvested, at least in the short run, can lead to massive environmental damage. Entire forests of pacific yew trees, on both public and private lands, were clear cut to obtain usable amounts of the anticancer drug taxol in the late 1980s and early 1990s. Much of this harvesting was done illegally by poachers, and some of the poachers were from foreign countries.

8. Micro-Invasiveness. Because bioprospecting has the ability to inflict substantial environmental damage, the NPS should adopt a strict policy that only micro-invasive collecting will be permitted in its Parks.

This policy would favor the collection of cells or organisms which can self-replicate, and discourage the collection of those which cannot.

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Plants require special comment. Historically, plant bioprospecting has required the collection of large amounts of wild-harvested material. Except for large or extremely abundant species, this scale of harvesting should not be permitted within the Park System.

However, plant tissue culture techniques have improved greatly in recent years, and it is now possible to produce sizable quantities of bioactive materials in plant tissue culture, thereby obviating the need for large scale wild-harvesting.

The NPS may wish to consider a policy restricting plant bioprospecting largely or exclusively to plant cell cultures, which can be established from very small amounts of plant material.

9. Species Abundance. In most ecosystems, a small number of species account for 90% or more of total biomass. The remaining 5 or 10% of biomass is partitioned between hundreds or thousands of rare or uncommon species. Bioprospecting campaigns have historically focused on large or (seasonally) abundant macro-organism species that are easy to collect in bulk volume.

Great care must be exercised by the Parks in permitting the collection of uncommon and rare macro-organisms. A kilogram collection of lady slippers or orchids could virtually exterminate a Park's population of these species.

10. Collecting Campaigns & Field Stations. Bioprospectors usually mount short campaigns designed to collect as many samples as possible. These samples are transferred to a repository, often thousands of miles away, where they are stored until needed. Fermentation or screening generally takes place months or years later, when it may be difficult or impossible to recollect more of the active samples. Because the duration of storage is unpredictable, the decay of bioactivity and extinction of microbes can be substantial. For these reasons, initial samples are usually collected in large quantities.

An alternative strategy is to screen samples as they are collected either in field stations or at laboratory facilities at a nearby university or Park headquarters.

With microscopic fungi, cultures established within 2 or 3 hours of collection generate a rich diversity of species outgrowth. With time, the number of species that can be recovered decays noticeably, and after a few days only very common and very hardy species can be cultured. The great majority of these will have already been collected and screened by others, and their useful bioactivities discovered and patented. They are therefore not commercializable by the current collectors.

With plants, rapid screening has the advantage of allowing the immediate recollection of more sample of active species.

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As a biologist who has spent considerable time doing research at marine laboratories, I have a strong bias in favor of working at field stations whenever possible. The NPS might want to consider establishing field stations in some of it's Parks.

It might also be worth establishing permanent laboratory facilities either at a Park headquarters or at a site immediately adjacent to a Park, perhaps in collaboration with a nearby university or research institute.

Offering such facilities to outside scientists represents a value-adding service that can command a premium upfront fee.

To the extent that Park personnel actively collaborate in research activities, it is possible in some instances that they, and therefore the Park, might qualify as a co-inventor of a patentable invention. This would permit the NPS to capture a greater share of royalties under the CRADA.

11. Private Sector Risk-Reward Relationships. In the private sector, the share of profits to which one is entitled is determined primarily by two factors: (1) the amount of risk assumed, for example, the proportion of total capital investment that one provides; and (2) the degree of value-adding that one contributes.

For example, the total cost to produce and sell a patentable pharmaceutical drug averages about \$ 1.8 billion. These costs include discovery, basic research, development, clinical research, regulatory requirements, clinical trials, manufacturing, quality control, advertising, marketing, distribution, liability and litigation costs, and taxes.

Most drugs fail to earn sufficient revenues to cover these costs, and thus are net money losers. A small handful of drugs make a net profit. These must pay both for themselves and for a number of failures.

12. Pharmaceutical Profit Sharing. Private sector profit sharing in the biotechnology and pharmaceutical industries typically involves three types of payments: (1) upfront fees; (2) milestone payments; and (3) royalties.

Upfront fees in bioprospecting include application fees, access fees, facility rental fees, and sample collection fees.

Milestone payments are granted when certain predetermined accomplishments are achieved, for example, licensing a product to another company, completing a successful clinical trial, or gaining regulatory approval from the Food and Drug Administration (FDA).

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Royalties are a share of the net profits that a commercial product makes when sold in the market place.

13. Financial Implications of Bioprospecting for the NPS. The financial implication for the NPS, whose primary function is to provide access to biological samples that others screen and develop, is that opportunities for profit sharing are rare beyond the initial phase of sample collecting.

Royalties from a successfully commercialized product are extremely rare, while samples that generate milestone payments are not common. Although milestone payments and royalties will occasionally occur, and are sometimes lucrative, upfront fees will provide the most dependable stream of benefits-sharing income.

14. Upfront Fees. The minimum fee that all outside researchers should be required to pay is an application fee designed to cover the costs to the NPS of reviewing applications and deciding whether or not to issue Park Research Permits.

If a Permit is granted, an access fee should then be levied. This fee should be large enough to recover the costs that the Park will incur for supporting and monitoring research activities by outsiders. The access could be either in the form of a single all-inclusive fee, monthly or quarterly fees, or, where sizable numbers of samples are to be collected, a per sample or per specimen charge. These several kinds of access fees are not necessarily mutually exclusive.

15. Monetary Benefits Models. At least five types of researchers are likely to conduct activities in NPS Parks: (1)academicians; (2) government scientists; (3) very small businesses; (4) small businesses; and (5) well established large and mid-sized businesses.

The two monetary models proposed in the DEIS correctly recognize that there are sometimes substantial differences in the abilities of these researchers to pay monetary upfront fees.

Well established corporations have deep pockets, and can afford to pay substantial upfront fees.

Small businesses with angel or venture financing have limited capital, and may not be able to afford the substantial fees that large corporations can pay.

Academicians and government scientists often have little capacity to pay more than nominal upfront fees. The same is true of very small businesses, which in bioprospecting are likely to consist of a university scientist and one or two graduate students or post-doctoral fellows working without salary.

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It is therefore sensible to have a graduated structure for upfront fees that varies with the financial resources of each research entity. Large corporations should pay full upfront fees. Academicians, government scientists, and very small companies should pay nominal or no fees. Small company fees should be intermediate, and take into consideration each company's financial position.

There is an important caveat. Academic and very small company bioprospectors often work in collaboration or have sponsored research agreements with large corporations. Indeed, large corporations sometimes use these small bioprospectors to avoid the fees they would have to pay if they were themselves the research party of record. As part of the Park Permit application process, the NPS should determine whether such collaborations or agreements are in effect, and adjust fee rates accordingly.

To the extent that milestone payments are linked to financial payments received from third party companies or organizations, there is less rational for graduated fee rates.

Royalties from commercial sales should be uniform regardless of the type of researcher.

16. Nonmonetary Benefits. The DEIS correctly notes that there is considerable potential for a Park to profit materially from nonmonetary benefits.

Some years ago, a biology department at a noted research university reached an agreement with a large pharmaceutical company in which the company took over an entire building, completely renovated it, fully equipped it with state of the art laboratory equipment, and used it for pharmaceutical research for a multi-year period. At the end of that time, the building and all of its equipment and facilities reverted to the biology department.

Arrangements of this sort may be very useful in developing and equipping field stations and laboratory R&D facilities at NPS Parks.

17. Disclosure of Financial Information. Many private corporations are highly secretive about their financial arrangements, and will not establish a research collaboration if terms are made public.

Since many Parks are surrounded by non-Park lands with similar biota, potential collaborators can and do collect at nearby locations just outside the Park. Some will even do unauthorized collecting in the Park itself, which is easily done with microbes.

The NPS will best be served by not having a strict policy regarding the disclosure of financial terms of agreement. Mandatory transparency will significantly reduce the number of commercial parties willing to engage in benefits-sharing research, and these are precisely the parties that can provide the most benefits to the Parks.

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18. Financial Terms. Another reason the NPS should be cautious about revealing financial terms is that once made public, these terms will become a de facto standard for parks and countries around the world.

Parks and countries differ considerably in what they can offer a researcher. Yellowstone (YNP) offers nearby airports with car rental facilities and a good road network to and from the Park. There are nearby universities with which outside scientists can establish collaborations. Within the Park itself, there is a good road and transportation system, hotel and restaurant facilities, a knowledgeable scientific and ranger staff, electricity, clean running water, sanitation facilities, good external communications, limited research facilities, and some exceptional microhabitats and ecosystems.

Many of the lands and parks that seek to attract bioprospecting, particularly in the third world, offer none of these amenities. To collect samples at a well known Marine Reserve in the Philippine Visayas, one must first acquire a live-aboard boat, fully provision it with food, water, supplies, and research equipment. The reserve, a small island and surrounding littoral, has no permanent inhabitants, no water, electricity, sanitation, food, or shelter. While the marine littoral surrounding the reserve is attractive, there are thousands of islands between the Visayas and the Solomons that offer similar biota.

For-profit companies will pay fair value for access to an attractive research environment, but how much they will pay depends on what a park or country can offer in return. A park like YNP can attract premium fees because of the excellent staff and facilities that it offers. Many others cannot.

19. Ad Hoc Review Committee.

In the mid 1980s, the National Cancer Institute's (NCI) Developmental Therapeutics Program (DTP) initiated a radical change in the technology that it used in its national anticancer drug discovery program. One of the changes was to strongly emphasize marine and plant natural products as a source of screening samples, i.e., bioprospecting.

To assist in this task, the DTP established an Ad Hoc Review Committee made up of distinguished scientists from around the world to serve both as a brain trust to help design and implement the new screening program, and to oversee and critique it.

Roughly 50 scientists served on the Ad Hoc Review Committee. About half were Americans, the rest from other countries. There were people from governments, academia, and industry. Their specialties included cell biology, preclinical drug development, tumor biology, clinical cancer research, clinical oncology, statistics, pattern recognition analysis, computer programming, information technology, natural products chemistry, synthetic and medicinal chemistry, fermentation, and industrial pharmacology.

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The Ad Hoc Review Committee was instrumental in the development and implementation of the new screening program. It is doubtful that the project would have been successful without its help. Committee members were reimbursed for out-of-pocket expenses, but otherwise worked pro bono.

If the NPS decides to implement a benefits-sharing program, it might wish to consider creating a similar committee to assist in its development.

Philip Skehan

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*Received 12/11/2006 via NPS's Planning, Environment  
and Public Comment (PEPC) website*

I support the National Park Service Alternative C in Section 2.1 of the Benefits-Sharing Environmental Impact Statement concerning our National Parks.

Alternative C will prevent funneling of resources for managing commercial efforts away from public programs. It will assure that the results all research in the Park system will be placed in the public domain. I oppose plans to place research results in the hands of private commercial interests, which would treat the knowledge they gain as private property.

Alternative C will prevent bio-prospecting and protect the Parks for many generations.

-Rob Kimmich  
Salem, Oregon

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*Received 12/14/2006 via NPS's Planning, Environment  
and Public Comment (PEPC) website*

To Whom It May Concern:

With reference to Benefits-Sharing Environmental Impact Statement:

I write in favor of Alternative B1, benefits-sharing with mandatory disclosure of all terms and conditions.

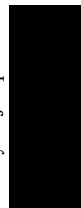
I am not in favor of the preferred alternative with optional disclosure. These lands are our national heritage; I want to know exactly what is occurring on them, who is benefiting, and how.

This is not a distrust of park service personnel. On the contrary. Dedicated park service personnel I know, being an environmental consultant, hold dear the missions of their work. Washington, however, does not, especially in the last 12 years. Industry cronies appointed to head environmental agencies, illegal tampering with scientific documents, all-out warfare against environmental protections by the Bush Administration, systematic cuts in spending to the Dept. of the Interior and National Park Service combine to shrink any semblance of trust in the marching orders federal agencies receive from the top.

I want to see the Park Service benefit from the services they have provided for years. I also want public oversight, and I never want to see benefits-sharing become an excuse to further shrink Park Service budgets!

Thank you,

Nancy C. Jacques



12515-92  
page 1 of 1

*Received 12/14/2006 via NPS's Planning, Environment  
and Public Comment (PEPC) website*

I do not think that the Benefits sharing program will be beneficial to the parks ecosystems. The whole point of the National Parks is to preserve the natural beauty of this country. Letting logging and mining happen will destroy this natural beauty.

Kept Private

12515-102  
page 1 of 1

*Received 12/15/2006 via NPS's Planning, Environment and Public Comment (PEPC) website*

Thank you for your careful consideration of the field of impact in the Benefits-Sharing Draft Environmental Impact Statement. Extending that field to the social environment shows the kind of innovation and creativity necessary for meeting the challenge of new technology.

