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OF COUNSEL
PHOEBE ANNE GREYSON

5/14/08

DANIEL E. STEUER
May 14, 2008

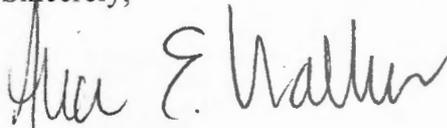
John Weisheit
Conservation Director
Living Rivers
P.O. Box 466
Moab, UT 84532

Re: Lake Powell Hydroelectric System, FERC Number P-12966

Dear Mr. Weisheit:

I have enclosed the copy of my letter to Kimberly D. Bose, Secretary, which I originally mailed to you on May 2, 2008. Also enclosed is my original mailing envelope which was returned to me in the envelope from Arizona Arrhythmia Consultants. For your convenience, I am also enclosing a copy of the Service List posted on the website for the Federal Energy Regulatory Commission.

Sincerely,



Alice E. Walker

AEW/dav
enc.: As stated

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Service List for P-12966-000 UTAH BOARD OF WATER RESOURCES

Contacts marked ** must be postal served

Party	Primary Person or Counsel of Record to be Served	Other Contact to be Served
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5/2/08

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RECEIVED

MAY 13 2008

DANIEL E. STEUER

GREENE MEYER & McELROY

May 2, 2008

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, D.C. 20426

Re: Lake Powell Hydroelectric System, FERC Number P-12966

Dear Ms. Bose:

This office represents the Kaibab Paiute Tribe ("Tribe") on matters related to the proposed Lake Powell Pipeline. On April 2, 2008, the undersigned counsel for the Tribe received the letter of the Federal Energy Regulatory Commission ("Commission") inviting the Tribe to participate in the licensing proceeding relative to the proposed pipeline, and requested that the Tribe respond within 30 days as to whether it wishes to participate in the licensing proceeding. The Tribe timely responds to the April 2, 2008 letter by May 2, 2008.

By this letter, the Tribe hereby states its intent to participate in the licensing proceeding for the proposed Lake Powell Pipeline. The Tribe wishes to participate in government-to-government consultations with the Commission, and we look forward to our meeting on May 20, 2008 with the Commission to begin that consultation process. If licensed, the proposed pipeline project will affect the Tribe in very significant ways, and the Tribe's participation in the licensing process, therefore, is critical. We provide the following factual background in order to demonstrate the extreme impact that the proposed pipeline would have on tribal interests.

BACKGROUND

The Tribe's aboriginal territory includes much of the length of the proposed Lake Powell Pipeline. The Kaibab Indian Reservation ("Reservation"), which is adjacent to the Arizona-Utah border, lies within the Tribe's vast aboriginal territory and was established by the Executive Order of June 11, 1913, and the Executive Order of July 17, 1917. The July 17, 1917 Executive Order describes the present-day Kaibab Indian Reservation as follows:

Kimberly D. Bose, Secretary
May 2, 2008
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Beginning at the northwest corner of section 6, township 41 north, range 2 west; thence east to the northeast corner of said section 6; thence north 47.12 chains to the boundary line between Arizona and Utah; thence west along said boundary line to the northwest corner of section 34, township 42 north, range 5 west; thence south to the southeast corner of section 33, township 41 north, range 5 west; thence east along the northern boundary of section 4, township 40 north, range 5 west, to the northeast corner thereof; thence south to the southwest corner of section 27, township 40 north, range 5 west; thence east to the southeast corner of section 28, township 40 north, range 2 west; thence north to the northeast corner of section 4, township 40 north, range 2 west; thence west to the southwest corner of section 31, township 41 north, range 2 west; thence north to the place of beginning.

The United States continues to hold the Reservation in trust for the benefit of the Tribe and its members.

The Tribe's aboriginal territory was much larger than the present-day Reservation. With respect to all of the Southern Paiute tribes and bands that were plaintiffs in the proceedings before the Indian Claims Commission, which included the Kaibab Paiute Tribe, the aboriginal territory was described as vast:

As claimed by petitioners, the area occupied by the Southern Paiute Nation was bounded on the south by the Colorado River and extended northward. Its westernmost boundary touched upon Death Valley in California. It reached northward into Beaver County of Utah and eastward to the region of the Escalante River in Utah. The area claimed included the Virgin River drainage area, the Muddy River area, and around the present location of the city of Las Vegas, Nevada.

Findings of Fact ¶ 2, *Southern Paiute Nation v. United States*, 14 Indian Cls. Comm'n 618, 619 (1965). With respect to the Kaibab Paiute Tribe:

The aboriginal boundary of the Kaibab district seems to be approximately where . . . interviewees placed it. The southern boundary of the district was certainly the Colorado River, probably extended downstream (south and west) from the Paria River to just west of Kanab Creek. . . . [I]nterviewees placed the northern boundary along the Pink Cliffs near the Paunsaugunt Plateau at the divide between the northern Colorado Plateau and the Great Basin.

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The western boundary, which incorporated both branches of the upper Virgin River, was marked with a dotted line indicating this boundary was probably unknown. Here, in this western-most portion of the Kaibab district lies a discussion about a missing Paiute district with a core oasis on the upper Virgin River.

DR. RICHARD W. STOFFLE ET AL., ETHNOGRAPHIC ASSESSMENT OF KAIBAB PAIUTE CULTURAL RESOURCES IN GRAND STAIRCASE-ESCALANTE NATIONAL MONUMENT, UTAH at 39 (Bureau of Applied Research in Anthropology, Univ. of Ariz., Tucson Oct. 2004) (“STOFFLE”). The Tribe continues to use lands within its aboriginal territory, and outside its Reservation, for traditional and cultural purposes, and those lands are critically important to the Tribe and its members. “Southern Paiute people continue to affiliate themselves with these places [in their aboriginal territory] as symbols of their common ethnic identity. Additionally, all Southern Paiute people continue to perform traditional ceremonies along with the menarche and first childbirth rites of passage rituals.” *Id.* at 42.

Prior to the filing of the *Notice of Intent to File an Application for Original License Pre-Application Document* (Mar. 4, 2008) (“PAD”), the State of Utah had consistently proposed three routes for the Lake Powell Pipeline. All three routes would begin at Glen Canyon Dam, travel northwest through Big Water, Utah to the Pump Station at the Cockscomb in Grand Staircase - Escalante National Monument, then head southwest to an exit point from Grand Staircase - Escalante National Monument. At that point, the potential routes diverge. The northern route would continue west toward Kanab, Utah, and head to a point north of Moquith Mountain, cut along the northern edge of Coral Pink State Park, then drop down into Arizona at Cottonwood Point, where the pipeline would then follow Arizona State Highway 389, while in Arizona, and Utah State Highway 59 to Hurricane, where the pipeline would follow Interstate 15 to Cedar City. The middle route would diverge from the northern route east of Kanab, Utah, and would then follow Arizona State Highway 389 through the Reservation, and would follow the northern route thereafter. The southern route would diverge from the northern and middle routes where the pipeline exits Grand Staircase - Escalante National Monument, and would then mostly follow the proposed West-Wide Utility Corridor south of the Reservation, crossing Kanab Creek Canyon, and joining up with the northern and middle routes west of the Reservation and south of Cottonwood Point. All of the three routes are within significant tribal cultural territory.

On March 4, 2008, the Utah Division of Water Resources filed the PAD with the Commission. The PAD identifies the southern route as the preferred and only route for the proposed pipeline project. Under the National Environmental Policy Act, 42 U.S.C. §§ 4321-70f (“NEPA”), the Commission will have to analyze all reasonable alternatives for the proposed project; therefore, all three proposed routes, and perhaps others, continue to be viable options for the proposed project. The potential impact of the Lake Powell Pipeline upon tribal archaeology, historical and modern uses of the lands through which the pipeline will cross is significant. Present-day uses of sacred territory will be disrupted, perhaps permanently in some cases. Because the pipeline

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will be buried, human remains and cultural artifacts belonging to the Tribe and others within the Southern Paiute Nation will be affected. Accordingly, and regardless of the pipeline route ultimately identified as the least environmentally disruptive, the Tribe has a direct interest in the various studies that the State must undertake for both the Commission's licensing process, as well as the environmental impact statement process under NEPA.

ALTERNATIVE ROUTES

As stated above, the State of Utah has always considered three possible routes for the proposed pipeline project. The PAD is the first document which identifies only the southern route for the proposed pipeline, mostly following the West-Wide Energy Corridor. Obviously, the selection of the appropriate route for the proposed pipeline can only occur after the conduct of various studies mandated by the Commission's licensing regulations, as well as NEPA and its implementing regulations. Chief among the requirements of NEPA is the analysis and study of all reasonable and prudent alternatives. 40 C.F.R. § 1502.14(a). The northern and middle routes will likely be studied as reasonable and prudent alternatives to the southern route, and, therefore, the PAD's identification of a single pipeline route should not be viewed as the only possible way by which the State may transport water from Lake Powell.

Significantly, the Tribe has not yet made a determination whether the proposed pipeline could follow the highway alignment that crosses the Kaibab Indian Reservation. Clearly, that decision will depend upon the outcome of various analyses, including the environmental, socio-economic, cultural and archaeological resources studies that must be conducted. *See* 18 C.F.R. § 5.6(d)(4) (requiring identification of studies); 42 U.S.C. § 4332(2)(C)(iii) (requiring that federal agencies consider "alternatives to the proposed action" as part of their decision-making process); 40 C.F.R. § 1502.14(a) (environmental impact statement must "[r]igorously explore and objectively evaluate all reasonable alternatives . . ."). There is no question that the Reservation route should be analyzed as a reasonable and prudent alternative to the southern route identified in the PAD. Accordingly, a significant issue for discussion in consultations with the Commission will be a Reservation right-of-way for the proposed pipeline. Certainly, the Tribe does not wish to foreclose the possibility of a Reservation route -- or even the northern route -- since most aspects of all three proposed routes remain unknown at this time.

A pipeline alignment following Arizona State Highway 389 as it crosses the Kaibab Indian Reservation offers the advantage of lower cost of construction, ease of access, and an already-disturbed site across tribal territory. In addition, from the tribal perspective, an important reason to analyze carefully a possible pipeline alignment following Arizona Highway 389 as it crosses the Reservation is section 4(e) of the Federal Power Act, 16 U.S.C. §§ 791a to 823c. That section provides:

That licenses shall be issued within any reservation only after a finding by the Commission that the license will not interfere or be

Kimberly D. Bose, Secretary
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inconsistent with the purpose for which such reservation was created or acquired, and shall be subject to and contain such conditions as the Secretary of the department under whose supervision such reservation falls shall deem necessary for the adequate protection and utilization of such reservation.

16 U.S.C. § 797(e). If the analyses required under the Commission's licensing process, as well as the NEPA environmental review, demonstrate that the highway alignment through the Reservation is the preferred route, and the Tribe determines to permit the pipeline to cross the Reservation, then the development of protective section 4(e) conditions will be a critical element of the project license. *See Escondido Mutual Water Co. v. La Jolla Band of Mission Indians*, 466 U.S. 765, 778 (1984); *City of Tacoma, Wash. v. Federal Energy Regulatory Comm'n*, 460 F.3d 53, 65 (D.C. Cir. 2006). The Tribe does not underestimate the importance of the section 4(e) conditions, and is carefully examining the advantages of their imposition as a result of a tribal determination to allow the pipeline to cross the Reservation.

The PAD should not be read to identify only one possible route for the proposed Lake Powell Pipeline. NEPA requires the analysis of all reasonable alternatives to the proposed project, and the route crossing the Reservation is one such alternative that the Commission should analyze. *See generally Surfrider Found. v. Dalton*, 989 F. Supp. 1309, 1325 (S.D. Cal. 1998) (discussing alternatives analysis requirement), *aff'd*, 196 F.3d 1057 (9th Cir. 1999); *Dubois v. U.S. Dep't of Agric.*, 102 F.3d 1273, 1286 (1st Cir. 1996) (an agency must prepare an environmental impact statement that "evaluate[s] different courses of action") (quoting *Kleppe v. Sierra Club*, 427 U.S. 390, 410 (1976)). Indeed, the Commission "has a duty 'to study all alternatives that appear reasonable and appropriate for study . . . , as well as significant alternatives suggested by other agencies or the public during the comment period.'" *Dubois*, 102 F.3d at 1286 (quoting *Roosevelt Campobello Int'l Park Comm'n v. United States EPA*, 684 F.2d 1041, 1047 (1st Cir. 1982)) (other citations omitted). Indeed, the alternatives analysis is "the heart of the environmental impact statement." 40 C.F.R. § 1502.14. Because the potential route following Arizona State Highway 389 is a reasonable alternative to the southern route identified in the PAD, the alternatives analysis should include an environmental analysis of the Reservation route.

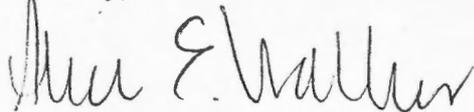
CONCLUSION

The Tribe intends to participate in the process to determine whether the Commission should issue a license to the State of Utah for the proposed Lake Powell Pipeline, and also intends to participate in the environmental analysis under NEPA. As stated, it is important to remember that more than one possibility exists for the proposed pipeline route, and the PAD should not be read to foreclose other routes for the proposed pipeline.

Kimberly D. Bose, Secretary
May 2, 2008
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The Tribe looks forward to meeting with the Commission and other federal agencies in May when we can begin to discuss these critical matters in more detail.

Sincerely,



Alice E. Walker
AEW/dav

cc: Hon. Ona Segundo, Hon. Danny Bulletts, Jr., Hon. Valencia Castro, Hon. LeAnn Shearer, Hon. Teyawwna Pickayvitt, Hon. Laura Savala, Hon. Gail Stanfield, Kimberly A. Owens, Catherine Wilson, Joe Incardine, James Fargo, Service List

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Utah Board of Water Resources

7/7/08

Project No. P-12966-000

**APPLICATION OF THE KAIBAB BAND OF PAIUTE INDIANS FOR
BIFURCATED PARTICIPATION IN PROCEEDING
TO CONSIDER PROJECT NO. 12966
UTAH/ARIZONA LAKE POWELL HYDROELECTRIC SYSTEM,
UTAH BOARD OF WATER RESOURCES**

The Kaibab Band of Paiute Indians ("Tribe"), a federally recognized Indian tribe, herein makes application to the Federal Energy Regulatory Commission ("Commission") to bifurcate its participation in the Commission's proceeding to consider Project No. 12966 – Utah/Arizona Lake Powell Hydroelectric System, Utah Board of Water Resources. The Tribe wishes to participate as an intervenor in the licensing proceeding, but wishes also to hire a consultant to participate as the Tribe's cooperating agency representative in the Commission's compilation of the environmental impact statement ("EIS") for Project No. 12966, which is required by the National Environmental Policy Act, 42 U.S.C. §§ 4321-70f. As described in more detail below, the Tribe would segregate its participation as an intervenor in the licensing proceeding from the participation of its consultant in the compilation of the EIS. The Tribe would adhere to the provisions of the Memorandum of Understanding Among the Federal Energy Regulatory Commission, Bureau of Land Management, Bureau of Reclamation, National Park Service, Bureau of Indian Affairs, and U.S. Fish and Wildlife Service ("MOU"), and would be a party to the MOU.

On March 4, 2008, the State of Utah filed its Notice of Intent to seek an original hydroelectric license, and its Pre-Application Document ("PAD") for the proposed Lake Powell Pipeline hydroelectric system. The proposed pipeline and hydroelectric system would be located in northern Arizona and southwest Utah, and would cross the Tribe's aboriginal territory, and possibly the Kaibab Indian Reservation. 40 C.F.R. § 1508.5 ("A State or local agency of similar qualifications or, when the effects are on a reservation, an Indian Tribe, may by agreement with the lead agency become a cooperating agency."). Because of the potential and significant effects on the Tribe, its members, its Reservation, and tribal cultural resources, the Tribe has participated in all aspects of the pre-application process. *See, e.g., Motion of the Kaibab Band of Paiute Indians to Intervene in Preliminary Application Filed by Utah Board of Water Resources (Jan. 2, 2008); Order Issuing Preliminary Permit (Feb. 7, 2008); Comments of the Kaibab Band of Paiute Indians Regarding the Pre-Application Document filed by Utah Board of Water Resources, for Lake Powell Hydroelectric Project No. 12966, and Comments of the Kaibab Band of Paiute Indians Regarding the Scoping of Environmental Issues for the Proposed Lake Powell Pipeline Project, FERC No. 12966, Utah and Arizona (July 7, 2008).* The Tribe intends to continue to participate substantially in the licensing process.

Under the Commission's regulations, an interested party may intervene in a licensing application upon filing a motion to do so. 18 C.F.R. § 385.214(a). The Tribe is an interested party because its lands and aboriginal territory would be affected by the proposed Lake Powell Pipeline. The Tribe may also participate as a cooperating agency with the Commission in the compilation of the EIS pursuant to NEPA since "the effects [may] be on [the] reservation." 40 C.F.R. § 1508.5; *see also* 40 C.F.R. § 1508.15 (Tribe has jurisdiction to approve a portion of the proposed project); 40 C.F.R. § 1508.26 (Tribe has special expertise in the region to be affected by the proposed project); 43 C.F.R. § 1601.0-5(d)(2) (Bureau of Land Management regulations allowing tribes to act as cooperating agencies).

Under the Commission's policies, cooperating agencies may not also be intervenors in a proceeding because it would be inconsistent with the Commission's *ex parte* rules. *See Arizona Public Serv. Co. Project No. 2069-004*, 94 FERC P 61076 (2001).

The reason for this policy is that staff of a cooperating agency is treated in some respects as though it were Commission staff, including having conversations and exchanging information that may not be in the record, just as Commission staff properly shares predecisional information internally. To allow such a cooperating agency to intervene in a proceeding would put it in the position of having information that was not available to other parties, in violation of our rule prohibiting *ex parte* communications.

Id. at 61350 (citing Regulations for the Licensing of Hydroelectric Projects, 62 Fed. Reg. 59802 (1997)). This Commission policy, however, puts an interested party such as the Tribe in a difficult position of having to choose whether to participate as a cooperating agency in order to assist in the compilation of the EIS which will inform the Commission's licensing decision, or as an intervenor with the ability to challenge the Commission's licensing decision in court if it poses a threat to tribal interests. Indeed, cooperating agency status does not give the cooperator decisionmaking authority, since such authority resides at all times with the Commission. Thus, it is possible that the Tribe could determine to become a cooperating agency and assist in the compilation of the EIS, yet the Commission could ultimately render a decision that is adverse to the Tribe's interests despite its efforts as a cooperator. Because it would have chosen to act as a cooperator, the Tribe's would have lost its right to challenge the Commission's licensing decision before the Commission's appeal board, 18 C.F.R. § 1304.6, which is a condition precedent to filing a lawsuit against the Commission in the United States Court of Appeals pursuant to the Administrative Procedure Act, 5 U.S.C. §§ 701-06.

Because of the quandary created by the Commission's rules prohibiting a party from acting both as an intervenor and a cooperating agency in the same licensing proceeding, the Commission has prepared a draft MOU among various federal agencies which would allow the bifurcation of a party's participation in the licensing proceeding so that the party could

participate as both an intervenor and a cooperating agency. The draft MOU provides as follows:

If any Department of Interior Bureau chooses to reserve its right to intervene in the proceeding, the Department of Interior Bureaus that choose to cooperate agree to "separate staff" by designating certain staff to cooperate with FERC in preparation of the EIS and other staff to prepare any recommendations, terms, or conditions filed under section 4(e), 10, and 18 of the FPA. If such an option is exercised, the Bureaus that cooperate agree that separated staff may not communicate with Bureau staff that has not been separated regarding the merits of the proceeding.

MOU at 3-4. The Tribe wishes to exercise the option set forth in the MOU as follows. The Tribe would be an intervenor in the licensing proceeding, and retain all rights associated with intervenor status. The Tribe would contract with a consultant to participate on the Tribe's behalf as a cooperating agency with the Commission and the other cooperating federal agencies. The Tribe's contractor would be considered "separate staff" and would not communicate with the Tribe regarding the merits of the EIS compilation process. The Tribe would only review the draft EIS upon its publication for public comment. The Tribe would take all steps to ensure that its consultant only worked on the EIS on the Tribe's behalf, and in no way would the consultant be involved in matters related to the licensing proceeding itself. The Tribe and the consultant would include such express terms in the contract of engagement of the consultant.

Accordingly, the Tribe hereby submits its application to become a cooperating agency through a consultant hired specifically to act as the Tribe's cooperating agency representative. The Tribe is entitled to cooperate in the EIS process in this matter.

1. The Tribe has jurisdiction by law in the matter of the proposed Lake Powell Pipeline because the Kaibab Indian Reservation and the region surrounding the Reservation are within the Tribe's aboriginal territory. CONSTITUTION OF THE KAIBAB BAND OF PAIUTE INDIANS OF THE KAIBAB INDIAN RESERVATION, ARIZONA, art. II, § 2; *Findings of Fact* ¶ 2, *S. Paiute Nation v. United States*, 14 Indian Cl. Comm'n 618, 619 (1965); see 40 C.F.R. § 1508.15. One possible route for the proposed pipeline would cross the Reservation, and the Tribe has statutory responsibility for the lands encompassed by the exterior boundaries of the Kaibab Indian Reservation. 40 C.F.R. § 1508.26; see also 43 C.F.R. § 1601.0-5(d)(2) (Bureau of Land Management regulations allowing for cooperating agencies to participate in agency's compliance with NEPA). Accordingly, the Tribe has jurisdiction to approve or disapprove the pipeline's potential route crossing the Reservation along Arizona State Highway 389. 40 C.F.R. § 1508.15.

2. The Tribe has special expertise in the matter of the proposed Lake Powell Pipeline. 40 C.F.R. § 1508.26. First, the lands that will be affected by the proposed pipeline are entirely within the Tribe's aboriginal territory, which the Tribe has occupied since time immemorial. *See Findings of Fact* ¶ 2, *S. Paiute Nation v. United States*, 14 Indian Cl. Comm'n 618, 619 (1965). This is true whether the proposed pipeline mostly follows the Navajo-McCullough Transmission Line to the south of the Kaibab Indian Reservation, as set forth in the PAD, or whether the proposed pipeline route would cross the Reservation along Arizona State Highway 389. Second, the Tribe is the entity with the most familiarity of the existing environment that would be affected by the proposed pipeline in and around the Reservation, and including the Grand Staircase-Escalante National Monument. DR. RICHARD W. STOFFLE ET AL., ETHNOGRAPHIC ASSESSMENT OF KAIBAB PAIUTE CULTURAL RESOURCES IN GRAND STAIRCASE-ESCALANTE NATIONAL MONUMENT, UTAH 39 (Bureau of Applied Research in Anthropology, Univ. of Ariz., Tucson Oct. 2004). Third, the Tribe is the only entity with special expertise to identify all traditional cultural properties in the vicinity of the proposed pipeline in and around the Kaibab Indian Reservation, and in the Grand Staircase-Escalante National Monument. Finally, the Tribe's contractor would have special expertise on Southern Paiute culture, traditions and modern use of the land.