However you have failed to consider a significant part of the social impact.

On page 272 of the DEIS you mention that "A number of people were concerned about topics that are outside the scope of this EIS, such as whether or not the NPS should support U.S. intellectual property laws." But you have defined the scope of the investigation as extending beyond just the physical environment to a social one. Therefore you need to consider the ethical impact of your proposals on how the NPS carries out its mission, and the impact on the culture at large.

On page 106 you describe the purpose of the NPS as conservation not only of park resources, but also of "park values." What are these? Section 1.4 of the 2001 Edition of National Park Service Management Policies emphasizes that conservation is for "the common benefit of all the people of the United States."

Any action the NPS takes on the issue of benefits-sharing will impact the larger culture. This is not just a question of law, it is a question of a basic cultural paradigm: the value of the Commons.

Popular economic theory today holds that the market is the source of wealth; this results in the privatization of natural resources we used to consider were held in common by all. Patents on genes in agricultural plants force farmers to buy seed every year, instead of planting some from last year's harvest. Patents on medicines the World Health Organization has identified as "essential for priority health care" make them out of reach for many people. Patents on results of scientific research actually make research more difficult (see <[http://sippi.aaas.org/survey/AAAS\\_IP\\_Survey\\_Report.pdf](http://sippi.aaas.org/survey/AAAS_IP_Survey_Report.pdf)>).

NPS's decision on the subject of benefits-sharing will support the spread of privatization -- or it can affirm the value of the Commons. Each time we give our Commons to corporations, we get further locked in to the market mindset. The mandate of the NPS asks us to be more creative than that: to find a solution that will foster the common good.

Kept Private

12515-95  
page 1 of 1

*Received 12/15/2006 via NPS's Planning, Environment and Public Comment (PEPC) website*

I support the No-Action Alternative for the Benefits-Sharing in the National Parks Draft Environmental Statement. This would allow research involving NPS specimens, that may lead to the development of commercial products to continue, in the parks, but without any obligation to share any resulting benefits with the NPS. A modification of the Preferred Alternative, in which scientific benefits and in-kind services would be shared with NPS by the researchers, but no royalty benefits paid, would be the ideal solution. In, the first place, the parks are publicly owned and paid for by the public, many times over, through Federal taxes, entrance and camping/backcountry fees, and boating registrations. It seems pure and simple greed on the part of the NPS to expect more financial gain from work that does not destroy the environment, yet could serve the furtherance of science. Second, entering into an agreement for financial gain by the NPS is just more red tape for researchers to deal with, not to mention the law suits that would inevitably follow this greed.

Pam Racow

*Received 12/16/2006 via NPS's Planning, Environment  
and Public Comment (PEPC) website*

To Whom It May Concern:

I vehemently oppose commercial bioprospecting in our National Parks. These are natural treasures that should be allowed to remain pristine for the public and wildlife.

While I do support the public interest research that takes place in the parks, I am opposed to the National Park Service's plans to enter "Benefits-Sharing" agreements with private corporations seeking to commercialize their research.

Corporations should not be allowed to mine, exploit and profit from living organisms that we, the people, ought to be stewarding.

Allowing commercial bioprospecting runs counter to the mission of our National Parks. The natural resources on our public lands must be preserved, protected and -- most importantly -- remain public for the public's benefit. This is why I oppose alternatives "A" and "B" in the National Park Service's Draft Environmental Impact Statement (DEIS), entitled "Benefits-Sharing".

Alternative C, as its title implies, is the only option that "Prohibits Research Specimen Collection for Any Commercially Related Research Purpose." With that in mind, I support "Alternative C".

Sincerely,  
Eric Prescott

*Received 12/18/2006 via NPS's Planning, Environment  
and Public Comment (PEPC) website*

Dear Park Service,

Bioprospecting in our National Parks is a horrible idea! These lands are supposed to be protected from commercial, natural resource exploitation. That was the point of establishing them, in the first place. How could someone in the National Park Service not get this!? Alternative C is the only one that is true to the mission of the National Park Service. It is embarrassing to you, who claim to be stewards of our National Parks, that you are actually considering -- and supporting! -- commercial natural resource exploitation in our National Parks. Shame on you!

Please do the only honorable thing by continuing the historic mission of the National Park Service: protecting our National Parks lands from commercial natural resource exploitation, preserving them for their natural values and the enjoyment of the American people in perpetuity.

Sincerely,

Dr. Jonathan Matthews



12515-150  
page 1 of 1

*Received 12/23/2006 via NPS's Planning, Environment  
and Public Comment (PEPC) website*

I am simply a U.S. citizen. I object to research in national parks that is commercial and for private profit. These parks belong to the citizens and any profit from the parks should be put back into the parks' upkeep. I support option C.

It is truly disappointed that we have to spend our time defending almost everything from the clutches of commercialism. You, the National Park Service, are supposed to protect our parks instead we find you trying to exploit them. Is there any government official that can be trusted?

Martha B. Ashton-Sikora

12515-166  
page 1 of 1

*Received 1/11/2007 via NPS's Planning, Environment  
and Public Comment (PEPC) website*

Isn't this going to invite unwarranted and invasive research in the hopes that it will create "benefits"? Extra money going to the NPS is a great thing, unless it is harmful to the parks and wildlife therein, in any way.

N/A

12515-1401  
page 1 of 1

*Received 1/12/2007 via NPS's Planning, Environment  
and Public Comment (PEPC) website*

Dear PEPC Benefits-Sharing,

Please select Alternative B1 in the final NPS Benefits Sharing Plan. Alternative B1 best protects park resource and visitor experience, while assuring the public the right to review any agreement between NPS and a private researcher or company.

In addition, the following points are critical to include in any final Benefits Sharing plan:

- Park resources and visitor experience must not be directly or indirectly adversely affected.
- The public should have a right to view the entirety of any agreement.
- All scientific information resulting from any agreement must be shared with the park, and any compensation received should be used to benefit resource protection and research.
- No benefits sharing agreement should be developed that results in resources being used for commercial purposes. Any research contemplated under Benefits Sharing agreements cannot result in the direct commercial use of those samples removed from parks.

The creation of new scientific knowledge in national parks is a significant benefit which is compatible with the conservation of the resource and undiminished public appreciation under this alternative. I urge you to select Alternative B1 to implement the Benefits Sharing Plan. Thank you for considering my views.

Sincerely,

Don Masterson

12515-1903  
page 1 of 1

*Received 1/12/2007 via NPS's Planning, Environment  
and Public Comment (PEPC) website*

Dear PEPC Benefits-Sharing,

Please select Alternative B1 in the final NPS Benefits Sharing Plan. Alternative B1 best protects park resource and visitor experience, while assuring the public the right to review any agreement between NPS and a private researcher or company.

In addition, the following points are critical to include in any final Benefits Sharing plan:

- Park resources and visitor experience must not be directly or indirectly adversely affected.
- The public should have a right to view the entirety of any agreement.
- All scientific information resulting from any agreement must be shared with the park, and any compensation received should be used to benefit resource protection and research.
- Agreements with scientists, research and other organizations should include explicit park ownership rights related to discoveries and any resulting intellectual property rights.
- Agreements should not be so one-sided as to discourage scientific research within the parks.
- Compensation through royalty or similar agreements should directly benefit the park from which the scientific discoveries were made.
- No benefits sharing agreement should be developed that results in resources being used for commercial purposes. Any research contemplated under Benefits Sharing agreements cannot result in the direct commercial use of those samples removed from parks.

I urge you to select Alternative B1 to implement the Benefits Sharing Plan. Thank you for considering my views.

Sincerely,

Mary Jo Veverka

12515-4602  
page 1 of 1

*Received 1/13/2007 via NPS's Planning, Environment  
and Public Comment (PEPC) website*

Dear PEPC Benefits-Sharing,

Please select Alternative B1 in the final NPS Benefits Sharing Plan. Alternative B1 best protects park resource and visitor experience, while assuring the public the right to review any agreement between NPS and a private researcher or company.

In addition, the following points are critical to include in any final Benefits Sharing plan:

- Park resources and visitor experience must not be directly or indirectly adversely affected.
- The public should have a right to view the entirety of any agreement.
- All scientific information resulting from any agreement must be shared with the park, and any compensation received should be used to benefit resource protection and research.
- No benefits sharing agreement should be developed that results in resources being used for commercial purposes. Any research contemplated under Benefits Sharing agreements cannot result in the direct commercial use of those samples removed from parks.

I urge you to select Alternative B1 to implement the Benefits Sharing Plan.

National parks belong to all of us - all their resources. Therefore all individuals should have the benefit of any research conducted in the park.

Thank you for considering my views.

Sincerely,

Karen Eble

12515-5083  
page 1 of 1

*Received 1/13/2007 via NPS's Planning, Environment  
and Public Comment (PEPC) website*

Dear PEPC Benefits-Sharing,

Please select Alternative B1 in the final NPS Benefits Sharing Plan. Alternative B1 best protects park resource and visitor experience, while assuring the public the right to review any agreement between NPS and a private researcher or company.

In addition, the following points are critical to include in any final Benefits Sharing plan:

- Park resources and visitor experience must not be directly or indirectly adversely affected.
- The public should have a right to view the entirety of any agreement.
- All scientific information resulting from any agreement must be shared with the park, and any compensation received should be used to benefit resource protection and research.
- No benefits sharing agreement should be developed that results in resources being used for commercial purposes. Any research contemplated under Benefits Sharing agreements cannot result in the direct commercial use of those samples removed from parks.

I am a supporter of commercial research, and of the private sector's ability to generate useful advances based on the profit motive. But the ability of business to do so does not depend upon unfettered access to ALL of the financial benefits. The entity that is the source of the raw material or phenomenon upon which the discovery is based and the profit is generated also deserves to benefit. In this case, that means that resources should go to preserving, protecting, and maintaining the environmental amenities in the National Parks.

I urge you to select Alternative B1 to implement the Benefits Sharing Plan.

Sincerely,

Gordon Rands

12515-6718  
page 1 of 1

*Received 1/16/2007 via NPS's Planning, Environment  
and Public Comment (PEPC) website*

Please include our comments as follows on the draft EIS on Benefits Sharing dated September 2006. We have visited many units of the National Park System, from nearby Harpers Ferry to great western parks such as Yosemite and Olympic. The protection of those parks under the nonimpairment standard of the National Parks Act is important to us.

We favor the use of national parks for research that draws upon the natural organisms and ecosystems that are protected in the parks, as long as it does not compromise the protection of the parks. We believe the benefits flowing from that research should be shared with the national parks to advance their conservation.

We also believe the agreements under which that research is done should be a matter of public record. In the past, concessioner agreements were kept confidential, which has led to many abuses, and we hope that will not be repeated in the Benefits Sharing program.

We favor Alternative B1 because it fosters research under conditions that will protect the resources of the parks and the experiences of visitors, and it also keeps the agreements open to public scrutiny.

We urge the following as essential elements of the final Benefits Sharing policy:

1. There must be no adverse effects on park resources or visitors' experiences.
2. All agreements must be subject to public review in their entirety.
3. Scientific information generated as a result of the agreement must be shared with NPS, and any financial consideration received for that information must be used to advance protection and research with respect to park resources.
4. No park resources must be used directly for commercial purposes (such as the sale of research specimens or samples). The noncommercial purposes of the parks must be maintained intact, or it would soon lead to abuses like those in the national forests.

We feel that Alternative B1 meets these objectives. Thank you for this opportunity to comment. Please keep us informed of future public reviews on this subject.

George & Frances Alderson

12515-6719  
page 1 of 1

*Received 12/11/2006 via NPS's Planning, Environment  
and Public Comment (PEPC) website*

This letter is a comment on the concept of bio-prospecting in the National Parks.

I support Alternative C. No bio-prospecting. Period. To allow commercial research in the parks goes expressly against the original purpose of the Park Service ' which is to protect these areas from exploitation. As I understand it, Alternative B allows commercial enterprises to remove biological organisms from the parks, which goes against the basic mission written into the formation of the National Parks Service.

Alternative B requires parks staff to allot part of their time for managing these commercial ventures, which puts the cost of maintaining these agreements on the American people, an unlawful misuse of public funds for private financial gain. As this deal-making goes public and more citizens find out about this bargaining, you may expect that this will cause an uproar.

Do the right thing. Choose Alternative C and refrain from dirty politics.

Seven Dunsmore

12515-6721  
page 1 of 1

*Received 12/08/2006 via NPS's Planning, Environment  
and Public Comment (PEPC) website*

I must strongly protest and oppose any move to allow any commercial 'bio-prospecting' in our national parks. This is just 'Selling off America and its resources.'

To commercially mine the genetic resources of plants, animals and microorganisms in any area that belongs to us, the public, is simply raping the land. These resources are not the federal government's to sell: They belong to all of us.