3. The Tribe has the legal authority to enter into an MOU with the Commission to act as a cooperating agency, and to bifurcate its participation in the processes to license the proposed pipeline project, and to comply with NEPA. CONSTITUTION OF THE KAIBAB BAND OF PAIUTE INDIANS OF THE KAIBAB INDIAN RESERVATION, ARIZONA, art. VI, § 1, cl. a (Tribal Council has the authority "[t]o negotiate, consult, and contract with the Federal, State, local, and tribal governments, private enterprises, individuals and other organizations for the benefit of the band.").

4. As stated above, the Tribe has participated in every aspect of the proposed Lake Powell Pipeline, and intends to continue to participate in all aspects of the licensing and environmental compliance processes for the proposed project.

5. As demonstrated in the Comments of the Kaibab Band of Paiute Indians Regarding the Pre-Application Document filed by Utah Board of Water Resources, for Lake Powell Hydroelectric Project No. 12966, and Comments of the Kaibab Band of Paiute Indians Regarding the Scoping of Environmental Issues for the Proposed Lake Powell Pipeline Project, FERC No. 12966, Utah and Arizona (July 7, 2008), the Tribe can, in a timely manner assist in identifying significant environmental issues, 40 C.F.R. § 1508.14, including natural, social, economic, energy, urban quality, historic

and cultural issues, 40 C.F.R. § 1502.16. The Tribe can also assist in identifying the proposed pipeline's relationship to the objectives of tribal land use policies. 40 C.F.R. § 1502.16(c).

6. The Tribe can assist in preparing portions of the environmental compliance documents in a timely fashion.
7. The Tribe can provide resources to assist in the licensing and environmental compliance processes for the proposed Lake Powell Pipeline. The Tribe employs individuals with expertise in the areas of wildlife, plants, groundwater resources, water quality issues, energy issues, and cultural and archaeological issues. This list is not exhaustive, and the Tribe is prepared to provide assistance whenever it can, and wherever appropriate. Such assistance would include, where appropriate, any tribal data or analyses that would assist in the licensing and environmental compliance processes. The Tribe intends to seek funding assistance for its participation as a cooperating agency from the Bureau of Indian Affairs and from the Commission, as appropriate.

We appreciate your consideration of the Tribe's request to participate, through an independent contractor, as a cooperating agency in the process of environmental compliance for the proposed Lake Powell Pipeline. The Tribe is willing to enter into the MOU prepared by the Commission. Upon the Commission's acceptance of the Tribe's request, please take all necessary steps to include the following signature block in the MOU for the Tribe's Chairwoman, Ona M. Segundo:

I concur with this MOU:

Ona M. Segundo, Chairwoman, Kaibab Band of Paiute
Indians

Date

Dated: July 7, 2008

Respectfully submitted,

/s/ Alice E. Walker

By: _____

Alice E. Walker
Daniel E. Steuer
GREENE, MEYER & McELROY, P.C.
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awalker@greenelawyer.com
dsteuer@greenelawyer.com

Attorneys for Kaibab Band of Paiute Indians

CERTIFICATE OF SERVICE

I hereby certify that pursuant to the eService requirements of FERC, I have forwarded the Acceptance for Filing email from the eFiling service via e-mail to all persons on the Service List for P-12966 for the foregoing *Application of the Kaibab Band of Paiute Indians for Bifurcated Participation in Proceeding to Consider Project No. 12966 -- Utah/Arizona Lake Powell Hydroelectric System, Utah Board of Water Resources*, and further that I have placed true copy in the U.S. Mail, first-class postage prepaid thereon, on this 7th day of July, 2008 to the following:

John Weisheit
Conservation Director
Living Rivers
P.O. Box 466
Moab, UT 84532

/s/ D.A. Vitale

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Utah Board of Water Resources

7/7/08

Project No. P-12966-000

**COMMENTS OF THE KAIBAB BAND OF PAIUTE INDIANS REGARDING
THE PRE-APPLICATION DOCUMENT FILED BY UTAH BOARD OF WATER
RESOURCES, FOR LAKE POWELL HYDROELECTRIC PROJECT NO. 12966**

AND

**COMMENTS OF THE KAIBAB BAND OF PAIUTE INDIANS REGARDING
THE SCOPING OF ENVIRONMENTAL ISSUES FOR THE PROPOSED LAKE
POWELL PIPELINE PROJECT, FERC NO. 12966, UTAH AND ARIZONA**

On behalf of the Kaibab Band of Paiute Indians ("Kaibab Tribe"), we submit the following comments on the Pre-Application Document ("PAD") filed by the Utah Board of Water Resources ("State") for the Lake Powell Hydroelectric Project No. 12966. The Tribe also provides herein its comments on the Scoping of Environmental Issues for the Proposed Lake Powell Pipeline Project, FERC No. 12966, Utah and Arizona (May 5, 2008) ("SD1"). The Tribe timely files these comments by July 7, 2008. SD1 § 6, at 19. The Tribe's comments follow each section as it is numbered in the PAD.

PRE-APPLICATION DOCUMENT

Section 3.1.1 Water Intake System.

The State intends to pump 100,000 acre-feet per year ("afy") from Lake Powell, which is the State's "undeveloped Upper Colorado River Compact water." PAD at 3-1. Under the Colorado River Compact of November 24, 1922, *reprinted at* 70 Cong. Rec. 324 (1928), the Upper Basin states, which include Utah, are entitled to 7.5 million afy, provided that over a ten-year period, on average 75 million acre-feet are delivered to the Lower Basin from the mainstream of the Colorado River. The Lower Basin may also increase its allocation by 1 million afy under certain conditions. Thus, the Lower Basin has priority for delivery of water from the Colorado River. The Upper Basin Colorado River Compact divides the Upper Basin share of Colorado River water among 5 states by percentage of flow. Utah is entitled to 23% of the available flow, which is up to 1,725,000 afy assuming that 7.5 million acre-feet of water are available to the Upper Basin in a particular year. Under the Colorado River Storage Project Act, Utah may take its allocation from storage in Lake Powell. 43 U.S.C. § 620.

The State's assertion that it is entitled to 100,000 afy does not correctly characterize the operation of the Colorado River Compact and the Upper Basin Colorado River Compact. The

State should refer to the transportation of a maximum of 100,000 afy since Utah's undeveloped and unused portion of its 23% allocation of the Upper Basin share could be less than 100,000 afy, depending upon the supply available to serve the Upper Basin states after delivery of the priority water rights to the Lower Basin states. The State should not create a false expectation that the Lake Powell Pipeline will transport a fixed amount of 100,000 afy.

3.1.3 Hydro System.

The State has identified a route for the proposed pipeline, a portion of which would mostly follow the Navajo-McCullough power transmission line and skirt the southern boundary of the Kaibab Indian Reservation. *See* PAD at 3-2, Figure 3-1; *see also* PAD at 5-102. Until it filed its PAD on March 4, 2008, the State had always considered at least three possible routes for the proposed pipeline project. The PAD is the first document which identifies only the southern route for the proposed pipeline. *See* PAD at 3-4. Section 5.8.3, Land Uses and Management, similarly refers only to the route south of the Kaibab Indian Reservation for the proposed pipeline. *See* PAD at 5-97.

The selection of the appropriate route for the proposed pipeline can only occur after the conduct of various studies mandated by the Commission's licensing regulations, as well as the National Environmental Policy Act, 42 U.S.C. §§ 4321-70a ("NEPA") and its implementing regulations. Chief among the requirements of NEPA, is the analysis and study of all reasonable and prudent alternatives. 42 U.S.C. § 4332(2)(C)(iii); 40 C.F.R. § 1502.14(a). Other routes will likely be studied as reasonable and prudent alternatives to the southern route, and, therefore, the PAD's identification of a single pipeline route should not be viewed as identifying the only possible way by which the State may transport water from Lake Powell to St. George and Cedar City. Indeed, the PAD plainly states that the utility corridor along Utah State Highway 89 in the Grand Staircase-Escalante National Monument "may be a possible route for the Lake Powell Pipeline, subject to NEPA analysis." PAD at 6-4. The same NEPA analysis should apply to a possible route for the proposed pipeline along Arizona State Highway 389 as it crosses the Kaibab Indian Reservation. Similarly, the analysis of reasonable and prudent alternatives should include a potential pipeline route that would entirely follow the Navajo-McCullough Transmission Line even as it crosses the southeast corner of the Kaibab Indian Reservation, as opposed to the route proposed in the PAD which deviates from the Navajo-McCullough Transmission Line in order to entirely avoid the Reservation.

Significantly, the Tribe has not yet made a determination whether the proposed pipeline could follow the highway alignment that crosses the Kaibab Indian Reservation, or even cut across the southeast corner of the Reservation in order to stay within the Navajo-McCullough Transmission Line. Clearly, that decision will depend upon the outcome of various analyses, including the environmental, socio-economic, cultural and archaeological resources studies that the State of Utah must conduct as the project proponent. *See* 42 U.S.C. § 4332(2)(A) (requiring that federal agencies "utilize a systematic, interdisciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts in planning and in decisionmaking which may have an impact on man's environment"); 40 C.F.R. § 1502.6

(environmental impact statement “shall be prepared using an inter-disciplinary approach”). There is no question that the Reservation routes should be analyzed as reasonable and prudent alternatives to the southern route identified in the PAD. Accordingly, a significant issue for discussion in consultations with the Commission will be a Reservation right-of-way for the proposed pipeline. Certainly, the Tribe does not wish to foreclose the possibility of a Reservation route -- or even a northern route entirely within the State of Utah -- since most aspects of the potential routes remain unknown at this time.

A pipeline alignment following Arizona State Highway 389 as it crosses the Kaibab Paiute Indian Reservation would offer the advantages of lower cost of construction, ease of access, and an already-disturbed site. Moreover, the Highway 389 route would avoid a pipeline crossing through the Kanab Creek Area of Critical Environmental Concern (“ACEC”). Another important reason to carefully analyze a possible pipeline alignment following Arizona Highway 389 as it crosses the Reservation is section 4(e) of the Federal Power Act, 16 U.S.C. §§ 791a-823d (“FPA”). That section provides:

That licenses shall be issued within any reservation only after a finding by the Commission that the license will not interfere or be inconsistent with the purpose for which such reservation was created or acquired, and shall be subject to and contain such conditions as the Secretary of the department under whose supervision such reservation falls shall deem necessary for the adequate protection and utilization of such reservation.

16 U.S.C. § 797(e). If the analyses required under the Commission’s licensing process, as well as the NEPA environmental review, demonstrate that the highway alignment through the Reservation is the preferred route, and the Tribe determines to permit the pipeline to cross the Reservation, then the development of protective section 4(e) conditions will be a critical element of the project license. *See Escondido Mut. Water Co. v. La Jolla Band of Mission Indians*, 466 U.S. 765, 778 (1984); *City of Tacoma v. Fed. Energy Regulatory Comm’n*, 460 F.3d 53, 65 (D.C. Cir. 2006).

The PAD should not be read to identify only one possible route for the proposed Lake Powell Pipeline. Both NEPA and the FPA require analysis of all reasonable alternatives to the proposed project, and the possible route crossing the Reservation is one such alternative that the Commission should analyze. *See generally Surfrider Found. v. Dalton*, 989 F. Supp. 1309, 1325 (S.D. Cal. 1998) (discussing alternatives analysis requirement), *aff’d*, 196 F.3d 1057 (9th Cir. 1999); *Dubois v. U.S. Dep’t of Agric.*, 102 F.3d 1273, 1286 (1st Cir. 1996) (a project proponent must prepare an environmental impact statement that “evaluate[s] different courses of action”) (quoting *Kleppe v. Sierra Club*, 427 U.S. 390, 410 (1976)). Indeed, the Commission “has a duty ‘to study all alternatives that appear reasonable and appropriate for study . . . , as well as significant alternatives suggested by other agencies or the public during the comment period.’” *Dubois*, 102 F.3d at 1286 (quoting *Roosevelt Campobello Int’l Park Comm’n v. United States EPA*, 684 F.2d 1041, 1047 (1st Cir. 1982)) (other citations omitted). This is so because the

alternatives analysis is “the heart of the environmental impact statement.” 40 C.F.R. § 1502.14. Because the potential route following Arizona State Highway 389, as well as the potential route following the Navajo-McCullough Transmission Line, are reasonable alternatives to running along the southern boundary of the Reservation, the alternatives analysis should include an environmental analysis of the Reservation routes.

This section of the PAD lists the elements of the hydroelectric power generation portion of the proposed pipeline, which include: penstocks, in-line generators, regulating tanks, forebay, shafts, tunnels, powerhouses, afterbay, transmission lines, and substations. The PAD states that “[t]he lowest elevation penstock crossing in the Kanab Creek watershed would be about 4,400 feet MSL.” PAD at 3-4. This statement does not identify the location of the penstock to be located in the Kanab Creek watershed. The Tribe requests that the State identify the exact location of that penstock by latitude and longitude coordinates.

3.2.1 Project Area Land Uses.

In listing the federal agencies responsible for federal land administration along the proposed route for the pipeline, the State fails to list the Bureau of Indian Affairs (“BIA”). The proposed pipeline project will traverse the aboriginal territory of various Southern Paiute Indian tribes, including the Kaibab Tribe. *Findings of Fact* ¶ 2, *S. Paiute Nation v. United States*, 14 Indian Cl. Comm’n 618, 619 (1965); DR. RICHARD W. STOFFLE ET AL., ETHNOGRAPHIC ASSESSMENT OF KAIBAB PAIUTE CULTURAL RESOURCES IN GRAND STAIRCASE-ESCALANTE NATIONAL MONUMENT, UTAH 39 (Bureau of Applied Research in Anthropology, Univ. of Ariz., Tucson Oct. 2004). Because of the potential impacts of the proposed pipeline on the interests of various tribes, the State should include the BIA in the listing of federal agencies that are responsible for land administration in the project area.

The State’s description of the Kaibab Indian Reservation as including “about 125,000 acres used for livestock grazing, pasture, wildlife habitat, tribal enterprises, highway corridors and small residential communities,” PAD at 3-7, fails to note the fundamental purpose of the Reservation, which is to provide a permanent homeland for the Kaibab Band of Paiute Indians. Accordingly, the description of the Reservation should be revised to read as follows:

Tribal lands on the Kaibab Indian Reservation include about 125,000 acres set aside by Executive Orders in 1913 and 1917 for the permanent homeland of the Kaibab Band of Paiute Indians and its members. The Tribe uses its reservation lands for residential communities, governmental operations, livestock grazing, irrigated pasture, wildlife habitat, and tribal enterprises. The Arizona Department of Transportation holds an easement across the Reservation for Arizona State Highway 389.

All of the descriptions in the PAD of Indian reservations should first acknowledge the primary purpose of all such reservations, which is to provide permanent homelands for the tribes and their members.

3.5 Drainage Basins and Tributary Streams.

Table 3-1 includes a column titled “Affected by Project Operation.” While operation of the proposed project would not affect four of the five watersheds that the pipeline would cross, it seems likely that construction will affect them. Table 3-1 should, therefore, include a column titled “Affected by Project Construction.” Additionally, it is not clear why temporary additions to the stream flows in those four watersheds, however small, as a result of project operations would not constitute “Affected by Project Operation.” Indeed, additions to streamflows is an issue that the Commission should analyze as environmental impacts in the environmental impact statement. *See generally Marsh v. Or. Natural Res. Council*, 490 U.S. 360 (1989) (NEPA requires agencies to consider the environmental consequences of their proposed actions).

4.1 Project Overview.

The first sentence of the first paragraph of this section identifies the proposed project as being located on “Federal, state, and private lands.” PAD at 4-1. That sentence should include “tribal lands” among those that are potentially affected, since tribal lands differ substantially from other federal lands because tribal lands are held in trust by the United States for the benefit of tribes and serve as permanent homelands for tribes. Other federal lands do not share these characteristics.

5.2.2 Existing Use of Water.

This section lists existing water use as being limited to municipal and domestic uses, industrial applications, irrigation of crops, stock watering, recreational activities, and hydroelectric power generation. *See* PAD at 5-10. The section should also identify cultural and religious water uses by Indian tribes that are indigenous to the area.

5.2.7.2 Cedar Valley Groundwater Quality.

Figure 5-35 depicts the quality of groundwater resources in the Cedar Valley and Central Iron County Water Conservancy District. The figure names the Paiute Indian Reservation, but fails to show the reservation boundaries. Figure 5-35 should be revised to show the exterior boundaries of the Paiute Indian Reservation.

5.7 Rare, Threatened, Endangered and Special Status Species.

The PAD defines plants and animals of “special concern” as those considered “by the State of Arizona or State of Utah” or the BLM to warrant special consideration. PAD at 5-81. The PAD should be amended to include those plants and animals considered to be special by the Tribe.

Pursuant to SD1 § 5.0 (requesting information to help describe the existing “environmental conditions and habitats” and “resource plans”), the Tribe has included a list of plants of special concern to the Tribe, Attachment 1 hereto, and a list of wildlife species of special concern to the Tribe, Attachment 2 hereto. These species of special concern should be included in the description and characterization of the existing environment.

5.8.1.2 Grand Staircase-Escalante National Monument.

Proclamation 6920, Establishment of the Grand Staircase-Escalante National Monument, 61 Fed. Reg. 50223 (Sept. 18, 1996), expressly acknowledges that Indian tribal use, both historically and currently, is one of the principal purposes for establishing the area as a national monument:

Archeological inventories carried out to date show extensive use of places within the monument by ancient Native American cultures. The area was a contact point for the Anasazi and Fremont cultures, and the evidence of this mingling provides a significant opportunity for archeological study. The cultural resources discovered so far in the monument are outstanding in their variety of cultural affiliation, type and distribution. Hundreds of recorded sites include rock art panels, occupation sites, campsites and granaries. Many more undocumented sites that exist within the monument are of significant scientific and historic value worthy of preservation for future study.

The monument is rich in human history. In addition to occupations by the Anasazi and Fremont cultures, the area has been used by modern tribal groups, including the Southern Paiute and Navajo.

61 Fed. Reg. 50224. The PAD, however, states that “GSENM was created primarily to protect an array of historic, biological, geological, paleontological, and archaeological resources.” PAD at 5-92. This section should also identify modern tribal uses as aspects of the area which are protected by the national monument.

5.8.1.3 Arizona Strip.

This section of the PAD describes the Arizona strip which is land in “northern Arizona that lies north of the Colorado River.” PAD at 5-93. The PAD fails to include the Kaibab Indian Reservation as lying within the Arizona Strip, and should be amended to identify the Reservation’s location within the Arizona Strip. Additionally, the PAD fails to include tribal trust lands as among the types of land that the Arizona Strip encompasses. The first sentence of the third paragraph of this section, PAD at 5-93, should be amended as follows: “In addition to public lands, the Arizona Strip encompasses state, local, tribal, and private lands that are

concentrated around small communities in extreme northern Arizona, including Pipe Spring, Fredonia, Marble Canyon, Colorado City, Centennial, Littlefield, Beaver Dam and Scenic.”

5.8.3 Land Uses and Management.

This section refers only to the route for the proposed pipeline running south of the Kaibab Indian Reservation. The Tribe’s comments on section 3.1.3 address this problem. *See supra* at 2-4.

The first sentence of the fourth paragraph of this section is missing a word: “Several wilderness areas and wilderness study areas are located near the Project alignment, however the Project would not [have, include] any facilities located . . .” PAD at 5-98.

5.10.1 Identification of Historic and Archaeological Sites in the Project Vicinity.

This section generally describes the extent of known historic and archaeological sites along the proposed pipeline corridor, and significantly acknowledges that “a formal Class I Cultural Resources Review has yet to be conducted to determine what, if any, historic and archaeological sites lie within disturbance areas associated with the Project alignment.” PAD at 5-102. Many of the archaeological sites in the path of the proposed pipeline likely contain human and funerary remains. The conduct of the studies to determine the extent of the historic and archaeological resources must, therefore, include substantial consultation with affected Indian tribes. *See, e.g.*, Native American Graves Protection and Repatriation Act, 25 U.S.C. §§ 3001-13; Archaeological Resources Protection Act, 16 U.S.C. §§ 470aa-470mm. The PAD should acknowledge that consultation with affected Indian tribes will be part of the survey of the existence of historic and archaeological sites and remains in the vicinity of the proposed pipeline alignment.

5.10.2 Traditional Cultural Properties.

The PAD acknowledges that the full extent of traditional cultural properties (“TCPs”) that the proposed pipeline project might affect is unknown at this time, and that further study is necessary to fully understand the breadth of TCPs in the project vicinity. The Tribe agrees that “[f]urther consultation is needed to identify specific water sites or areas of potential concern with respect to the Project,” PAD at 5-103, but the PAD should clearly indicate that such further consultation must extend to all areas of potential concern, not just water sites. *See* PAD at 5-115 (“Specific information regarding the potential for the Project to affect any of these rights will be developed through consultation with the identified Tribes and the Navajo Nation.”). The Tribe is prepared to participate in such consultation and assist in the identification and mitigation of all TCPs in the project vicinity.

5.12.1 Existing Communities.

The PAD identifies various communities that may be affected by the proposed pipeline project, however, it fails to include the Kaibab Indian Reservation and Pipe Spring in that listing. *See* PAD at 5-105. The second sentence of the first paragraph of this section should be amended to

include the Kaibab Paiute Reservation and Pipe Spring in the list of towns and cities. This section should also be broadened to acknowledge the regional effects of the proposed pipeline, which will likely extend into Arizona and Nevada.

5.15 Tribal Resources.

Throughout this section, the PAD refers to the “Kaibab-Paiute Tribe.” The formal name of the Tribe is “Kaibab Band of Paiute Indians” as set forth in the CONSTITUTION OF THE KAIBAB BAND OF PAIUTE INDIANS OF THE KAIBAB INDIAN RESERVATION, ARIZONA. The PAD should correctly identify the Tribe’s name. An abbreviated reference to the Tribe is to the “Kaibab Tribe.”

6 Issues, Impacts, Studies, and Plans.

The Tribe has attached to these comments the *Comprehensive Cultural Ecology Code of the Kaibab Band of Paiute Indians* (“Ecology Code”), which was adopted by Resolution of the Governing Body of the Kaibab Band of Paiute Indians, K-19-99 (Apr. 15, 1999). Attachment 3 hereto. The purpose of the Ecology Code is to prevent the destruction of natural and cultural resources of the Tribe, and to promote economic and cultural development consistent with tribal cultural environmental values and tradition, and to provide emergency and disaster planning, and to enable the Tribe to stop activities that are harmful to the quality of life and the environment on the Kaibab Indian Reservation. The Ecology Code is relevant to the identification of issues that the PAD identifies as requiring analysis and study. Pursuant to SD1 § 5.0, the Tribe provides its Ecology Code for inclusion in the relevant laws to which the State must adhere as it proceeds to conduct the analyses set forth in the PAD.

6.1 Geology and Soils.

This section of the PAD focuses on the engineering issues associated with rocks and soils in the proposed pipeline vicinity. Yet, nowhere does the PAD address the fact that there are cryptobiotic soils in the proposed project area, even though the presence of cryptobiotic soils along the proposed project route is well-documented:

Cryptobiotic soil is found throughout the world. In arid regions, these living soil crusts are dominated by cyanobacteria, and also include soil lichens, mosses, green algae, microfungi and bacteria. These crusts play an important role in the ecosystems in which they occur. In the high deserts of the Colorado Plateau (which includes parts of Utah, Arizona, Colorado and New Mexico), these knobby black crusts are extraordinarily well-developed, and may represent 70 to 80 percent of the living ground cover.