We must not allow the exploitation of our parks' genetic treasures! I prefer to leave the parks stand as they are with absolutely no interference.

However, if I must choose one, I support Alternative C. I want NO Commercial Bio-prospecting in the National Parks.

Read Teddy Roosevelt's words as he was setting land aside for the future denizens of our country. He had prophetic vision. These lands must be left as pristine as they are!

We must stop opening our public lands for anything other than to honor the pure nature and the beauty of these-sacred places. We need these areas to survive. They help clean the poisons from our environment and provide a survival area for what is left of our wildlife.

They also provide solitude for the masses (like myself) who live in the cities and suburbs; visiting these parks and seeing the magnificence there is like going to church. These lands are definitely God's Country and should be left to stand as they are.

The National Parks Service has been assigned stewardship of our precious lands, to preserve and to protect them.

Do not allow private commercial companies to own or use any genetic resources of plants and animals in our parks. Alternative C is the only choice acceptable.

Necia Refes

12515-6724  
page 1 of 1

*Received 11/30/2006 via NPS's Planning, Environment  
and Public Comment (PEPC) website*

I do not want any bioprospecting in our country's national parks. I hope you do not approve any plan which permits this no matter what the financial benefits. Our parks have been set aside to protect them from exploitation of any kind including bioprospecting.

I understand that alternative C allows research in the parks, but not commercial research. Of all the proposals this is the best unless there is an alternative of no change at all.

All versions of alternative B are unacceptable. Please do not implement any of these. I hope we can keep our parks as they were intended to be--for the enjoyment of future generations.

Edwin J. Potts

Received 11/09/2006 via NPS's Planning, Environment  
and Public Comment (PEPC) website

I am writing to you to comment on the "Benefits-Sharing" plan contained in the Draft Environmental Impact Statement (DEIS) regarding bioprospecting in US national parks. First, let me say that I support Alternative C. I want NO commercial bioprospecting in the National Parks. Second, let me say that it shames me that the American government has sunk to the level that our national parks - which were meant to preserve our natural heritage in perpetuity - are being threatened with commercial exploitation by businessmen conducting back-room deals. The process by which this DEIS has come about is a disgrace, and the fact that the public only gets 90 days to review and comment on the 340 page document is ludicrous. Furthermore, the name "Benefits-Sharing" is a laughably Orwellian term. This plan would privatize the benefits of the national parks, removing resources so that only the wealthy few can benefit from them.

Research in our national parks should be conducted for the public good, not for private gain. Research should be conducted in a way that preserves the park as completely as possible. Neither of these conditions would be met under options A, B and B2, and therefore I oppose options A, B and B2 in the DEIS. I support option C.

Alternative B2 is appalling. Not only would private companies be free to make deals for exploiting the national parks, but citizens would never be able to find out the financial details of the plan. There would be no oversight, and without oversight the potential for bad deals is tremendous.

Furthermore, our national parks are understaffed as they are, and option C in the DEIS is the only option that would allow the park staff to continue on their mission on the public's behalf. Other options would divert time away into negotiating Commercial Research and Development Agreements (CRADAs). Not only would the public lose its national park resources, it would also lose tax-funded working hours of national parks employees.

The national parks should remain national, and not be privatized. Our national parks are not for sale.

Michael Roberts

Received 12/29/2006 via NPS's Planning, Environment  
and Public Comment (PEPC) website

I strongly urge you to adopt Alternative C, and to not allow "bioprospecting" in our national parks by commercial interests. Alternative C appears sufficient to allow legitimate research in the parks for the public interest, without opening the door to the exploitation that would doubtlessly follow if you were to allow these private, commercial interests in.

Alternative B would not only allow commercial exploitation, but "confidential" arrangements as well. This is an obvious signal that these commercial interests know very well that their practices are offensive to many people and want the cover of secrecy to keep what they do from the public.

Sirs, these parks are national treasures belonging to the American people. Please defend them from the "biomining" that would inevitable result from the initial "bioprospecting", and leave a bio-devastation in our parks comparable to that left by mineral mining throughout the West.

Laura Pace

*Received 10/30/2006 via NPS's Planning, Environment and Public Comment (PEPC) website*

I have been involved in research for over the past 20 years, including on-the-ground research products in numerous national parks across the US. NPS research projects I have and are currently involved with directly benefit the parks and aid to expand the marketability of the products involved. I have also sat on the board of a foundation that has a CRADA with a government agency to help stabilize the government research program that all members of the foundation benefit from. The foundation has voluntarily contributed a minimum of \$0.5M to the research program annually for 10 years. The relationship between the research agency and the foundation is extremely close with meetings quarterly and a firm understanding of the benefits, costs and risks of each institution involved. As I commented on the Benefits-Sharing DEIS, I relied heavily on my experience with past and current research projects and the foundation CRADA.

Although I believe the National Park system should benefit in some way from research conducted in the Park or with Park specimens, I do not agree that the preferred alternative, as outlined, is the solution. It is important to understand that researchers and companies that develop commercial products have related costs. Will NPS contribute to the cost of the research at the same percentage rate that they will benefit from a commercial product? Park preservation/operation costs are an important contribution. How would they be assessed as a contribution to the product development costs? Industry and University typically have set budgets/expenditures towards development of a product to aid in assessing profit needed to recoup development costs. Not all research leads to commercial, profit generating products; however, the developing costs of products that never make it to market or generate income must be accounted for. Typically non-commercial product research is covered by the profit generated by the few successful products. Successful product profit also is used to reinvest in the company research program as well as used to cover manufacturing and distribution costs. In reading the DEIS, I did not see how these back and future costs of the researcher or park will be accounted for. When considering Alternative B, NPS should remember that their funding comes from taxes. NPS should recognize their benefit from successful research results is an improved national economy. Companies stagnant with one patent don't employ nearly as many people as companies generating numerous patents, reinvesting for the future.

## COMMENTS

Alternative C is unacceptable. This alternative has the possibility of causing a missed opportunity that could benefit the US.

Alternative A: No action alternative is adequate and preferred over the Alternative B as it stands as outlined in the DEIS.

Pg 67, Note #10 for Section 2.4 states that NPS is currently able to enter into cooperative type agreements that will help achieve the NPS mission. This statement indicates that a change dictated by an EIS is not necessary for NPS to enter into agreements that would result in royalties to the park to be used for conservation and preservation.

Alternative A is preferred over Alternative B because, there is no impact to the researchers and, as stated in Chapters 3 & 4, there is no impact to NPS (except a 1.14% loss of funds to one park). Alternative B does negatively impact the researcher with no negative impact to the mission or resources of NPS.

Alternative B is unacceptable as outlined in the DEIS. Most notable, this alternative is unacceptable due to the lack of detail and clarity of when and which research projects must enter into a benefits-sharing agreement with the park. The direction appears clear at the beginning but later statements, such as, Section 3.5.3.

"If the study of those specimens resulted in discoveries or inventions that could have a commercial application, then any park could participate in benefits-sharing under Alternative B."

Is this misstated that "& any park could &" , indicating option, or they "would", indicating Parks would have no alternative but to enter into a benefits-sharing agreement?

"Based on past history, some park units are more likely to participate in Alternative B benefits-share program than others."

Are they "likely to participate" because they want to, or because they have the opportunity to? If Benefits-sharing agreements are always required when a commercially viable product is the result of research, Alternative B is unacceptable. Alternative B would be acceptable (with the following comments addressed) if parks had the choice, when a commercially viable product is involved as a research result, to enter or not enter into a benefits-sharing agreement. Parks may elect not to enter into the agreement if negotiation reveals that royalty payments, which would otherwise be reinvested back into research, will only cover park administration costs.

Suggest Alternative and modifications to Alternative B:

Understanding that each research venture would be negotiated separately, a guideline should be set forth to help determine compensation/royalty. If the national parks directly benefit from the discovery (example: product aids in the preservation of the park, or helps park meet other mandate) no compensation is required. If the national park mission is not directly benefited by the discovery, the park negotiates for compensation following a set of criteria that would include consideration of the researcher's costs and national park's costs to preserve the researched item. Researcher costs could include:

discovery costs, reinvestment of profit to additional research (including personnel, equipment, labs, etc.), taxes paid on profit, costs of product registration (incase of chemical, food or pharmaceutical) and cost of failed research towards similar products. Park cost could include preservation, maintenance, up keep, and visitor enjoyment disruption for the area where the specimen was collected or research was conducted. Criteria would result in figuring cost due to the national park in relation to their contribution to the research/discovery. To fully accept Alternative B, I would need to see more detail on what factors would be considered during a benefits-sharing negotiation.

Specific Comments / Unacceptable provisions under alternative B:

Page 43 "The General Provisions provide an approval framework to allow sharing of scientific and monetary benefits resulting from improved cooperation between national parks and the research community." There is no discussion of the sharing of cost. Cooperation between park and researcher will not improve if the researcher assumes all cost/risk and the park only benefits without risk. The DEIS should include more detail, in addition to the cost of issuing research permits, of the risk/cost to the park that makes NPS deserving of a share of the product profit.

Page 44 "Researchers . . . would be required to enter into a benefits-sharing agreement and negotiate' with the park' royalty or other monetary terms that are contingent on actual commercial development of a discovery of invention before using any such discovery or invention for any commercial purpose.

The time frame for developing the benefits-sharing agreement is not outlined. The realistic steps appear to be: prepare CRADA, review by regional director, review by Dept of Interior Solicitor Office, review by NPS director, signed by park superintendent. Signing by the researcher can include; review by company/institution lawyers, review by marketing personnel (typically 1 to 3 tiers)/board of directors/Institution heads, prior to signing

by the researcher or company official. This process can severely delay "time to market" while the negotiating time and approving park royalty will not result in a more clear idea of "fair value" as indicated in the DEIS. Delaying time to market typically results in loss of revenue through missed opportunity, salary/manufacturing/distribution overhead, delay of new product research, reduce stock value and can result in employee lay-offs. The steps from Discovery to Marketing, layed out on page 85, are not separate events, but overlap substantially to aid in reducing the time to market. Although a delay to market my be viewed as more "equitable" to the national parks, it can be devastating to a research company.

#### Section 3.5.4 Existing Administration Resources

Discussion of FTE for research permit applications is not a valid as any type of indicator for negotiation of a benefits-sharing agreement. As outlined in the DEIS, the two events are separate. As a researcher in industry I am well aware that negotiation for sharing of profit takes a great deal more time than 1.6 hours. Timeframes of negotiation range from 1 month to 2 years.

#### Section 2.4.3 Disposition of Benefits

"All benefits received by the NPS under any type of benefits-sharing agreement would be dedicated to the conservation of resources protected and managed by the NPS" In the private sector revenue not utilized for salary, benefits and operations is reinvested to future research. Future research is extremely important to our economy. I do not agree with potential research dollars being re-directed to conservation of our national parks when an option of directing funds to the Natural Resource Challenge exists. Alternative B would be more acceptable if dollars gained by NPS from benefits-sharing were applied to NRC.

#### Pg 47 Section 2.4.5.2 Penalties for non-compliance

It is unacceptable that there is no penalty or incentive for the park to negotiate an acceptable benefit-sharing agreement swiftly. This section allows for a park to purposely slow negotiation to force the researcher in to a compromising position to accept a less than reasonable agreement to assure timely market entrance. If a product launch is delayed due to poor negotiation the company can potentially suffer substantial economic set back, encouraging violation of the agreement (or yet to be agreement). There must be an incentive or penalty built into Alternative B in relation to the park, if one exists for the researcher. This further emphasis the lack of risk NPS has in the partnership.

12515-7241  
page 5 of 6

#### Section 2.4.6.1 Technical assistance to parks

The developed service-wide institutional record of benefits-sharing agreements must be easily assessable to the researchers and their companies for the same reason these would be beneficial to the parks 'to enhance institutional expertise and efficiency.

#### Section 2.4.6.2 Financial support for administration

This section is unacceptable and should be changed to indicate that benefits-sharing will only be implemented if an agreement is negotiated to substantially reimburse the park over the cost of the parks administration costs. When negotiating, the cost of the company lawyers and negotiators should be taken into equal consideration of the cost of the park negotiator. If royalties are only covering the cost of the administration, or slightly above the administration cost resulting in no real benefit to the park program, the benefit-sharing program is only resulting in wasting money that could be reinvested in additional research that could benefit the US.

#### Section 2.4.6.4

Implementation of benefits-sharing will inappropriately influence research permitting decisions, not on the side of the park, but on the side of the research companies. Research companies already need to jump through numerous government hoops to bring a product to market 'patent process, FDA/FIFRA process, tax process, manufacturing licenses, approval of product name, etc. Addition of an added government process, negotiating benefit-sharing agreements, will encourage researchers to go else where to collect/investigate specimens. This means potential discoveries based on park resources will be missed.