. . . .

Unfortunately, many human activities are incompatible with the presence and well-being of cryptobiotic soils. The fibers that confer such tensile strength to these crusts are no match for the compressional stress placed on them by footprints or machinery, especially when the crusts are dry and brittle.

Air pollutants, both from urban areas and coal-fired power plants, also harm these crusts.

Tracks in continuous strips, such as those produced by vehicles or bicycles, are especially damaging, creating areas that are highly vulnerable to wind and water erosion. Rainfall carries away loose material, often creating channels along these tracks, especially when they occur on slopes.

Wind not only blows pieces of the pulverized crust away, thereby preventing reattachment to disturbed areas, but also disturbs the underlying loose soil, often covering nearby crusts. Since crustal organisms need light to photosynthesize, burial can mean death. When large sandy areas are impacted during dry periods, previously stable areas can become a series of shifting sand dunes in just a few years.

Impacted areas may never fully recover. Under the best circumstances, a thin veneer of cryptobiotic soil may return in five to seven years. Damage done to the sheath material, and the accompanying loss of soil nutrients, is repaired slowly during up to 50 years of cyanobacterial growth. Lichens and mosses may take even longer to recover.

Cryptobiotic Soil, <http://www.nps.gov/archive/care/crypto.htm> (last visited July 1, 2008). The description of the geology and soils in the proposed pipeline corridor should include a discussion of cryptobiotic soil and the destructive impact that the proposed pipeline would have on those soils.

This section of the PAD also discusses groundwater from the perspective of potential hazards that groundwater resources may pose for stability of the proposed pipeline. *See* PAD at 6-1 (groundwater infiltration), 6-2 (seepage of groundwater causing unstable conditions in high gypsum soils), 6-3 (groundwater as a geologic hazard). The studies identified in the PAD should also examine the impact of the proposed pipeline on groundwater resources in the area, with particular attention to groundwater depletion and degradation of groundwater quality.

6.1.3.2 Soils.

The studies that the State intends to perform “to determine the soil engineering characteristics along the pipeline and penstock alignment,” PAD at 6-3, should include studies of the presence of cryptobiotic soils in the proposed project vicinity. The studies should identify mitigation measures to help prevent damage to the cryptobiotic soils, and, to the extent possible, encourage their reestablishment after any damage.

6.2.2.1 Preliminary Issues.

While the PAD identifies studies to analyze groundwater quality issues that may result from putting Lake Powell water in Sand Hollow Reservoir, blending waters from different sources, disposal of groundwater during excavation, water quality impacts at Lake Powell, and water use issues, the PAD fails to identify studies on the impacts to existing groundwater resources that may result from construction and operation of the proposed pipeline. All studies of impacts to groundwater should include groundwater depletion potential and degradation of groundwater quality as a result of construction and operation of the proposed pipeline. Such studies should include all groundwater resources that the proposed pipeline will affect as a result of excavation, and the effects of possible leaking from the pipeline into the surrounding substrate.

6.3.2 Known or Potential Project Impacts.

The PAD states that “[c]onstruction would be performed during periods of no flow in intermittent drainages and streams to the greatest extent possible” PAD at 6-7; *see also* PAD at 6-9. The PAD should identify how the State intends to restrict construction activities to periods of no flow, since many construction projects occur when the resources are available for the work, which may or may not be during periods of no flow in these streams and drainages.

The PAD also states that there will be a blowoff valve in Kanab Creek. PAD at 6-8. The studies of the impacts of adding pipeline water to existing water resources that would be crossed by the proposed pipeline, *see supra* at 9 (commenting on groundwater quality studies), should provide additional information about this structure, including a detailed analysis of the potential environmental damages that could occur as a consequence of blowoffs and the State’s proposed mitigation measures to address that potential damage.

6.3.4 Potential Protection, Mitigation and Enhancement Measures.

The PAD states that invasive species such as quagga mussels could be transferred to existing reservoirs; accordingly, the State intends to prevent them from surviving within the first 16 miles of the pipeline by using chemicals or other biological control methods. PAD at 6-9. However, the PAD does not explain what sort of chemicals or biological control methods would be appropriate to accomplish this purpose. The PAD should identify the specific protocols the State would use to eliminate invasive species before delivering Lake Powell water to the existing reservoir, and how such protocols might affect the water quality, and native plant and animal

species, including threatened and endangered species.

The PAD states that the “[i]mpacts on aquatic life and habitats in ephemeral and intermittent streams would be minimized by performing construction activities during dry or low flow periods.” PAD at 6-9. As stated above, *see supra* at 10, the PAD should identify how the State intends to restrict construction activities to periods of low or no flow, since many construction projects occur when the resources are available for the work, which may or may not be during periods of low or no flow in these streams and drainages.

6.4.3 Preliminary Studies and Information Gathering Needs.

The PAD refers to consultation with “federal and state wildlife agency resource specialists” in order to ascertain wildlife habitat and use data in the proposed project vicinity. PAD at 6-11. The PAD should include consultation with tribal agency resource specialists who have expertise in the area which would be affected by the proposed pipeline project, which is potentially within and certainly surrounding the Kaibab Indian Reservation.

6.6.3 Preliminary Studies and Information Gathering Needs.

The PAD refers to consultation with “federal and state resource management agencies” in order to ascertain the locations of wetland and riparian areas, and impacts from the construction and operation of the proposed pipeline on wetland and riparian areas in the proposed project vicinity. PAD at 6-14. The PAD should include consultation with tribal agency resource specialists who have expertise in the area which would be affected by the proposed pipeline project which is potentially within and certainly surrounding the Kaibab Indian Reservation.

6.7.1 Preliminary Issues.

The PAD refers to “consultation with the U.S. Fish and Wildlife Service and other federal and state wildlife agency resource specialists” in order to address threatened and endangered species issues in the proposed project vicinity. PAD at 6-15. The PAD should include consultation with tribal agency resource specialists who have expertise in the area which would be affected by the proposed pipeline project which is potentially within and certainly surrounding the Kaibab Indian Reservation.

6.7.2 Known or Potential Project Effects.

The PAD nowhere acknowledges the existence of the special population in Northern Arizona of California condor (*Gymnogyps californianus*). *See* 61 Fed. Reg. 54043, 54060 (1996). The California condor occupies territory in the proposed pipeline vicinity. The condors are commonly associated with the proposed pipeline vicinity, and tend to be drawn to areas with people, such as construction sites. The list of known impacts to special status species should include the California condor.

6.7.3 Preliminary Studies and Information Gathering Needs.

The PAD refers to “[a]ll proposed studies will be performed in consultation with the U.S. Fish and Wildlife Service and biologists and resource managers with affected federal and state resource management agencies.” PAD at 6-19. The PAD should include consultation with tribal agency resource specialists who have expertise in the area which would be affected by the proposed pipeline project which is potentially within and certainly surrounding the Kaibab Indian Reservation.

6.8.1 Preliminary Issues.

The first sentence of this section is missing information. It reads: “Preliminary issues involving recreation resources include direct and indirect impacts on recreational activities and areas, access to recreational facilities and areas,” PAD at 6-21. The following sentence is missing a verb. The paragraph is incomplete and should be corrected.

6.10.2 Known or Potential Project Impacts.

The PAD states that “[o]peration and maintenance activities have little to no potential for impacts on cultural resources.” PAD at 6-29. This statement is overbroad and presumes that operation and maintenance activities will not interfere with traditional cultural uses of the property affected by the proposed pipeline. The only entities that can determine whether operation and maintenance of the proposed pipeline have an impact on cultural resources are those tribal entities that make cultural uses of the affected property. The State should eliminate this sentence, or modify it so as to make clear that it is the State’s assumption that operation and maintenance of the proposed pipeline will not affect cultural resources. In any event, the Tribe agrees that the State should expand its cultural resource investigations beyond the boundaries of the proposed project, PAD at 6-29, and should at all times consult with the Tribe in making a determination whether operation and maintenance activities will affect cultural properties.

6.10.3 Preliminary Studies and Information Gathering Needs.

The PAD anticipates the need “to visit a number of state and federal government facilities, to copy appropriate cultural resource report and site information, and then to compile and analyze the data.” PAD at 6-29. The State should also plan to visit tribal government facilities in order to gather such information. Accordingly, the PAD should list the historic and other records of the Tribe, subject to obtaining tribal permission to review those records, in its list of research facilities, and should also consider listing the records of the Bureau of Indian Affairs in the Area Office in St. George, Utah, as well as the Western Regional Office in Phoenix, Arizona.

6.10.4 Potential Protection, Mitigation and Enhancement Measures.

The PAD states that a Programmatic Agreement will be developed “for signature by FERC, other federal agencies with permitting authority, and the Arizona and Utah State Historic

Preservation Officers.” PAD at 6-30. Given the potential effect upon tribal archaeological and cultural resources, the development of the Programmatic Agreement must not only include input from the Tribe regarding historic properties, but the Programmatic Agreement itself must include the Tribe as a signatory. This section of the PAD should be modified accordingly.

6.12.2 Known or Potential Project Impacts.

The PAD states that “[p]roject construction would provide a short-term economic stimulus to southwestern Utah.” PAD at 6-32. Clearly, the same short-term economic stimulus would occur in northern Arizona since the proposed pipeline corridor drops into Arizona for several miles. Thus, the first sentence of the section should be revised as follows: “Project construction would provide a short-term economic stimulus to southwestern Utah and northern Arizona.”

6.12.3 Preliminary Studies and Information Gathering Needs.

The PAD refers to gathering socioeconomic data regarding “State and regional population, services, employment, income, and other historical and forecast data and information.” PAD at 6-34. The PAD should also include tribal socioeconomic data in its analysis, and, given the regional effects of the proposed pipeline, the PAD should broaden its scope to include Arizona and Nevada socioeconomic data as well.

6.13.2 Known or Potential Project Impacts.

The PAD states that new roads would be constructed to provide access to the proposed pipeline, including “the penstock alignment east, south and west of the Kaibab Indian Reservation as it crosses the Arizona Strip adjacent to the Navajo-McCullough Transmission Line.” PAD at 6-35. The new road adjacent to the Navajo-McCullough Transmission Line “may create transportation corridors for utilization by off road vehicles and may create access points for hikers, OHV users, or others that were not as easily accessible prior to Project construction.” *Id.* As stated above, *see supra* at 3, the PAD acknowledges the cultural significance of Kanab Creek Canyon to the Tribe. *See* PAD at 6-29 (“Potential TCP’s are located near the Project alignment south of the Kaibab Indian Reservation near Kanab Creek Canyon.”). To the extent that the new road adjacent to the transmission lines would increase non-tribal use of the area, the State must undertake studies and analyses to ensure that tribal interests would not suffer adverse affects as a result of such increased use. Moreover, in constructing the road itself, the State must avoid adverse affects to tribal cultural properties and other tribal resources in the area.

6.13.3 Preliminary Studies and Information Gathering Needs.

The studies listed in this section of the PAD do not include any analyses of the potential impacts of constructing a road along the Navajo-McCullough Transmission Line. The PAD should be revised to include such studies in the list of studies and information gathering needs.