I understand the DEIS has tried to address this issue through use of a CRADA; however, the lack of penalty or incentive to the park to efficiently negotiate and process paper work reduces my confidence that the process will be efficient and not discourage research.

#### Pg 45 Disclosure options

If the Preferred alternative for benefit-sharing is accepted, I agree with alternative B2 for optional disclosure if the company is protected by FOIA.

#### General Comments

I am unclear how actively all scoping comments were considered in determining the alternatives, but some could distract and result in poor alternatives. The one of concern

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page 6 of 6

is 2.6.1.1. "...or scientific research must not be allowed if its goal is to discover useful products or processes from the study of nature."

Velcro, metallic paints, the least toxic EPA approved herbicide, biological weed control, and light without heat (glow-in-the-dark sticks and accessories) were all invented from the study of nature. Industry increasingly turns to the wonders of nature to meet society's wants and needs.

The document fails to discuss continued research of a product already on the market. How will product improvement or market expansion be addressed?

Would monetary benefits be paid to the park before or after taxes?

Jennifer Vollmer

12515-7429  
page 1 of 1

*Received 01/27/2007 via NPS's Planning, Environment  
and Public Comment (PEPC) website*

Any proposal to collect any sort of fees for commercial activity in the parks, other than those for limited traditional franchises such as lodges and gasoline stations, is entirely unacceptable. It creates a financial incentive to permit activities which are detrimental to the Park Service's mission to preserve the natural and historical features of the parks.

Robert Moss

12515-7444  
page 1 of 1

*Received 1/28/2007 via NPS's Planning, Environment  
and Public Comment (PEPC) website*

The benefits both to the Park Service and humanity that can be reaped by bioprospecting are too great to pass up. With benefit sharing agreements the Park Service may share in the benefits arising from such research.

The Park has not been harmed by any past bioprospecting, humanity has benefited, tremendous profits have been made (but not shared with the Park Service). Research permitted with the Park Service as a benefit sharing partner is a win-win scenario.

I support and approve of the current plan but do believe that mandatory disclosure of terms and conditions of any and all benefit sharing agreements must be a critical condition to avoid the appearance of impropriety and prevent benefit sharing agreements and bioprospecting from failing due to public perception of wrong doing.

-Katie La Salle-Lowery  


12515-7455  
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*Received 1/28/2007 via NPS's Planning, Environment  
and Public Comment (PEPC) website*

I strongly oppose opening up the parks for business partnerships. Also, I want to see profits from research or applications of research conducted in the parks to be shared with the parks - preferably received and managed by some 3rd party that could dampen conflicts of interests in generating revenue at the costs of compromising ecological integrity. Thank you for your consideration, and your dedication to the generations far ahead that will not remember our names.

all the best,

Jesse Turner

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page 1 of 6

*Received 1/29/2007 via NPS's Planning, Environment  
and Public Comment (PEPC) website*

I respectfully submit the following comments concerning the National Park Service Benefits Sharing Draft Environmental Impact Statement, hereafter referred to as the DEIS. I request that our comments be included in the official public record, carefully considered, and incorporated into the planning process, any further drafts, and the Final EIS/Plan and Record of Decision.

I recently left the Smithsonian Institution where for almost 18 years I was dealing with international environmental policy issues for the Smithsonian and from them, within the USG interagency processes. One of the processes which I have followed, and in fact been a substantive lead on, is that of "Access and Benefit Sharing." I have been part of the formal and informal discussions and meetings internationally at the UN Convention on Biological Diversity, the World Intellectual Property Organization, the World Summit on Sustainable Development, and many other fora. I am currently writing academic pieces on these experiences

I believe the DEIS, as presented, is seriously flawed. It does not satisfy the District Court's Order in *Edmonds Institute et al. v. Babbitt, et al.*, nor does it meet the requirements of the National Environmental Policy Act (NEPA). The DEIS has narrowly cast what should be a full range of alternatives into a false choice between commercial bioprospecting with increased benefits to the Parks and society, and no commercial bioprospecting with no increased benefits.

The NPS should either withdraw the DEIS, correct its deficiencies, and then issue a revised document for public review and comment as a Supplemental Draft EIS or choose Option A.

NPS has traditionally allowed scientific research, under specified conditions, to take place in the National Parks. This research has exceedingly rarely led to the consequences, scientific and financial, such as that accruing from the discovery of TAQ.

However, the NPS was put into an uncomfortable position, as they themselves admit, when they were asked why the US government did not get royalties from the TAQ polymerase patent. This desire to get a financial return (benefit) forces the defensive position in the NPS to both claim ownership of the biodiversity within the Parks and heightened control over all specimens taken from the National Parks and to develop the CRADA and benefit sharing concepts which this DEIS addresses.

The desire to get the benefits is understandable, as is the desire not to have to come in front of Congress and explain why this apparently obvious idea is not good public policy.

However, it is not good public policy. It is not good public policy because there is no evidence that the potential benefits would efficiently outweigh the added costs of the regulatory and contractual systems which the benefit-sharing system as proposed would entail. Any benefits of a benefit sharing scheme must be weighed against the practical impact of such a scheme in terms of cost, on the actual use of research specimens and information. Globally, many countries have fallen into the same trap that the NPS has fallen into one of the policy arenas in which there actually is a slippery slope. The slope is the following: deciding that there is a desire to capture benefits from the commercial use of the biodiversity on lands; recognizing that this is extremely difficult to monitor and control once materials are out of one's position; not trusting one's contractual counterparts increasing control over materials (in this case specimens coming from Park lands); and setting up elaborate, expensive, anti-science systems of control and oversight with no analysis of the cost-benefit ratio of this system, clearly stifling scientific, especially taxonomic, research.

Some developed countries which have done careful analysis of the ABS issues for government lands have decided that the management costs and restrictions which would come from such a process are not warranted and therefore have chosen policies similar to Option A. No other developed countries have developed national procedures yet due to the complexity and understood sensitivity during global negotiations.

The costs to the NPS are in terms of the long-term management and oversight of this complex set of arrangements and in the many legal challenges which will come from its attempted implementation, but, perhaps more important are the resulting restrictions:

- “To the thousands of researchers and their institutions who do research in the National Parks, the vast majority of which is non-commercially oriented;
- “To the public in the reduced scientific information which this already complex system is resulting in, and;
- “To the future when the necessary specimens which document the National Parks in this day and age are not widely available due to the difficult and onerous conditions which this policy forces the NPS to take.

Benefit sharing as a concept is being discussed and negotiated widely in the international arena. It is one of the elements in the U.N. Convention on Biological Diversity (which the U.S. has not ratified and the Congress has instructed NPS not to implement). The

experiences from other countries trying to implement ownership based models of benefit sharing have all created large bureaucratic and procedural impediments to research and development, and few have seen any substantial flow of benefits to them. All have seen a decrease of research opportunities and a decrease in the many non-monetary benefits which flow from pro-research policies and procedures. Some of the countries which have adopted such policies are now changing back to a less restrictive set of procedures, such as the Philippines and Brazil. Benefit-sharing concepts are being negotiated not only in the UNCBD, but also in the World Intellectual Property Organization, the World Trade Organization, and as part of many of our Free Trade Agreements. The NPS proposed policy will make our negotiations much more difficult in all of these fora.

This deceptively simple desire to have benefit sharing arrangements creates many unintended negative consequences to science, creates more uncertainty and ambiguity in any bioprospecting enterprise, and as written is too broad and vague, with no certain return. It is, as increasingly is being seen in the CBD discussions, a lottery. Some Parks may indeed provide a useful organism which creates an income flow, but most will not.

The benefit sharing debate, globally and in the NPS, is based on simplistic assumptions and models, all reinforced by the rather unique TAQ example that an organism is taken, important and commercially relevant properties are found, they are patented and commercialized. The reality is that this is an extremely rare case. First, access to materials is for non-commercial research in the vast number of cases. Very few of the specimens collected for commercial research will uncover any commercially interesting applications. The majority of commercially interesting findings, even those receiving patent protection, will not generate any income (many, if not most patents are defensive keeping others from using the potential, rather than resulting in a positive cash flow). Finally, most of these commercially interesting options will not be using the organism, as the TAQ example does, but a tiny part of the genome or part of a molecule discovered. Apportioning the property claim to part of a molecule is not a trivial exercise. So the regulations are set up to capture benefits from a tiny fraction of uses. One additional element of the slippery slope is that for the vast majority of basic science research specimens (as opposed to those specifically collected for bioprospecting), they are specifically collected to be held in perpetuity, to allow future generations to understand the biodiversity at a specific place and time. It allows us to understand change, variety and variability in nature. However, this leaves open a door (very small, but real) that someone in the future might use these specimens for commercially oriented research (the future and third party issues). Therefore some countries, and the NPS, to create more certainty that they will get their share, have made it costly and nearly impossible for the many repositories museums, research collections, botanical gardens and herbaria to in good conscience accept NPS materials any more.

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The other benefits which do flow from research knowledge, education, information for management and planning these already are flowing and will continue to flow (to the NPS and the citizens of the United States) under all models.

Additionally, I will venture a guess that most respondents to this request for submissions are focusing solely on bioprospecting. However, the NPS preferred proposal states they it is intended to gain benefits from “useful discoveries, inventions, or other commercially valuable applications.” This statement is too broad and vague. Does the printing of a calendar of photos from the research (with copyright protection) fall under this mandate? (I note that the NPS does charge cost recovery and a location fee for commercial filming will they include a royalty fee also under this policy?) Would biomechanical inventions such as a clamp which was designed after watching the use of a spider’s mouth be covered? Would the development of a cancer fighting drug from a plant in Canada which was studied because it was related to a plant in an American National Park be covered, even if the American plant did not provide the ultimately useful product but was part of the discovery process? These are not just hypothetical examples for each type there are claimants in other parts of the world who are requesting benefits from such linkages.

These questions of reach and reach-through are fundamental and need to be addressed prior to any decision on whether or not to develop such a regime. On the face of it, the language proposed is a legal quagmire and will result in many lawsuits to define and demark questions like the ones asked above.

Most of the biological diversity found in our Parks are not unique to Park lands. If something was found within a Park but also outside of the Park, what claim for benefit sharing would the Park have?

The preferred option proposal will have effects contrary to many of the objectives of the Park Management Act. The tension between the scope and ambition of any benefit sharing system and its feasibility of practical implementation needs to be addressed.

While the financial windfall from capturing part of the profits of another TAQ are alluring, that siren call must be weighed against the probably loss of other benefits which are already being accrued, but not accounted for. Benefits already coming to the US public (the real owners of the biodiversity of the National Parks) from the research (commercial and non-commercial) on NPS lands include knowledge of the biodiversity and ecology of the regions, enhanced management capacity, and yes, new products. The benefit to the United States from the TAQ process has been enormous in health benefits, and our understanding of so many scientific processes. Each of these has created new products

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and the tax revenues from them. Foregoing the royalties on a new TAQ, if it facilitates it being found more quickly, most probably would be an overall increased benefit to the U.S. public, and the world.

The potential (and in fact the high probability) that the costs of maintaining the necessary system and defending against the many court cases that will ensue from the vague and open-ended attempt to gain benefits from “useful discoveries, inventions, or other commercially valuable applications” will result in a decrease of funds for the maintenance and appropriate oversight of the Park and therefore have a deleterious impact on the conditions (environment) of the Park.

The real life existing procedures which the NPS has developed in recent years to try to capture benefits have not worked well. Other organizations and individuals are questioning the basis of NPS ownership of the organisms which might be studied, and therefore questioning their capacity to develop these procedures. Based on Supreme Court cases and the NPS Organic Act, these questions are very valid. These claims do create a conflict with the provisions in the USGS Organic Act of 1879 which clearly outline the responsibility of the NPS to deposit research collections at the Smithsonian or other repositories. Others question that having the benefit-sharing process, especially with a mandate to “make money” for the Parks, will skew Park decision making and permit approval towards bioprospecting and away from general research. This also has strong credence and examples from many parts of the world show that this is the result of increasing benefit-sharing status.

Most natural history collections currently will not take NPS collections under the conditions which Headquarters insist upon. They are expensive, create additional unfunded mandates, and for control purposes (to avoid misappropriation which might reduce benefit sharing as mentioned above) mandate dual systems of storage, curating, reporting and monitoring of the collections. These real costs are reducing the ability of the partners of the NPS in the academic, museum and research community from documenting the biodiversity and ecology of the National Parks as they have been doing since the inception of the system. In the research communities I have worked with, people are increasingly avoiding working in the National Parks, depriving the Parks and the U.S. public from the information and knowledge which such research would develop. (There are some exceptions, and some Parks are less restrictive in the conditions which they place.)

As we have seen in the international arena, the fear of biopiracy from third party or later use of specimens (which is theoretically possible, but extremely rare) is creating conditions

which are onerous on the research and collections community. From a strictly bureaucratic position, once you put the value on the specimen, you almost have to create this onerous system to avoid future embarrassments.

As is stated in the DEIS, benefits, should they ever be derived, "often don't materialize until years or even decades after completion of the permitted research" (p5). The management costs to all users of Park resources are therefore an obligation of tracking and reporting for years and decades. These costs need to be seriously understood.

Thus DEIS is fundamentally flawed for 2 key reasons. First is it built on an improper analysis of law, specifically in their claim of ownership rather than sovereignty of the materials found in the National Parks. This claim has many implications, none of which are good for long-term management or resolution of the issues and all open up many long-term legal questions of control, shared resources, and multiple claims for the benefits (to the Park? To the NPS? To the general treasury for the real owners, the American people?).

The second reason is that they did not do an effective cost-benefit analysis of the proposals and the implications of a costly system on the long-term ability of the Park Service to manage the Parks. Many important questions were neither asked nor answered, the long-term management, oversight, and enforcement questions were not adequately addressed, and the real implications for the fundamental mandates of the NPS for research and science-based management of the Parks are being given short shrift by this proposed procedure.

While the Congress and Court have stated that the NPS may negotiate benefit sharing agreements, they have not mandated that they must do this. To address the desire to create an opportunity for the US government to benefit from successful commercialization of genetic resources found on our lands, is there a less heavy handed and much more precise process which could be developed?

Many of the costs are known and can be calculated. The benefits are a crapshoot. Until a legitimate cost-benefit analysis is done, the only conclusion is that implanting any option other than A will result in a decline of resources going into Park maintenance and management and therefore will have a deleterious impact on the environment of the Parks.

Leonard P. Hirsch

*Received 01/29/2007 via NPS's Planning, Environment  
and Public Comment (PEPC) website*

January 27, 2007

NPS Benefits Sharing DEIS  
P.O. Box 168  
Yellowstone National Park WY 82190

To the reviewer,

I am writing to state my opposition of the commercialized bio-prospecting which is proposed within the Benefits-Sharing DEIS. The US National Parks are formed to recognize and protect areas of defined significance to the people of the United States, and to steward the resource for the benefit of all citizens. In the case of National Parks that are created for natural treasures, the stewardship has always sided to the protection and preservation of the natural features for perpetuity of the nation.

Commercialization of the parks for natural area has help to a relatively low measure; mainly for the enhancement of managed access for people to come in contact with the natural area. Commercialized bio-prospecting is contrary to the stewardship mission of the parks. I am aware of the existing system for limited 'prospecting' of natural species within the parks, with friends who deal with academic biological studies, and with research from private corporations. The system that is currently in place admittedly works well, as stated within the DEIS. This allows low-impact surveys, with any beneficial results spread across the public. Commercialized bio-prospecting will entail a 'lock,' in the form of limited licensure or a patent on a specific natural process or item. The commercialized proposal does include a monetary kickback to the National Park, but the main payoff will be to a single entity - a private enterprise, citizen, or corporation.

Impact statement reviews for Parks necessarily default to preserving or protecting the Park as a foremost objective, with citizen access, then use will following. With a commercialized interest, as proposed with this 'Benefits-Sharing' DEIS, the 'burden of proof' is on the proposed impact to show how it will not endanger the integrity of the Park's purpose of preservation or protection. This DEIS shows a good fundraising scheme for the use of a natural resource. This proposal would have merit on lands managed for use as a natural

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resource, but I feel that it has absolutely no merit in dealing with our National Parks. They are held to a separate and higher standard of integrity. Because of this, I can only support the 'Alternative C; the Prohibition of Research Specimen Collection for Any Commercially Related Research Purpose' that is proposed within the document.

Sincerely,

Oren Kennedy



Copy placed on the DEIS website input area and separately mailed as backup only.

To:  
NPS Benefits-Sharing DEIS Team  
P.O. Box 168  
Yellowstone National Park, WY 82190

12515-7473  
page 1 of 1

*Received 1/19/2007 via NPS's Planning, Environment  
and Public Comment (PEPC) website*

I oppose any commercial exploitation by any commercial bioprospecting. Park resources should not be used at all for commercial purposes. National parks are for the protection of their natural resource, not commercial uses.

Alan Carlton

12515-7476  
page 1 of 1

*Received 1/19/2007 via NPS's Planning, Environment  
and Public Comment (PEPC) website*

I am pleased to comment on this EIS from the perspective of a citizen who regularly visits and enjoys the National Parks--particularly for their scenic, recreational, and wilderness values. I am very proud of our National Parks System, the finest in the world, and I believe overwhelmingly seen as havens of natural resources to be enjoyed as Nature--not as commercial resources!

We do have huge tracts of federal lands outside the Parks, available for various forms of commercial-industrial exploitation. The National Parks should not take on this additional aspect.

I oppose EIS alternatives which might open the National Park System to commercial bioprospecting. I urge selection of Alternative C. No commercial bioprospecting.

Stephen Brown

12515-7477  
page 1 of 1

*Received 1/18/2007 via NPS's Planning, Environment  
and Public Comment (PEPC) website*

Upon a recent return trip from one million acre Boundary Waters wilderness, I learned of the National Park Service's plan to facilitate bioprospecting on more than 84 million acres of land.

This proposal violates the spirit of the park service, devalues our public lands, and arguably continues the pattern of corporatizing our mountains, valleys, draws, and watersheds. Proposals such as these open our spaces to development of all kinds. Environmental impact analysis of roads, impacts of equipment on the soil, wildlife, soluble and non' soluble trash, and future development can never be adequately predicted once prospecting begins.

I am intimately familiar with the scale, scope, and magnitude of these projects. In the Boundary Waters, the wilderness area abuts others, effectively creating more than three million acres. In the Bob Marshall Wilderness, here in Montana, I've never packed enough food to walk across even half of the one million acre space and the connected Greater Yellowstone ecosystems of Glacier National Park and beyond. From walking all of these spaces, and others, I understand the intimate connections between these areas for wildlife, historic human populations, environmental health, and clean watersheds.

I urge you to strongly reject this proposal, citing the Wilderness Act and the dangerous precedent this sets for putting all public lands on boardroom tables instead of where they were meant to be: cartographic marks that, when combined, take days to climb and walk across. Places that we can keep sacred in stories and dreams for generations to come.

Noah Jackson

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*Received 1/20/2007 via NPS's Planning, Environment  
and Public Comment (PEPC) website*

Commercial enterprise in wilderness is prohibited by the Wilderness Act. Bioprospecting is a commercial activity.

Parks are to manage recommended wilderness the same as designated wilderness.

There is so little of our natural heritage left and it needs to be guarded and preserved, not sold off for any reason.

Thank you.

June Anna-Fey

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*Received 1/26/2007 via NPS's Planning, Environment  
and Public Comment (PEPC) website*

I am completely opposed to the NPS allowing private corporations to have access to the park for profit making exploration.

PARKS NOT FOR SALE!

Mary Ellen Anderson

*Received 2/11/2007 via NPS's Planning, Environment  
and Public Comment (PEPC) website*

These personal comments are based on concerns over the current and future environment of the NPS and the advancement of basic scientific research in the NPS and are not intended to portray the positions of the organizations with which I have worked.

As implied in this EIS, the most important issues at hand are to insure that the NPS has measures in place to continue and to increase conservation of species and the "science for parks" in the NPS. The "science in parks" efforts will strengthen many fields of scientific research in the United States and improve the environmental management decisions made for the National Park System.

There are no evident benefits to Alternative C, which should not be implemented. Alternative C appears to be prone to undermine Objective 3.2 to some extent, which states, "Ensure that implementation of the alternatives does not discourage the conduct of research involving units of the NPS." Alternative C appears certain to make basic scientific research in the National Parks more difficult, and as stated in the EIS, there is the potential that this inhibition of research could be major. This "hands-off" or "no access" approach has several adverse impacts, some of which are immediately recognizable, others adverse impacts will become evident over time. Does the NPS want to take responsibility for trying to discern which species might lead to commercially valuable information and which do not? Where would NPS draw the line? Discerning these issues will most likely require more capacity to evaluate research proposals than the NPS currently has. Although the report states that less than 1% of all research activities would be prohibited under Alternative C, any species could, theoretically, contain bioactive compounds, enzymes, or interesting properties that might later lead to commercial benefit.

The EIS states that, under Alternative C, if a researcher inadvertently finds something of commercial value within a species, the adverse impacts of not being able to study this particular range from small to major. Does this mean, for example, if a botanist identifies a plant to have medicinal compounds, that this botanist can no longer study this plant species in the National Parks? Would this prohibit all other researchers from researching this species in the NPS as well? Excluding certain species from study in the NPS appears to counteract conservation measures for species. How can species be conserved if basic research on its systematics, ecology, and population biology cannot be conducted? In addition, Alternative C could create perverse incentives for people to collect target species illegally in National Parks. When such research is done without approval, it would be more likely to be done in environmentally harmful ways. In addition, if a researcher is

forced to study the plant outside of National park boundaries, no potential benefits will be shared with the NPS. One would hope that the NPS describes Alternative C simply as a requirement of creating this DEIS, rather than as a serious proposal. As long as the NPS is able to protect species present in the NPS appropriately and pursues legal action if species are collected or sold illegally, this approach would inhibit possible benefits to United States citizens.

The decision to implement either Alternative A or Alternative B rests on the true administrative burden to the NPS and the procedures under which benefits would be negotiated. The report states that, "Under Alternative B, individual parks would negotiate, implement, and monitor compliance with benefits-sharing agreements consistent with their current management of a variety of agreements with other entities."

The DEIS Report appears to focus on the potential benefits of BS in NPS, but it is not clear after reading this report if the true current or future costs of implementing a benefit-sharing system are reflected sufficiently. For example, the report mentions frequently that the MTAs used in Yellowstone take only 1.5 hours of a current staff's time, but perhaps there is an assumption that such MTAs are easily applicable to the administrative and management systems for all National Parks. Perhaps such MTAs are more applicable to some parks, such as Yellowstone, than to others. In addition, the estimates of the numbers of potential CRADAs per year (two to nine) may be far below what will take place in the future.

Although the administrative and other costs are evaluated quantitatively and concluded to be "negligible," this should be very carefully examined before committing to a benefit-sharing program that is mandatory for both researchers and the NPS. If the NPS will need a team of lawyers and scientists to evaluate agreements, this may well have substantial costs. In summary, if it is possible that any benefit-sharing system may be more expensive than the value of the benefits brought in, then the NPS should evaluate critically the worth of applying benefit sharing to the National Parks.

If it is clear that the administrative burden is far less than the benefits projected to occur by creating benefit-sharing, then the NPS should have a benefit-sharing system in place under one of the "Alternative B" proposals. (The three different Alternative B proposals should be more clearly distinguished than was done in the DEIS, perhaps with specific examples). Any benefit-sharing agreement should not take place at the same time as the research permit, since this could easily restrict basic research. Instead, benefit-sharing negotiations should be separate from the research permit process and should be triggered by the discovery of commercial value derived from the biological resource, and initiated by those

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who wish to commercialize the discovery. As stated in the DEIS, if any benefit-sharing system is implemented, it will be very important to insure that those people approving research permits do not discriminate against (or for) each individual research project which might lead to commercial benefits. There must be adequate measures to guard against the tendency to approve those projects which might bring benefits to the NPS while inhibiting other projects that do not have commercial interests from doing research on the same or a similar species. Separating the research permit process and the benefit-sharing process is the clearest way to protect against this tendency.

According to the DEIS, "most monetary benefits would be dedicated to scientific activities promoting the conservation of natural resources protected and managed by the NPS." It is true that any monetary benefits should be dedicated to promote "scientific efforts that promote conservation", but it should be more precisely specified how exactly such money would directly promote conservation rather than including it in any general NPS budget. For example, the original researcher who collected the species could have a role in defining how the species from which the commercial use was derived can best be conserved. Or if the species is abundant, the original researcher could recommend other species to which such monetary benefits could be directed.

The report also states that "monetary benefits could also be used to offset administrative costs of a benefit sharing agreement in accordance with the FTTA." While this idea has some merit, it is possible that the administrative burden of implementing benefit-sharing agreements could absorb most of the monetary benefits which should be directed towards science and conservation, or could exceed the actual value of the monetary benefits if additional NPS staff are added to manage all stages of the benefit-sharing. If any monetary benefits are taken, it appears that the administrative burden would be less if there were a clear up-front payment system, rather than a prolonged negotiated contract system for each separate CRADA.

In the discussion of benefits, there should be a focus on pursuing non-monetary benefits instead of monetary benefits for academic researchers and basic scientific research organizations. The ability of such organizations to improve the "science for parks" fall mainly within the non-monetary domain by providing knowledge and training. To a lesser extent, such organizations may be able to provide equipment and special services, as described in the report. A focus on monetary benefits for such organizations is misleading and will quickly lead to disappointment.