6.15.2 Known or Potential Impacts.

The PAD states that there will be “no direct impacts on known sacred sites, TCPs, reservation lands, or other tribal resources.” PAD at 6-38. This statement is incorrect because it is internally inconsistent and presumes too much. First, as stated above, *see supra* at 2-4, the Commission is obligated to analyze all reasonable and prudent alternatives in determining whether to license the proposed pipeline, and to fully analyze its environmental impacts. Accordingly, the Commission must examine other possible routes for the proposed pipeline, including the potential route adjacent to Arizona State Highway 389 as it crosses the Kaibab Indian Reservation, and also the route that would stay entirely within the Navajo-McCulloch Transmission Line. To say, therefore, that there will be no direct impacts on Reservation lands presumes that the approved route for the proposed pipeline will be to the south of the Reservation.

Second, the PAD admits that the State does not know the full extent of tribal cultural and archaeological resources that may lie in the path of the proposed pipeline. PAD at 6-28 (“Archaeological sites, historical sites, Traditional Cultural Properties, cultural landscapes, archaeological districts and historical buildings and structures within and near the Project boundaries have yet to be determined.”). Because the State will excavate a large trench in order to bury the proposed pipeline, myriad cultural and archaeological resources may be discovered which will require mitigation. It is, therefore, incorrect to presume that there will be no direct impacts on resources with cultural significance and affiliation to the Tribe.

Third, the only entity that can determine whether the proposed project will have direct impacts on known sacred sites, TCPs, reservation lands, or other tribal resources is the Tribe. To date, the State has not consulted with the Tribe to ascertain the potential for impacts on known sacred sites. Therefore, the State cannot possibly know whether there will be any direct impacts upon known (or unknown) sacred sites, TCPs, reservation lands, or other tribal resources.

The first sentence of this section should be deleted and the State should include a detailed proposal for consulting with the Tribe regarding the existence and extent of known and unknown sacred sites, TCPs, reservation lands, and other tribal resources both within the southern route and the Reservation route for the proposed pipeline.

The same problem is present in the first sentence of the second paragraph of this section. Operation and maintenance of the proposed pipeline may very well have impacts upon known sacred sites, TCPs, reservation lands, and other tribal resources. By failing to consult with the Tribe on these issues, the State has presumed to determine that no direct impacts will occur from operation and maintenance activities, yet it cannot possibly know whether such impacts may occur without consulting with the Tribe. Thus, the first sentence of the second paragraph of this section should be deleted, and the State should include a detailed proposal for consulting with the Tribe regarding the potential impacts from operation and maintenance of the proposed project on sacred sites, TCPs, reservation lands, and other tribal resources both within the southern route and the Reservation routes for the proposed pipeline.

It will be critically important that the State consult closely with the Tribe, and other affected Indian tribes, as it compiles and analyzes tribal resource data. Such data may not be published, and only the Tribe, or other affected Indian tribes, will be able to ascertain whether such information should remain unpublished.

6.15.3 Preliminary Studies and Information Gathering Needs.

The PAD acknowledges that consultation with the Tribe is necessary “to identify tribal resources that may be affected by Project construction and operation and maintenance activities.” PAD at 6-38. Additionally, comprehensive archaeological and cultural resources surveys for the southern route and the Reservation routes for the proposed pipeline must be completed, and the PAD should include such surveys in its list of studies and information gathering activities.

6.15.4 Potential Protection, Mitigation and Enhancement Measures.

The PAD states that the State will employ “[s]tandard construction and operating procedures including measures to avoid, minimize or reduce impacts on tribal resources.” PAD at 6-38. Standard measures are insufficient to the extent that they do not include consultation with the Tribe regarding the protection of tribal resources and mitigation of damages to those resources. The PAD should be revised to state the State will employ “standard and other necessary construction and operating procedures.”

APPENDIX A: DRAFT RESOURCE WORK PLANS AND SCOPING OF ENVIRONMENTAL ISSUES

Appendix A of the PAD sets forth 19 draft resource work plans under which the State has proposed various studies and information gathering activities in order to provide information to the Commission as it considers whether to issue a license to the State for the proposed pipeline project. Additionally, SD1 identifies a series of environmental issues and concerns which the Commission will analyze as part of its compliance with NEPA. *See* SD1 § 4.2, at 12-16. The analysis of the environmental issues and concerns identified in SD1 will take place in the context of the State’s conduct of the work set forth in the draft work plans described in Appendix A in the PAD. Thus, the Tribe’s comments that follow pertain to both the draft work plans in Appendix A of the PAD and the environmental issues and concerns in SD1.

Each of the draft work plans will affect territory that is either within the Tribe’s permanent homeland – the Kaibab Indian Reservation – or is within the Tribe’s ancestral homeland and aboriginal territory. Given the potential for enormous impacts to the Tribe’s interests, it is critical that the Commission consult closely with the Tribe as the State carries out its work plans. The Commission’s regulations require consultation with Indian tribal governments when proposed hydropower projects have the potential to affect tribal resources. 18 C.F.R. § 2.1c(e). Additionally, federal law generally requires close consultation with Indian tribal governments when major federal actions may have an effect on tribal resources. Exec. Order No. 13,175, 65 Fed. Reg. 67249 (2000). Accordingly, to the extent that each of the 19 draft work plans set forth

in Appendix A of the PAD omit the requirement of consultation with the Tribe, the State should amend those work plans to expressly include a requirement that the State consult with the Tribe in all aspects of its work.

Many of the draft work plans will involve social impact assessment. The identification and conduct of such studies and information gathering efforts that involve social impact assessment should proceed according to the *Principles and Guidelines for Social Impact Assessment in the USA*, 21 Impact Assessment and Project Appraisal 231-50 (Sept. 2003) (“Principles and Guidelines”), prepared by The Interorganizational Committee on Principles and Guidelines for Social Impact Assessment, a copy of which is attached for the Commission’s convenience as Attachment 4. The Principles and Guidelines provide, “systematic and interdisciplinary principles and guidelines to assist government agencies and private-sector interests in using SIA to make better decisions under NEPA, related mandates and administrative requirements,” Principles and Guidelines at 232, and have been accepted and used by federal agencies in other contexts requiring compliance with NEPA. The six principles and guidelines are:

Achieve extensive understanding of local and regional settings to be affected by the action or policy

- Identify and describe interested and affected stakeholders and other parties
- Develop baseline information (profiles) of local and regional communities

Focus on key elements of the human environment

- Identify the key social and cultural issues related to the action or policy from the community and stakeholder profiles
- Select social and cultural variables which measure and explain the issues identified

Identify research methods, assumptions and significance

- Research methods should be holistic in scope, i.e. they should describe all aspects of social impacts related to the action or policy
- Research methods must describe cumulative social effects related to the action or policy
- Ensure that methods and assumptions are transparent and replicable
- Select forms and levels of data collection analysis which are appropriate to the significance of the action or policy

Provide quality information for use in decision-making

- Collect qualitative and quantitative social, economic and cultural data sufficient to usefully describe and analyze all

reasonable alternatives to the action

- Ensure that the data collection methods and forms of analysis are scientifically robust
- Ensure the integrity of collected data

Ensure that any environmental justice issues are fully described and analyzed

- Ensure that research methods, data, and analysis consider underrepresented and vulnerable stakeholders and populations
- Consider the distribution [of] all impacts (whether social, economic, air quality, noise, or potential health effects) to different social groups (including ethnic/racial and income groups)

Undertake evaluation/monitoring and mitigation

- Establish mechanisms for evaluation and monitoring of the action, policy or program
- Where mitigation of impacts may be required, provide a mechanism and plan for assuring effective mitigation takes place
- Identify data gaps and plan for filling these data needs

Principles and Guidelines at 233. The State should apply the Principles and Guidelines to all of the work plans that involve social impacts and assessment, including ethnographic considerations, and traditional human uses of resources in the region that will be affected by the proposed pipeline project.

The Tribe provides more detailed comments on each of the 19 draft work plans below.

1. Draft Air Quality Work Plan.

Section 4 Impact Area and Significance Criteria: This section defines the impact area as within one-half mile of pipeline alignment. PAD at A-1. The draft work plan should provide an explanation for the one-half mile impact area, as it seems too limited in scope since fugitive dust can travel significantly larger distances. Additionally, a one-half mile delineation for the pipeline alignment appears to be inconsistent with the impact area identified in the Draft Cultural Resources Work Plan, which anticipates a two mile wide corridor (one mile on either side of the pipeline centerline) for identification of cultural resource sites. *See* Draft Cultural Resources Work Plan § 6.3.2, at A-7. Indeed, air quality analyses should include the totality of the project, including the air quality effects produced by the source of the energy needed for the project less that recovered by hydropower, and should cover the entire impacted airshed, as opposed to a very limited one-half mile of the actual project corridor. Regarding the air quality effects of the source of energy needed to construct and operate the project, the State should identify the source

of such energy (i.e. coal, nuclear, or other) and whether it would require a new energy plant to be built.

Section 5.1.3 Analysis of Cumulative Impacts: The PAD states that “air quality cumulative impacts analysis will address the combined impacts of the alternatives and any past or future proposed or planned actions that have or are likely to affect the air quality in the impact area.” PAD at A-4. The State should prepare a full emissions inventory for the life of the project which clearly identifies all pollutants produced and used by the proposed project, and the work plan should be amended accordingly.

Section 7 Procedures for Developing Mitigation: This section states that “mitigation measures will be based on applicable state and Federal statutes and regulations, past experience and best professional judgment to either satisfy a legal requirement or to satisfy the public interest requirement.” PAD at A-5 to A-6. The PAD should also include the Tribe’s Ecology Code, Attachment 3 hereto, because it relates to the protection of air quality. The PAD should also include the Tribe and the Bureau of Indian Affairs among the entities that will evaluate air quality mitigation options. *See* PAD at A-6.

2. Draft Cultural Resources Work Plan.

Section 1 Introduction: The PAD defines cultural resources to “include archaeological sites, burial sites, traditional cultural properties, cultural landscapes, historic standing structures, and archaeological and historic districts.” PAD at A-2. To avoid over-limitation of the term “traditional cultural resources,” the PAD should further define the term to be very broad, as suggested by the following National Park Service example:

There are many definitions of the word “culture;” but in the National Register programs the word is understood to mean the traditions, beliefs, practices, lifeways, arts, crafts, and social institutions of any community, be it an Indian tribe, a local ethnic group, or the people of the nation as a whole

One kind of cultural significance a property may possess, and that may make it eligible for inclusion in the Register, is traditional cultural significance. “Traditional” in this context refers to those beliefs, customs, and practices of a living community of people that have been passed down through the generations, usually orally or through practice. The traditional cultural significance of a historic property, then, is significance derived from the role the property plays in a community’s historically rooted beliefs, customs, and practices. Examples of properties possessing such significance include:

- a location associated with the traditional beliefs of a Native American group about its origins, its cultural history, or the nature of the world;
- a rural community whose organization, buildings and structures, or patterns of land use reflect the cultural traditions valued by its long-term residents;
- an urban neighborhood that is the traditional home of a particular cultural group, and that reflects its beliefs and practices;
- a location where Native American religious practitioners have historically gone, and are known or thought to go today, to perform ceremonial activities in accordance with traditional cultural rules of practice; and
- a location where a community has traditionally carried out economic, artistic, or other cultural practices important in maintaining its historic identity.

A traditional cultural property, then, can be defined generally as one that is eligible for inclusion in the National Register because of its association with cultural practices or beliefs of a living community that (a) are rooted in that community's history, and (b) are important in maintaining the continuing cultural identity of the community.

National Park Service,
<http://www.nps.gov/history/nR/publications/bulletins/nrb38/nrb38%20introduction.htm#tcp> (last visited June 30, 2008). Consistent with the fact that the proposed pipeline will traverse the Tribe's aboriginal territory which is larger than the Tribe's present-day Reservation, *see supra* at 4, the consideration of effects on TCPs should extend to all territory that will be affected by the proposed pipeline.

The second paragraph of Section 1 fails to include the Archaeological Resources Protection Act, 16 U.S.C. §§ 470aa-470mm, which is clearly applicable to the proposed pipeline project. *See* PAD at A-2. The paragraph should be amended accordingly.