One idea to examine during the benefit-sharing discussion is to require that most (if not all) of the benefits are non-monetary for commercial organizations as well. This

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approach might promote cooperation between those commercializing something derived from a biological resource collected in a National Park to work towards the desired non-monetary benefits that each park and commercial organization is uniquely suited to provide. For example, the commercial organization may be able to provide special services such as genetic work, or funding training opportunities (for Ph.D. and masters students, NPS personnel, academics). Focusing on non-monetary benefits might stimulate other novel and creative ideas and plans for how to enhance the education, research, and conservation efforts in the National Parks more than the approach of simply taking in monetary benefits. In addition, some organizations might be more willing to provide non-monetary than monetary-benefits for several reasons including: enhancing their public relations image or more willingness to provide special services that are less costly to give to the NPS than it would be for the NPS to obtain by using outside consulting services. This might be more favorable to the NPS as well, to more easily demonstrate the true scientific and conservation goals of the NPS to U.S. citizens, some of which may have a misperception that the NPS is "selling off" their natural resources.

If monetary benefits are an inevitable part of the future system adopted by the NPS for commercial use of biological resources, consider a tiered system in which non-monetary benefits are shared for a certain amount of the total royalties generated by each company. For example, if the value is less than \$1 million dollars per year, non-monetary benefits such as those described in the DEIS would be provided, but if total royalties exceed \$1 million per year, this would then trigger a negotiation of the percentage of the royalties that would be shared.

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When discussing the benefit sharing in the NPS, it is important to keep in mind that the United States is involved in the process of addressing issues similar and related to those in this EIS on an international scale under the Convention on Biological Diversity and other treaties. Whatever decisions are made for the US NPS may be seen to outside countries as setting a precedent for how access and benefit sharing negotiations should proceed.

I would be happy to share more comments on this topic in the future.

Michael Powers

*Frances Lamberts*

January 22, 2007

Benefits Sharing DEIS Team  
Yellowstone Center for Resources  
P.O. Box 168  
Yellowstone National Park, Wyoming 82190

Re: DEIS Servicewide benefits sharing through commercial bio-prospecting in the national parks

Dear National Park Service:

I appreciate your seeking public input to a proposal that will affect public lands dear and precious to all Americans--our national parks. Please accept my comments for your consideration, and for the public record.

I am aware of the research being conducted at one of these treasures that is close to me--the Great Smoky Mountains National Park. The ongoing research toward compilation of an All Taxa Biodiversity Inventory (ATBI) for our Park is of truly awesome scope and importance. It highlights many facets of the scientific exploration of our natural resources which are preserved in these public lands: the expertise which Park scientists bring to these studies, the wide range of additional expertise in specialty fields, through involvement of public research institutions worldwide, and the committed assistance from thousands of citizen volunteers. For example, for just one category of organisms, beetles, the working group of scientists collaborates with authorities at more than 40 institutions, in six countries, on three continents. Through the ATBI research effort, as of October 2006, 651 species new to science have been discovered and almost five thousand species not previously known to reside at the Park. Surely this Inventory study demonstrates unparalleled achievement in biological field science, through the public domain, with full transparency to and involvement of the public, and to the good aim of our better understanding of the resources which these public lands contain, and better ability of preserving them.

I am therefore surprised and dismayed to note in your DEIS that research, specimen collection and contractual arrangements for potential new commercial products derived from species found in the parks is "preferred" to be performed on a commercial basis. This, in my view not only fails to acknowledge and fully utilize the research capabilities of your Agency's own scientific staff but raises many questions, inadequately dealt with in the DEIS, concerning operational aspects of implementation of the plan, its monitoring and oversight, public transparency regarding proprietary-information rights that are sure to be claimed, and many others.

Most notably and fundamentally, the "preferred" plan would establish as new purpose for the national parks their use for the derivation of commercial profit, which the Parks' enabling legislation prohibits and which would therefore seem to be illegal on the face of it, and not wished for by the public. Commercial facilities and endeavors in the national parks are, and should remain, subservient to the needs of the public in enjoyment of their parks. Park use for extraction of resources for private, commercial profit--even with promise of "sharing" of some of the latter--should not be instigated.

Benefits Sharing DEIS Team, p. 2

I am, in short, not in favor of your preference regarding the indicated choices. I oppose all the DEIS options laid out in Alternative B. I urge that the Park Service honor and support its own scientists through implementing Alternative C.

As Professor E. O. Wilson says, bio-prospecting research will no doubt take on greater importance in the future, and can be benign. But such research and undertaking, where the public lands are involved, should remain in the public domain. Please do not institute commercial bio-prospecting ventures in our national parks.

Thank you for accepting my comments.

Sincerely,

*Frances Lamberts*

# Comments from Public Agencies and Tribes

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|            |                                                                         |
|------------|-------------------------------------------------------------------------|
| 12515-76   | Superintendent,<br>Isle Royale National Park                            |
| 12515-136  | Comanche Nation                                                         |
| 12515-6717 | Bridgeport Indian Colony                                                |
| 12515-7462 | United States Department of State                                       |
| 12515-7467 | Shoshone-Bannock Tribes                                                 |
| 12515-7501 | Environmental Protection Agency                                         |
| 12515-7513 | National Conference of State Historic<br>Preservation Officers (NCSHPO) |
| 12515-7515 | Advisory Council on<br>Historic Preservation (ACHP)                     |
| 12515-7516 | Superintendent,<br>Mojave National Preserve                             |
| 12515-7517 | Fish and Wildlife Service                                               |

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*Received 12/04/2006 via NPS's Planning, Environment  
and Public Comment (PEPC) website*

Many federal agencies have the capacity to receive royalties from any patents or commercial gain developed from government resources or intellectual collaboration. The NPS should indeed be able to have formal benefit sharing arrangements and the requirement to do so should be included in the research permit process. The percentage is usually very nominal as the commercial developer of an application typically has high start up costs but something should come back to the public benefit when commercial entities utilize the public's resources. I would support these revenues returning directly to the NPS unit where the research originated.

Green, Phyllis A

[Superintendent, Isle Royale National Park]

12515-136  
page 1 of 1

*Received 12/19/2006 via NPS's Planning, Environment  
and Public Comment (PEPC) website*

At this time, the Comanche Nation has no immediate concerns or issues regarding the EIS; however, we would like to be kept informed of any further developments concerning this issue. We look forward to receiving any additional reports or other information that is derived from the planning and preparation concerning this project.

We look forward to your reports as activities proceed.

Sincerely,

Ruth Toahy

NAGPRA Coordinator

Comanche Nation

ALL NRES  
AD-10/06-16  
OCT 27 2006



(760) 932-7981 Fax: (760) 932-2846 e-mail: bico@admi@yahoo.com

October 17, 2006

United States Department of the Interior  
National Park Service  
Attn: Mr. Michael A. Soukup, Associate Director  
Natural Resources Stewardship and Science  
1849 C Street, N.W.  
Washington, DC 20240

RE: A3823(2300)

Dear Mr. Soukup:

In response to your letter received, October 2, 2006, the following is being provided.

The Bridgeport Indian Colony does not agree with benefit-sharing with scientists.

There are too many great lands across our great country being destroyed as we speak. Allowing more destruction to continue for research to benefit only those involved for monetary gain is unforgivable.

How can one allow what god created to be used for commercial purpose - just to extract what is left of our natural resources.

For centuries, as documented in history, Native Americans suffered at the hand of generations of political gain even to the point of extermination. Don't do this to our beautiful lands.

National Park Service was created to protect and preserve the national parks not to tear it up.

In the Spirit of Tradition,

*Charlotte Baker*  
Charlotte Baker  
Tribal Chairperson

CC: Cultural Program



**United States Department of State**

*Bureau of Oceans and International  
Environmental and Scientific Affairs*

*Office of Ecology and Terrestrial  
Conservation*

January 29, 2007

NPS Benefits-Sharing EIS  
PO Box 168  
Yellowstone National Park, WY 82190  
Voice 307-344-2203  
benefitseis@nps.gov

Re: Comments on Benefits-Sharing Draft Environmental Impact Statement

Dear Sir or Madam:

The United States Department of State appreciates the opportunity to comment on the draft Environmental Impact Statement (EIS) on Benefits-Sharing. The National Park Service (NPS) plays an important management role over federal lands on behalf of the American people. Essential to that role is the management of and control over access to genetic resources of fauna and flora in our parks.

With advances in molecular biology and genomics, there is enormous potential for useful and unique genetic material to be discovered and utilized. The management of access to genetic resources and the sharing of benefits from the utilization of those resources is an emerging national and international issue.

Internationally, the United States has supported negotiating access to genetic resources and the sharing of any resulting benefits on a case by case, contract basis with the understanding that any negotiation should first and foremost encourage research and scientific innovation, not discourage it. We believe the NPS should implement a similar approach nationally.

Facilitating environmentally responsible research and scientific development through access to genetic resources on Federal Park lands is a priority. The negotiation of a benefits-sharing agreement should not, as we have seen it occur in many countries around the world, impede, prohibit or deter scientific research on national park lands.

As a general matter, it seems that full disclosure of benefits-sharing arrangements with respect to federal lands would be a good policy (Option B1). However, we understand that there may be circumstances when the terms and conditions of a benefits-sharing arrangement may be difficult to disclose for a private company. Therefore, Option B2 may also be appropriate in certain circumstances to the extent it is consistent with U.S. law (e.g. Freedom

of Information Act, Federal Technology Transfer Act). We also note that some developed countries (e.g. Nordic) which have done careful analysis of the costs associated with a benefits-sharing structure for government lands have decided that the management costs outweigh the potential benefits and have therefore have chosen policies similar to Option A.

We understand that NPS would have research permit issuance and access to genetic resources precede and be separate from any negotiation of a benefits-sharing agreement. We defer to your judgment on this matter and trust that relevant policy issues have been considered, e.g. the desire to not unnecessarily burden applicants with potentially unneeded steps against the pitfalls of having to enter negotiations with applicants twice.

Additionally, we encourage the NPS to consider including standard language in research permits requiring any molecular research results, such as genomic data, be disclosed through scientific publication of the genetic sequence in a national public repository such as GenBank or NCBI prior to commercialization. Requiring publication would help prevent the illegal patenting of organisms and parts thereof and provide a baseline to determine the validity of a commercially viable innovation that may be patentable.

Sincerely,



Daniel K. Balzer  
ABS Focal Point  
Office of Ecology and Terrestrial Conservation  
OES/ETC, Room 4333  
Department of State  
2201 C Street, NW  
Washington, DC 20520



FORT HALL INDIAN RESERVATION  
PHONE (208) 478-3700  
FAX # (208) 237-6797

FORT HALL BUSINESS COUNCIL  
P.O. BOX 306  
FORT HALL, IDAHO 83403

January 24, 2007

Benefits-Sharing EIS Team  
Center for Resources  
P.O. Box 168  
Yellowstone National Park, WY 82190

**RE: Review and comments to Benefits-Sharing Draft Environmental Impact Statement (DEIS)**

The Shoshone-Bannock Tribes (Tribes) has reviewed the Draft Environmental Impact Statement prepared by the National Park Service and submits the following comments.

**General Comments**

Bioprospecting utilization of natural resources located in the National Park System (NPS) for research and possible applicable knowledge created by such research is the commodity available for commercialization. The need for this DEIS is the outcome of a lawsuit between the National Park Service (NPS) and a research company. Currently the NPS does not promote the benefits sharing program and due to this circumstance there is a need to specify the rights and responsibilities of both the NPS and research parties. The DEIS proposes three alternatives and identifies the preferred alternative, Alternative B, which would provide a benefit sharing agreement between the researcher and the NPS (where the research originates), if the research produces possible revenue from future commercial application. The researcher and NPS will share monetary gain if Alternative B is implemented. The Shoshone-Bannock Tribes (Tribes) have concerns about bioprospecting.

**Cultural Resources**

Bioprospecting does and will continue to impact cultural resources the Tribes finds important. The Tribes define cultural resources as holistically consisting of many components in the natural and man-made environments. As succinctly stated by a tribal member, "our cultures involve knowledge systems developed, nurtured and refined by the people from the elements existing in our territory and traditions passed on by succeeding generations. Our many unique names, designs, symbols, songs, ceremonies

and stories are based upon our peoples' continuing relationship to the natural world. Cultural property, in our view, includes all components of cultural integrity, and therefore, heritage".

At risk are the Intellectual property rights of the Tribes from bioprospecting and benefits sharing. Plants, animals, minerals and landscape have and continue to be resources utilized for spiritual and subsistence to the Shoshone and Bannock people. Indian people have manipulated the landscape and environment through time to gain ecological benefits and in doing so have created an established ecological, traditional knowledge base. This knowledge is considered "prior art" and its value is well known in the pharmaceutical industry as many medicines originated from "prior art" knowledge.