As stated above, the Programmatic Agreement for protection of cultural, historic and archaeological resources must include the Tribe as a signatory. National Historic Preservation Act, 16 U.S.C. § 470a(d). The last sentence of the fourth paragraph of Section 1 should be amended accordingly. *See* PAD at A-2. Regarding the identification and evaluation of sites that may lie in the path of the proposed pipeline and which are within the Reservation or the Tribe's aboriginal territory, the work plan must provide for consultation with the Tribe as the principal

entity that can determine how to treat archaeological sites, artifacts and human remains.

Section 2 Issues: The list of issues in this section includes no provision for treatment of human remains. PAD at A-3. As with all cultural resources, any treatment of human remains must be made in close consultation with the Tribe. *See* Native American Graves Protection and Repatriation Act, 25 U.S.C. § 3002(c); American Indian Religious Freedom Act, 42 U.S.C. § 1996.

Section 4.1 Impact Area: The PAD should expand the impact area of the proposed pipeline project to include those areas that will suffer adverse impacts from fugitive dust, as discussed in Section 6.14 of the PAD, since air quality degradation may adversely affect cultural resources.

Section 4.2 Significance Criteria for Each Impact Topic: The work plan states that “impacts on cultural resources are considered significant if resources are eligible for inclusion in the NRHP or have already been listed.” PAD at A-4. This is an inadequate standard for analysis and mitigation of effects on TCPs and other tribal resources, as it is far too limited in scope. As stated above, *see supra* at 14-15, the critical issue of whether a resource is significant must be made in close consultation with the Tribe. Section 6.15.3 of the PAD states that “[c]onsultation with Native American Indian tribes and nations will be performed to identify tribal resources that may be affected by the Project construction and operation and maintenance activities.” PAD at 6-38. The work plan, however, does not include any provision for consultation with the Tribe. The State should amend the work plan to expressly provide for consultation with the Tribe to determine whether a resource is a TCP, or otherwise has significance to the Tribe.

Section 5 Methodology: Once again, the PAD has limited its scope of analysis to “identifying the properties eligible for, or listed on, the NRHP located within the impact area of influence.” PAD at A-4. The Tribe objects to this overly-limited standard as it fails to take into account the requirements of consultation with the Tribe, the Native American Graves Protection and Repatriation Act, 25 U.S.C. § 3002(c), the Archaeological Resources Protection Act, 16 U.S.C. § 470cc(g), and the National Historic Preservation Act, 16 U.S.C. § 470a(d).

Section 5.1.2 Analysis of Alternatives: The PAD states that “[e]ach cultural resource site, including archaeological sites and historical buildings and structures, will be drawn on the project baseline map.” PAD at A-5. The Tribe objects to the identification of any archaeological site as contrary to the provisions of federal law. The Archaeological Resources Protection Act, 16 U.S.C. §§ 470aa-470mm (“ARPA”), prohibits a federal agency from disclosing the location of archaeological sites on public lands:

Information concerning the nature and location of any archaeological resource for which the excavation or removal requires a permit or other permission under this chapter or under any other provision of Federal law may not be made available to the public under subchapter II of chapter 5 of Title 5 or under any

other provision of law unless the Federal land manager concerned determines that such disclosure would –

- (1) further the purposes of this chapter or the Act of June 27, 1960, and
- (2) not create a risk of harm to such resources or to the site at which such resources are located.

16 U.S.C. §§ 470hh(a) (citation omitted). Any disclosure of the location of archaeological sites in the areas that would possibly be affected by the proposed pipeline is contrary to ARPA and is, therefore, illegal.

Protection of the confidentiality of site location is critical not only to protecting the integrity of those sites, such protection being the principle purpose of ARPA, but also to the religious and cultural beliefs of the various Southern Paiute Tribes in the proposed project region. Any disclosure of the locations of archaeological sites in the region potentially affected by the proposed pipeline would represent a serious danger to those sites. It is a well-known problem in Utah that archaeological sites are the subject of illegal pot-hunting and unpermitted excavation. *See* NPS Archeology Program: The Archaeological Resources Protection Act of 1979 (ARPA), Department of Interior, <http://www.nps.gov/archeology/tools/laws/arpa.htm> (last visited July 3, 2008). Unpermitted excavation is subject to both criminal and civil penalties. 16 U.S.C. § 470ee(d) (imposing fines for illegal excavation and unpermitted removal of artifacts and remains of up to five years incarceration and \$100,000); § 470ff(a) (allowing assessment of civil penalties against illegal excavators and those who remove artifacts and remains without permission of federal land manager). The draft work plan should, therefore, contain express provisions to protect the confidentiality of archaeological sites and resources discovered in the course of analyzing the possible effects of the proposed pipeline.

Section 6.2 Data Available and Adequacy: The work plan anticipates the need to update existing cultural inventories which have been compiled in the context of “road construction projects along SR 59 in Utah, SR 389 in Arizona, and U.S. 89 and U.S. Alt 89 in both Utah and Arizona.” PAD at A-5. Any “re-survey” work to update those cultural inventories must be done in close consultation with the Tribe. The second sentence of the fourth full paragraph on page A-6 states a plan to consult with affected Indian tribes, who are listed as “the Southern Paiute Tribe, various Pueblo and Upper Yuman Tribes and, possibly, the Navajo Tribe.” PAD at A-6. Obviously, the affected Indian tribes should include the Kaibab Band of Paiute Indians, who are not part of the Paiute Indian Tribe of Utah, among those with whom the State and participating federal agencies must consult. For purposes of correctly identifying federally acknowledged Indian tribes, there is no Southern Paiute Tribe, and the correct term is Navajo Nation, not Navajo Tribe. The sentence should, therefore, be amended as follows: “That will be determined in consultation with Federal and State agencies who, in turn, will be asked to make initial contacts with appropriate Native American tribes who traditionally occupied the area, particularly, the Paiute Indian Tribe of Utah and its constituent groups, the Kaibab Band of

Paiute Indians, various Pueblo and Upper Yuman Tribes and, possibly, the Navajo Nation.”

To the extent that the State will seek out existing data and information regarding TCPs, tribal resources and tribally significant uses of the region potentially affected by the proposed pipeline, PAD at A-6, the State should look to the extensive work conducted and published by Dr. Richard Stoffle.

Section 6.3.2 Secondary: This section of the draft work plan lists a number of places where the State intends to conduct secondary research “in order to establish a baseline understanding of the nature, types, number, and density . . . of cultural resources sites located within and near the project corridors and facility locations.” PAD at A-7. None of the places identified in this section includes the records of the Tribe. This section should be amended to include any records the Tribe may maintain, and which are public documents, regarding archaeological and cultural sites in the vicinity of the proposed pipeline.

Section 7 Procedures for Developing Mitigation: Once again, the draft work plan fails to include consultation with the Tribe as part of the plan to mitigate harm to archaeological and cultural sites in the vicinity of the proposed pipeline. This section should be amended as follows:

The analysis of impacts on cultural resources will be based on consultation with Native American Indian Tribes, and the standard operating procedures, and measures to avoid or reduce impacts that are included in the project description. The significance criteria for cultural resources, which will include the recommendations provided by Native American Indian Tribes, will then be applied to determine if the impact would be significant or not. Mitigation measures, where possible, would then be developed for the significant impacts. The mitigation measures would be based on tribal recommendations, applicable regulations, past experience and best professional judgment. In some cases it may not be possible to mitigate significant impacts, and the contractor will rely on the recommendations of the Native American Indian Tribes to determine how to proceed in those circumstances. All reasonably foreseeable mitigation options will be evaluated by the Federal Energy Regulatory Commission, the Bureau of Land Management, the Bureau of Indian Affairs, and other responsible federal agencies and factored into the respective decision documents.

3. Draft Aquatic Resources Work Plan

Section 5.1.1 Definition of Baseline Conditions: The first sentence in this section, PAD at A-3, is missing a word, and should be revised as follows: “Aquatic resources baseline

conditions will be defined [as] the existing fish and other critical aquatic species and populations and habitat conditions in the immediate impact area and surrounding area.”

Section 7 Procedures for Development of Mitigation: The development of any mitigation measures regarding impacts to aquatic resources must be made in consultation with the Tribe. The fourth sentence of this section, PAD at A-6, should be amended as follows: “The mitigation measures will be based on applicable state, federal and tribal statutes and regulations, past experience and best professional judgment to either satisfy a legal requirement or to satisfy the public interest requirement. In some cases significant impacts may not be able to be mitigated. All reasonably foreseeable mitigation options will be evaluated by the Federal Energy Regulatory Commission, Bureau of Land Management, the Bureau of Indian Affairs, and other responsible federal agencies and factored into the respective decision documents.”

4. **Draft GIS Work Plan**

Section 5.1.2.2 Field Reconnaissance: The PAD states that “[f]ield reconnaissance will include a physical inspection of each alternative alignment.” PAD at A-2. The State must ensure that it has received the permission of the Tribe for any field inspections of alignments that cross the Reservation, and the draft work plan should expressly provide that the State will obtain all necessary tribal permission prior to conducting any field inspections.

The definition of the acronym “GPS” should be “Global Positioning System,” not “Geographic Positioning System.” PAD at A-2.

5. **Draft Groundwater Resources Work Plan**

Section 2 Issues: The PAD identifies the following issue for investigation: “How would groundwater recharge associated with the LPP affect the availability of groundwater resources in the vicinity of St. George?” PAD at A-1. The State should expand its investigation of groundwater recharge impacts to include the groundwater resource in and around the Kaibab Indian Reservation, especially given the Tribe’s dependence upon groundwater.

Section 4.1 Impact Area: The PAD defines the impact area as all of the reservoirs, wetlands, and stream crossings along the LPP alignment. PAD at A-2. The PAD limits the impact on groundwater resources to “St. George and vicinity affected by development of groundwater resources.” *Id.* The PAD should expand the impact area to include in the impacts of the construction and operation of the proposed pipeline the groundwater resource in and around the Kaibab Indian Reservation.

Section 5.1 Introduction and Overall Approach: The work plan anticipates “field reconnaissance to identify seeps, springs, wetlands and other areas that would likely be affected by LPP activities.” PAD at A-2. The State must ensure that it has received the permission of the Tribe for any field inspections of seeps, springs, wetlands and other areas on the Reservation that would be affected by construction and operation of the proposed pipeline, and the draft work

plan should expressly provide that the State will obtain all necessary tribal permission prior to conducting any field investigations. Similarly, the State must obtain the Tribe's permission if it wishes to install any observation wells on the Reservation for monitoring the groundwater resources that may be affected by the proposed pipeline. *See id.*; *see also* § 5.1.2.4, at A-3 to A-4 (discussing installation of observation wells). The State must obtain permission from the Tribe for all activities involving field work to ascertain groundwater resources and monitor possible impacts to them which would occur on the Reservation or otherwise affect the Reservation resources.

Section 5.1.2.2 Field Reconnaissance: The PAD states that “[f]ield reconnaissance will include a physical inspection of each alternative alignment.” PAD at A-3. The State must ensure that it has received the permission of the Tribe for any field inspections of alignments that cross the Reservation, and the draft work plan should expressly provide that the State will obtain all necessary tribal permission prior to conducting any field inspections.

Section 5.1.2.4 Subsurface Hydrogeologic Investigations: The PAD states that “subsurface hydrogeologic investigations will be performed.” PAD at A-3. The State must ensure that it has received the permission of the Tribe for any subsurface hydrogeologic investigations on the Reservation, and the draft work plan should expressly provide that the State will obtain all necessary tribal permission prior to conducting any subsurface hydrogeologic investigations. The same permission is necessary for the installation of piezometers anywhere on the Reservation, as well as for the collection of data from wells and piezometers that would be located on the Reservation.