Simply stating in the DEIS that Intellectual Property Right Laws will be followed is not sufficient to assure the Tribes that our traditional knowledge is protected.

As identified in the DEIS, Yellowstone National Park has the greatest amount of researchers applying and receiving permits to do research in the park. Shoshone and Bannock people living in Wyoming, Montana, and Idaho have used the natural and cultural resources in the Greater Yellowstone area from time immemorial according to the tribal history and the archaeological record. Accordingly, Tribes view the Greater Yellowstone Area as significant aboriginal land that continues to contribute and play an integral part in maintaining cultural beliefs and traditional practices. Tribal ethnography of this area is indicative of the significance of the Greater Yellowstone Area.

Research in the Yellowstone National Park concerns the Shoshone and Bannock Tribes. Yellowstone ethnographic study (2006) identifies tribes that have historically used the Greater Yellowstone area for the procurement of natural resources for sustenance. Shoshone and Bannock tribal members have resided on the Yellowstone Plateau and procured natural and cultural resources from the Greater Yellowstone Area like many generations before present. Additionally, the Fort Bridger Treaty provides the Shoshone and Bannock Tribes gathering and hunting access on unoccupied lands of the United States. Presently our tribal members continue to go to the Greater Yellowstone Area and exercise their cultural and traditional heritage. Moreover, research may impact a sacred area used for medicinal or spiritual purposes. For example, the hot springs are spiritually and culturally significant. As noted in the draft ethnography of Yellowstone National Park (Walker 2006) the concern is when a spiritual place overused by other uses may impact the spirits associated with the place and cause them to no longer reside there, therefore the place loses the ability to provide the cultural and spiritual needs of the Shoshone-Bannock Tribes. How will Tribes be assured resources that are important to them will be preserved for their needs?

Another concern not identified in the DEIS, where does the NPS identify in the researcher application process or benefit sharing agreement if no synthetic version can replicated, will the raw material from the national park be used? This might apply if research discoveries are of great value and is a significant contribution to the advancement of human health. Where is this addressed?

### Specific Comments

- Section 2.2.3. Page 39 - Intellectual Property Rights will remain unaffected by commercialized knowledge created by research how will IP be monitored to ensure all IP laws are being met? It is documented the many of today's medicines are derived from traditional knowledge held by Indian people. Also true is that future discoveries relating to human health may in fact be not a discoveries at all. Tribal people possess the knowledge but keep it within the traditional knowledge base this type of knowledge is known as prior art.
- Section 2.4.1.1 Page 42. - Any tribe, tribal community or tribal member who has traditional or cultural knowledge that is associated with the research can be a participant in benefit sharing. This is a general statement and does not begin to address the complex issue of Indian tribes and their traditional uses of the Greater Yellowstone Area. Also problematic is if individuals are recognized as beneficiaries of benefit-sharing agreements how will this affect the tribe as a whole and do tribes recognize individual actions as representing the tribes as a whole.
- Section 2.4.6. Page 47 - what are the mitigation measures? Include the measures in an appendix.
- Section 2.6.1.7. Page 55 - Alternative A and B provide for tribal inclusion in benefits sharing, although the Alternatives are very different in how the tribes will participate. Not identified is how those tribes with treaty rights who do not participate in the research, and when the research utilizes the natural resources used by the tribes for subsistence or spiritual purposes will be mitigated. What mitigation measures provide for the loss of these cultural resources and intellectual property rights?
- Section 2.8. Pages 59 - explain how cultural and historic aspects will benefit from the monies generated by the benefit sharing and what specifically is targeted under cultural and historic aspects.
- Section 3.3.1. Page 79 - similar to the visitors experience in Yellowstone, the Shoshone and Bannock people's perception of a spiritual experience exist when they visit the park. The visit permits Indian people to experience the park and the natural resources and reconnect with the land, which is significant to them and also to their ancestors. Tribal people find the National Parks an important element in reaffirming their tribal identity. The condition of the park is vital to the level of enjoyment and spiritual and cultural experience of their heritage.
- Section 3.4.2. Page 84 - states there is no process or protocol to track third party researchers and the specimens they may have acquired. For park managers to effectively manage the researchers and the natural resources of the park the third party researchers must be monitored and at the very least park manager must have knowledge of where the research specimen are located and who has possession of

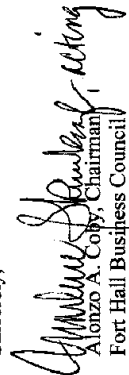
them. This lack of control provides for an opportunity for researchers to take advantage of the science and possible economic gain at the expense of the parks resources, Indian tribes and the public.

### **Recommendations**

1. NPS establish a monitoring plan for transfer of cultured samples to third party researchers and in the case of pirating of natural resource from poachers whom may have the ability to replicate research for commercial application.
2. Tribes may in the future want to participate, as environmental researchers. Are provisions in place to accommodate the native researcher similar to affirmative action procedures?
3. Establish a monitoring plan to identify when and if a particular location for research activity is placing stress on or creating an ecological condition that results in the changing of ecological environment?
4. Shoshone and Bannock people have the right to self-determination and sovereignty over their own lands of natural and cultural resources. Indian people have ownership rights regarding traditional knowledge, biodiversity and genetic resources. Consultation needs to occur regularly regarding the research at Yellowstone National Park. Project information sharing will facilitate tribal monitoring of natural resource use.

If you should have any questions please do hesitate to contact Carolyn B. Smith, Tribal DOE Cultural Resources Coordinator, (208) 478 - 3706 or email [csmith@shoshonebannocktribes.com](mailto:csmith@shoshonebannocktribes.com).

Sincerely,

  
Alonzo A. Coby, Chairman  
Fort Hall Business Council

cc: Carolyn B. Smith, Tribal DOE  
Claudio Broncho, Policy Representative  
file



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

JAN 18 2007

ASSISTANT ADMINISTRATOR  
ENVIRONMENTAL AND  
COMPLIANCE ASSURANCE

Ms. Sue Mills, Project Manager  
NPS Benefits-Sharing EIS  
P.O. Box 168  
Yellowstone National Park, WY 82190

Dear Ms. Mills:

In accordance with our responsibility under the National Environmental Policy Act (NEPA), 42 U.S.C. Section 4321, et seq., and Section 309 of the Clean Air Act, 42 U.S.C. Section 7609, the U.S. Environmental Protection Agency (EPA) has reviewed the programmatic Draft Environmental Impact Statement (EIS) for Service-wide Benefits-Sharing (CEQ No. 20060378).

This Draft EIS analyzes the potential environmental impacts of benefits-sharing, or the sharing of monetary and/or non-monetary benefits, from commercial ventures through formal agreements between National Parks and researchers. The document evaluates three alternatives that the NPS believes promote fair and equitable benefit-sharing which can be used to protect park resources. Alternative A (No Action) proposes that no benefits-sharing agreements be implemented and research would continue without the establishment of a standard benefits-sharing agreement. Alternative B proposes to implement benefits-sharing agreements and offers three variations specific to the disclosure requirements: B-1 proposes mandatory disclosure of all terms and conditions; B-2 offers optional disclosure of all terms and conditions, adhering to standard confidential business protocols; and B-3 proposes no disclosure of any royalty rate or related proprietary information. Alternative C proposes to prohibit research specimen collection for any commercially related research and only non-commercial research would take place. The document identifies B-2 as the preferred alternative.

The Draft EIS discusses the authorities that affect the management of natural resources and ensure their protection within the Parks, including the NPS's 1916 Organic Act. The document clearly identified the NPS mandate, to "conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations". Further, the National Parks Omnibus Management Act authorized the NPS to enter into benefits-sharing

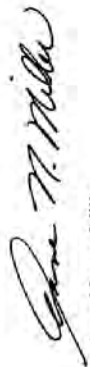
agreements with researchers and defined Parks as federal laboratories within the definition of the Federal Technology Transfer Act (FTTA). The type of benefits sharing agreement that is being considered by the NPS is termed a Cooperative Research and Development Agreement (CRADA). Additionally, the Draft EIS states that appropriate site-specific NEPA documents will be prepared for each future permit to collect research specimens.

EPA supports implementing the preferred alternative under existing authorities combined with full disclosure of CRADA information within confidential business information protocols. However, we suggest that the Final EIS establish mechanisms to ensure proceeds are focused on protecting natural resources in the Parks, and develop adequate enforcement protocols to ensure the terms of permits are followed so that natural resources would not be significantly impacted. In addition, EPA suggests that the Final EIS include information to clarify the range of research that has been permitted over the last 5-10 years. Lastly, we suggest including a sample permit in the Final EIS to clarify what types of information are required for issuing research permits.

Based on our review we have assigned a rating of Lack of Objections (LO) to the preferred alternative in the document. A copy of EPA's rating system is enclosed for your reference.

Thank you for the opportunity to review this Draft EIS. If you have any questions regarding EPA's comments, please contact me at 202/566-5400, or Elaine Suriano, of my staff, at 202/5640-7162.

Sincerely,



Anne Norton Miller  
Director  
Office of Federal Activities

Enclosure: EPA Rating System for Draft EISs

## U.S. Environmental Protection Agency Rating System for Draft Environmental Impact Statements

### Definitions and Follow-Up Action\*

#### Environmental Impact of the Action

**LO -- Lack of Objections:** The Environmental Protection Agency (EPA) review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

**EC -- Environmental Concerns:** The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce these impacts.

**EO -- Environmental Objections:** The EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no-action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

**EU -- Environmentally Unsatisfactory:** The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

#### Adequacy of the Impact Statement

**Category 1 -- Adequate:** EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis of data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

**Category 2 -- Insufficient Information:** The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new, reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses or discussion should be included in the final EIS.

**Category 3 -- Inadequate:** EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the National Environmental Policy Act and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

\* From EPA Manual 1640 Policy and Procedures for the Review of Federal Actions Impacting the Environment. February, 1987.

## NCSHPO

National Conference of State Historic Preservation Officers

HALL OF THE STATES SUITE 342  
444 NORTH CAPITOL STREET, NW WASHINGTON DC 20001-1512  
202-624-6465 FAX 202-624-5419 WWW.NCSHPO.ORG

March 20, 2007

Ms. Sue Mills  
Yellowstone Center for Resources  
Yellowstone National Park  
Yellowstone, Wyoming 82190

RE: EIS on Benefits-Sharing

Dear Ms. Mills:

The National Conference of State Historic Preservation Officers has received the September 2006 *Benefits-Sharing Draft Environmental Impact Statement*. Michael Soukup, Associate Director, National Resource Stewardship and Science, asks in his cover letter of March 15, 2007, for the concurrence of the National Conference of State Historic Preservation Officers in the National Park Service's determination that the action would not affect historic properties.

First, under the Advisory Council's regulations for the implementation of Section 106, 36 CFR Part 800, no authority exists for the National Conference of State Historic Preservation Officers to concur with a federal agency's determination of significance or effect. The National Conference's role in the Section 106 process relates to the preparation and execution of nationwide programmatic agreements.

Second, the Benefits-Sharing project involves a decision about whether the National Park Service and scientists studying National Park Service resources would share any financial benefits derived from that research. In our opinion, the sharing any revenues from research is not an activity that constitutes an "undertaking" as defined in the National Historic Preservation Act.

Sincerely,

*Nancy Schamu*  
Executive Director

cc: Jay D. Vogt, President, National Conference of State Historic Preservation Officers, and South Dakota State Historic Preservation Officer  
Kelly Yasutis Fanizzo, Historic Preservation Specialist, Advisory Council on Historic Preservation



Preserving America's Heritage

May 23, 2007  
Ms. Sue Mills  
Environmental Protection Specialist  
Yellowstone Center for Resources  
Yellowstone National Park  
P.O. Box 168  
Yellowstone National Park, WY 82190

Ref: *Draft Environmental Impact Statement on Proposed Benefits-Sharing with Researchers*

Dear Ms. Mills:

On March 26, 2007, the Advisory Council on Historic Preservation (ACHP) received a copy of the September 2006 *Benefits-Sharing Draft Environmental Impact Statement (EIS)*, prepared by the National Park Service (NPS). Dr. Michael Soukup, Associate Director, National Resource Stewardship and Science of the NPS, requested, in his cover letter of March 22, 2007, that the ACHP review and comment on the document. Dr. Soukup noted that the National Conference of State Historic Preservation Officers (NCSHPO) concurred with the NPS' determination of no adverse effect for historic properties and included a copy of NCSHPO's response letter, dated March 20, 2007. In actuality, the NCSHPO letter presents the opinion that the proposed Benefits-Sharing does not constitute an undertaking as defined by the National Historic Preservation Act (NHPA).

Benefits-Sharing involves the development of agreements between NPS and researchers carrying out research on lands controlled by NPS and the sharing of revenues from research when the results of research have commercial value. Based on a review of the draft EIS, the ACHP agrees with the opinion of NCSHPO. As presented in the draft EIS, the sharing of revenues from research does not appear to constitute an undertaking as defined by the NHPA and its implementing regulations, "Protection of Historic Properties" (36CFR Part 800). Accordingly, pursuant to 36 CFR 800.3(a)(1) and 800.16(y), if the NPS concurs with the views of NCSHPO and the ACHP, it has no further obligations for compliance with Section 106 for the development and implementation of Benefits-Sharing policy and agreements with scientists who conduct research in NPS units.

Thank you for providing us with a copy of the draft EIS and for your request for our comments. If you have any questions or require our further assistance, please contact Dr. John T. Eddins at 202-606-8553 or via email at [jeddings@achp.gov](mailto:jeddings@achp.gov).

Sincerely,

*Charlene Dwin Vaughn*  
Charlene Dwin Vaughn, AICP  
Assistant Director  
Office of Federal Agency Programs

ADVISORY COUNCIL ON HISTORIC PRESERVATION

1100 Pennsylvania Avenue NW, Suite 609 • Washington, DC 20004  
Phone: 202-606-8503 • Fax: 202-606-8647 • [achp@achp.gov](mailto:achp@achp.gov) • [www.achp.gov](http://www.achp.gov)



# United States Department of the Interior

NATIONAL PARK SERVICE  
Mojave National Preserve  
2701 Barstow Road  
Barstow, California 92311

IN REPLY REFER TO:  
R16 (MOJA)

January 4, 2007

## Memorandum

To: Yellowstone Center for Resources at [BenefitsEIS@nps.gov](mailto:BenefitsEIS@nps.gov)  
From: Superintendent, Mojave National Preserve  
Subject: Comments on Service-wide Benefits-Sharing draft Environmental Impact Statement (DEIS).

Thank you for this opportunity to review the Service-wide Benefits Sharing draft Environmental Impact Statement. While the intent of the service-wide programmatic proposal is admirable, my science advisor, Dr. Debra Hughson, offers some interesting observations of the complexities and difficulties of managing research projects under this framework.

At present, the only research management tool available to national parks is the scientific research and collecting permit. "Bio-prospecting" and its potential for commercial exploitation extend beyond the limits of a permit and might, therefore, require the National Park Service to enter into an agreement with each associated party.

Another issue is the question of utility. The DEIS does not define how to determine the breadth of benefit from a biological source. There is potential for both direct and indirect benefits to result from the harvesting of a biological material. The NPS needs to identify the limits or extent of benefit sharing. It is extremely difficult to negotiate a priori benefits that have yet to be realized.

My staff has also identified other questions about the proposed action.

| Page (Section) | Comment                                                                                                                                                                                                                                                                                                                        |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| xii (ES.2.2)   | It is unclear how the NPS would enforce permit regulations once research has been completed. The NPS controls research activities only during the period of time when the researcher is operating under an active permit.                                                                                                      |
| 39 (2.2.2)     | The Investigator's Annual Reports (IARs) are the only products the NPS requires and reliably receives from permitted researchers. Other research products, such as copies of publications, theses, dissertations, raw data, etc., are received only sporadically; the NPS has no mechanism by which to ensure their submittal. |
| 41 (2.4.1)     | It is not clear what incentive individual researchers would have to initiate benefits-sharing negotiations.                                                                                                                                                                                                                    |

- 47 (2.4.5.2) The draft EIS does not explain how benefits-sharing agreements would be enforced or who would enforce them.
- 49 (2.4.6.4) The draft EIS is not clear regarding how CRADAs would be developed, implemented, or enforced.
- 135 (4.4.4.2) Use of research results for commercial purposes is untrackable and untraceable. Again, benefits-sharing agreements would not be enforceable.

If you have any questions, please contact Dr. Debra Hughson, Mojave National Preserve Science Advisor, at [debra\\_hughson@nps.gov](mailto:debra_hughson@nps.gov) or (760) 252-6105.

Sincerely,

Dennis Schramm

cc: Dr. David Graber, PWR Science Advisor  
Alan Schriener, PWR Compliance Coordinator  
Dannette Woo Nolan, Mojave National Preserve Compliance Coordinator



# United States Department of the Interior

FISH AND WILDLIFE SERVICE  
Washington, D.C. 20240



In Reply Refer To:  
FWS/AES/DCHRS/031640

JUN 13 2007

Ms. Sue Mills  
National Park Service  
P.O. Box 168  
Yellowstone National Park, Wyoming 82190

Dear Ms. Mills:

This letter is to acknowledge receipt of correspondence dated May 9, 2007, from Michael A. Soukup, National Park Service, regarding consultation on the National Park Service's programmatic/planning Benefits-Sharing Draft Environmental Impact Statement (DEIS). The DEIS describes conditions under which certain activities may be conducted and provides potential general standards for management. The NPS is requesting the Service's concurrence on the NPS determination of "no effect" under section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*).

In the DEIS, the NPS evaluates the environmental impacts of three alternatives concerning proposed actions under the potential implementation of benefits-sharing agreements with scientists who conduct research in one or more National Park System units. The Service understands the action area to include all of the approximately 400 units of the National Park System, including Yellowstone National Park. The document examines the concept of benefits-sharing agreements and impacts to natural resource management, without evaluating specific types of research or the potential impacts to federally listed species and designated critical habitat from implementing research and related activities.

Section 7 of the Endangered Species Act addresses consultation on federal agency actions to insure that any action authorized, funded, or carried out is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of critical habitat. Although the NPS made a determination of "no effect", a determination of "not likely to adversely affect" would be more appropriate in that the Service agrees with the NPS that proposed research activities related to actions described in the draft EIS may require consultation for project-specific and site-specific impacts to listed species and designated critical habitat.

In further response, the Service may be able to support the broad concept of benefits-sharing agreements with scientists who conduct research in National Park System units, and appreciates the potential research and financial benefits to the maintenance of natural resources.



Ms. Sue Mills

2

If you have any questions, please contact the Chief, Branch of Consultation and Habitat Conservation Planning at (703) 358-2106.

Sincerely,

Richard E. Sayers, Jr., Chief  
Division of Consultation, Habitat Conservation  
Planning, Recovery and State Grants

cc: Michael A. Soukup, Ph.D.

**CORE TEAM (Yellowstone National Park, Yellowstone Center for Resources)**

| <b>Name</b>        | <b>Responsibility</b>                                                                                                 | <b>Education</b>                                                               | <b>Experience</b>                                                       |
|--------------------|-----------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|-------------------------------------------------------------------------|
| Susan Mills        | Project Manager, Servicewide Benefits-Sharing EIS                                                                     | BA Biology, BA Psychobiology                                                   | 23 years National Park Service                                          |
| Ann Deutch         | Writer, Servicewide Benefits-Sharing EIS, former Research Permit Coordinator                                          | BS Outdoor Recreation, MA Biological Sciences                                  | 17 years National Park Service, 5 years private environmental education |
| Kevin Schneider    | Management Assistant, Glen Canyon National Recreation Area; former Technical Writer-Editor, Yellowstone National Park | BS Natural Resources, Recreation and Tourism; Masters of Public Administration | 9 years National Park Service                                           |
| Alice Wondrak Biel | Technical Writer-Editor                                                                                               | PhD Geography                                                                  | 8 years National Park Service                                           |
| Tami Blackford     | Technical Writer-Editor                                                                                               | BA English                                                                     | 14 years National Park Service                                          |

**MANAGEMENT TEAM**

|                    |                                                                                                                                |                                       |                                                                                                                 |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| Mike Soukup        | Co-Chair Servicewide Benefits-Sharing Management Group, NPS Associate Director, Natural Resources Stewardship and Science      | PhD Limnology                         | 31 years National Park Service                                                                                  |
| Tom Olliff         | Co-Chair Servicewide Benefits-Sharing Management Group, Chief, Yellowstone Center for Resources (from 2006)                    | BS Forestry, MS Resource Conservation | 21 years National Park Service                                                                                  |
| John Varley        | former Co-Chair Servicewide Benefits-Sharing Management Group, former Director, Yellowstone Center for Resources (before 2006) | BS Zoology, MS Zoology                | 23 years National Park Service, 11 years Fish and Wildlife Service, 5 years Utah Division of Wildlife Resources |
| Suzanne Lewis      | Superintendent, Yellowstone National Park                                                                                      | BA American History                   | 28 years National Park Service                                                                                  |
| John Dennis        | NPS Deputy Chief Scientist                                                                                                     | PhD Botany                            | 35 years National Park Service                                                                                  |
| Lindsay McClelland | Geologist, NPS Natural Resources                                                                                               | MS Geology                            | 15 years National Park Service, 8 years Smithsonian Institution                                                 |

| Name              | Responsibility                                                                                        | Education                                                     | Experience                                                                                                                 |
|-------------------|-------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| Carla Mattix      | Attorney-Advisor, Office of the Solicitor, Division of Parks and Wildlife, Department of the Interior | BS Aerospace Engineering, JD Georgetown University Law Center | 12 years Department of the Interior, 5 years US Patent and Trademark Office                                                |
| Jacob J. Hoogland | Chief, Environmental Quality Division, National Park Service                                          | JD University of Utah College of Law                          | 29 years National Park Service, experience in environmental planning and compliance, 106 compliance, and regulatory issues |

#### INTERDISCIPLINARY TEAM

|                      |                                                                                                               |                                                                                                           |                                                                                                                                                      |
|----------------------|---------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sarah Allen          | Science Advisor, Point Reyes National Seashore                                                                | PhD Wildland Resource Science                                                                             | 14 years National Park Service, 15 years Point Reyes Bird Observatory                                                                                |
| Thomas O. Clark      | Integrated Resources Program Manager, Division Chief for Resource Mgmt. & Science, Capitol Reef National Park | BS Wildlife Management, MS Zoology                                                                        | 12 years National Park Service, 4 Bureau of Land Management, Wildlife Biologist, 5 Dept of Army, Ecologist, 3 Dept of Navy, Environmental Specialist |
| Judith Hazen Connery | Biologist (Natural Resource Specialist), NEPA Compliance, Acadia National Park                                | BS Natural Resource Management                                                                            | 26 years National Park Service                                                                                                                       |
| Carol B. Daniels     | Research Coordinator, South Florida Caribbean CESU                                                            | BA Biology, MS Biology, PhD Marine Estuarine Environmental Science (specialization in Aquatic Toxicology) | 6 years National Park Service, 10 years Environmental Protection Agency, Research Toxicologist                                                       |
| Nancy Finley         | Chief, Resource Management and Science, Great Smoky Mountains National Park                                   | BS Biology, MS Environmental Health and Toxicology                                                        | 8 years National Park Service, 7 years U.S. Fish and Wildlife Service, Ecological Risk Assessment/ Toxicology                                        |
| Russell Galipeau     | Superintendent, Channel Islands National Park                                                                 | BS Forest Resources and Conservation                                                                      | 26 years National Park Service                                                                                                                       |

| <b>Name</b>    | <b>Responsibility</b>                                                        | <b>Education</b>                                    | <b>Experience</b>                                                                                                                                     |
|----------------|------------------------------------------------------------------------------|-----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ann Hitchcock  | NPS Curator/Senior Advisor for Scientific Collections                        | MA Anthropology, AB Anthropology                    | 28 years National Park Service                                                                                                                        |
| Ken McMullen   | Overflights Program Manager, Grand Canyon National Park                      | MS Rangeland Ecology                                | 24 years Department of the Interior, including 16 years National Park Service                                                                         |
| Diane Pavek    | Botanist/Research Coordinator, National Capital Region                       | BS Botany/Zoology, MS Botany, PhD Botany            | 8 years National Park Service, 2 years US Department of Agriculture                                                                                   |
| Stephen Rudd   | Natural Resource Program Manager, Hot Springs National Park                  | BS Geology and Physical Geography, MS Geomorphology | 27 years National Park Service                                                                                                                        |
| Gary Vequist   | Associate Regional Director for Natural Resource Stewardship, Midwest Region | BS Zoology, MS Water Quality–Environmental Science  | 35 years National Park Service                                                                                                                        |
| Robert Winfree | NPS Alaska Regional Science Advisor                                          | BS, MS, and PhD Wildlife and Fisheries Sciences     | 12 years National Park Service, 5 years other federal agencies, and 7 years in private sector marine biotechnology/aquaculture research & development |

#### **CONSULTANTS**

|               |                                                                                |                                                      |          |
|---------------|--------------------------------------------------------------------------------|------------------------------------------------------|----------|
| Preston Scott | President/Executive Director, World Foundation for Environment and Development | BA History, BA Political Theory, JD University of VA | 27 years |
| Mansir Petrie | Project Officer, World Foundation for Environment and Development              | BA Grinnell College                                  | 5 years  |