To the extent that the State wishes to install new wells and piezometers at locations on the Reservation, the PAD should state that federal and tribal regulatory requirements will apply, in addition to state regulatory requirements. *See* PAD at A-4. Thus, the first sentence of the first full paragraph on page A-4 should be amended as follows: “All new wells and piezometers will be permitted and constructed in accordance with federal, tribal and state regulatory requirements, using a state-licensed well driller that is acceptable to the relevant federal agencies and Indian tribes.”

Section 6.2 Data Available and Adequacy: The PAD should include the Tribe among the possible sources of information regarding groundwater on the Reservation.

Section 7 Procedures for Developing Mitigation: The development of any mitigation measures regarding impacts to groundwater must be made in consultation with the Tribe where the groundwater resource either underlies the Reservation or where extra-Reservation activities could affect the Reservation groundwater resource. The fourth sentence of this section, PAD at A-6, should be amended as follows: “The mitigation measures will be based on applicable state, federal and tribal statutes and regulations, past experience and best professional judgment to either satisfy a legal requirement or to satisfy the public interest requirement.”

6. Draft Land Use Plans and Conflicts Work Plan

The introductory heading of this draft work plan has a typographic error as it refers to the “Draft Recreation Resources Work Plan.” This should be corrected.

Section 4.2 Significance Criteria for Each Impact Topic: This section limits the criteria for significant impacts to land uses to changes in ownership, alteration or restriction of access, and amendments to land use plans or zoning ordinances. PAD at A-2. However, changes in landscapes may constitute changes in TCPs, *see supra* at 18-19, and, therefore, the significance criteria for land use impacts should be expanded to include impacts from the construction and operation of the proposed pipeline on traditional land uses, including cultural landscape issues. A fourth bullet should be added to the significance criteria as follows: “Changes or alteration in landscapes that affect traditional cultural properties and traditional practices.”

Section 5.1.2.1 Review of Existing Land Use Literature: The federal agencies listed should expressly include the Tribe.

Section 5.1.2.2 Field Reconnaissance: The PAD states that “[f]ield reconnaissance will include a physical inspection of each alternative alignment.” PAD at A-3. The State must ensure that it has received the permission of the Tribe for any field inspections of alignments that cross the Reservation, and the draft work plan should expressly provide that the State will obtain all necessary tribal permission prior to conducting any field inspections.

Section 6.2 Data Available and Adequacy: The PAD should include the Tribe among the possible sources of information regarding land uses on the Reservation.

Section 7 Procedures for Development of Mitigation: The development of any mitigation measures regarding impacts to tribal land uses must be made in consultation with the Tribe. The fourth sentence of this section, PAD at A-4, should be amended as follows: “The mitigation measures will be based on applicable state, federal and tribal statutes and regulations, past experience and best professional judgment to either satisfy a legal requirement or to satisfy the public interest requirement. In some cases significant impacts may not be able to be mitigated. All reasonably foreseeable mitigation options will be evaluated by the Federal Energy Regulatory Commission, Bureau of Land Management, the Bureau of Indian Affairs, and other responsible federal agencies and factored into the respective decision documents.”

Section 9 Dependency Items From Other Resources: The work plan should be amended to include the Cultural Resources analysis as a dependency item since alterations in the landscape could constitute an adverse impact to TCPs.

7. Draft Noise Work Plan

Section 7 Procedures for Developing Mitigation: The development of any mitigation measures regarding impacts to tribal land uses must be made in consultation with the Tribe. The fourth sentence of this section, PAD at A-4, should be amended as follows: “The mitigation measures will be based on applicable state, federal and tribal statutes and regulations, past experience and best professional judgment to either satisfy a legal requirement or to satisfy the public interest requirement. In some cases significant impacts may not be able to be mitigated. All reasonably foreseeable mitigation options will be evaluated by the Federal Energy Regulatory Commission, Bureau of Land Management, the Bureau of Indian Affairs, and other responsible federal agencies and factored into the respective decision documents.”

8. Draft Paleontological Resource Work Plan

Section 6.1 Data Needed: The PAD states that the paleontological work will include “[a] field survey and recordation of paleontological resources.” PAD at A-4. To the extent that such field survey would occur on the Reservation, the State must obtain tribal permission to conduct the field survey. The work plan should expressly provide that the State will obtain tribal permission to conduct a paleontological field survey on the Reservation.

Section 6.3.1 Primary: The PAD anticipates “field inventory and recordation of paleontological resources within the LPP.” PAD at A-4. To the extent that such field inventory would occur on the Reservation, the State must obtain tribal permission to conduct the field inventory. The work plan should expressly provide that the State will obtain tribal permission to conduct a paleontological field inventory on the Reservation.

Section 7 Procedures for Developing Mitigation: The development of any mitigation measures regarding impacts to paleontological resources located on tribal lands must be made in consultation with the Tribe. The fourth sentence of this section, PAD at A-5, should be amended as follows: “The mitigation measures will be based on applicable state, federal and tribal statutes and regulations, past experience and best professional judgment to either satisfy a legal requirement or to satisfy the public interest requirement. In some cases, significant impacts may not be able to be mitigated. All reasonably foreseeable mitigation options will be evaluated by the Federal Energy Regulatory Commission, Bureau of Land Management, the Bureau of Indian Affairs, and other responsible federal agencies and factored into the respective decision documents.”

9. Draft Public Involvement and Outreach Work Plan: No comment.

10. Draft Recreation Resource Work Plan

Section 7 Procedures for Developing Mitigation: The development of any mitigation measures regarding impacts to recreational resources located on or affecting tribal lands must be made in consultation with the Tribe. The fourth sentence of this section, PAD at A-5, should be

amended as follows: “The mitigation measures will be based on applicable state, federal and tribal statutes and regulations, past experience and best professional judgment to either satisfy a legal requirement or to satisfy the public interest requirement. In some cases significant impacts may not be able to be mitigated. All reasonably foreseeable mitigation options will be evaluated by the Federal Energy Regulatory Commission, Bureau of Land Management, the Bureau of Indian Affairs, and other responsible federal agencies and factored into the respective decision documents.”

11. Draft Socioeconomics/Water Resources Economics Impacts Draft Work Plan

Section 2 Key Issues: The PAD should include an additional issue for analysis of the recovery and reclamation of all structures and facilities associated with the proposed project should it be only partially constructed, or abandoned some in the future because it has become obsolete. The impacts on the socioeconomic resources of the Tribe and others in the proposed project vicinity of a partially constructed or abandoned project could be significant, and that possibility should be analyzed.

Section 4.1 Impact Area: The PAD limits the socioeconomic impact area “as the St. George to Cedar City corridor, in Southern Utah.” PAD at A-2. This geographic restriction is too limited. The socioeconomic impacts should be analyzed for all communities in the Arizona Strip, as well as Page and possibly Littlefield, Arizona.

Section 7 Procedures for Developing Mitigation: The development of any mitigation measures regarding impacts to the socioeconomic conditions on tribal lands must be made in consultation with the Tribe. The fourth sentence of this section, PAD at A-5, should be amended as follows: “The mitigation measures will be based on applicable state, federal and tribal statutes and regulations, past experience and best professional judgment to either satisfy a legal requirement or to satisfy the public interest requirement. In some cases significant impacts may not be able to be mitigated. All reasonably foreseeable mitigation options will be evaluated by the Federal Energy Regulatory Commission, Bureau of Land Management, the Bureau of Indian Affairs, and other responsible federal agencies and factored into the respective decision documents.”

12. Draft Surface Water Resources Work Plan

Section 2 Issues: This section of the PAD lists various issues, one of which is long-term drought affects on the Colorado River water supply. PAD at A-1. This study issue should include other climate change issues, such as flooding, lower snow packs in the Upper Basin of the Colorado River, precipitation occurring at different times of the year, and warmer winters, all of which have an effect on the Colorado River supply, *see* PAD § 5.2.4.4, at 5-43, which in turn has an effect on the operation of the proposed pipeline.

Section 6.1 Data Needed: The PAD states that data collection will require observations in the form of photographs “of channel conditions at pipeline crossings.” PAD at A-4. To the

extent that such pipeline channel crossings are located on the Kaibab Indian Reservation, the State must ensure that it has obtained permission from the Tribe to enter the Reservation to make such photographic observations. The work plan should expressly provide that the State will obtain tribal permission to take photographs of channel conditions on the Reservation.

Section 6.3.1 Primary: The PAD provides that the State will conduct “[l]ow-altitude aerial photographs or field photographs of locations where proposed pipeline alignments cross channels and washes.” PAD at A-4. In order to conduct aerial photographs over the Kaibab Indian Reservation, the State must obtain permission from the Tribe. The work plan should expressly provide that the State will obtain tribal permission to conduct aerial surveys and photographs of channel conditions on the Reservation.

Section 7 Procedures for Development of Mitigation: The development of any mitigation measures regarding impacts to surface water on tribal lands must be made in consultation with the Tribe. The fourth sentence of this section, PAD at A-5, should be amended as follows: “The mitigation measures will be based on applicable state, federal and tribal statutes and regulations, past experience and best professional judgment to either satisfy a legal requirement or to satisfy the public interest requirement. In some cases significant impacts may not be able to be mitigated. All reasonably foreseeable mitigation options will be evaluated by the Federal Energy Regulatory Commission, Bureau of Land Management, the Bureau of Indian Affairs, and other responsible federal agencies and factored into the respective decision documents.”

13. Draft Threatened, Endangered and Special Status Species Work Plan

Section 2 Issues: The PAD provides that the State will conduct studies to measure the effects of the proposed pipeline on plants and animal listed by the United States Fish and Wildlife Service as threatened and endangered, and those plants and animals considered to have special status. PAD at A-2. A plant or animal has special status when they are “considered as wildlife of special concern by the State of Arizona or the State of Utah.” PAD § 5.7, at 5-81. This definition of special status species fails to include those plants and animals that are considered to be sensitive and have special meaning to the Tribe. Pursuant to SD1 § 5.10 (requesting information to help describe the existing “environmental conditions and habitats” and “resource plans”), the Tribe has included a list of plants of special concern to the Tribe, Attachment 1 hereto, and a list of wildlife species of special concern to the Tribe, Attachment 2 hereto. All of the plants and animals included on the Tribe’s lists should be part of the State’s plan that threatened, endangered and special status species be “managed proactively to minimize the need for future listing as threatened or endangered under the ESA.” PAD § 5.7, at 5-81. Additionally, plants and animals identified by the Tribe as having special importance for cultural and religious purposes must be protected under the provisions of the American Indian Religious Freedom Act, 42 U.S.C. § 1996, and the work plan must include those plants and animals in its analysis of impacts.

Section 4.2.1 Endangered Species Act (Federally Listed Species): The first bullet sentence in this section has a typographic error. The word “of” between “threatened” and “endangered” should be “or.”

Section 5.1 Introduction and Overall Approach: This section of the draft work plan includes documentation of direct mortality of threatened, endangered and special status species as a result of the construction and operation of the proposed pipeline. PAD at A-4 to A-5. To the extent that the State intends to document direct mortality on the Kaibab Indian Reservation, the State must obtain permission from the Tribe. The work plan should expressly provide that the State will obtain tribal permission to document direct mortality of threatened, endangered and special status species on the Reservation.

Section 5.2.1 Wildlife: The PAD provides that the State will develop wildlife species habitat maps. PAD at A-5. To the extent that the State intends to conduct field research on the Kaibab Indian Reservation in order to develop such maps, the State must obtain permission from the Tribe. The work plan should expressly provide that the State will obtain tribal permission to conduct field research on the Reservation for the development of wildlife species habitat maps.

Section 5.2.3 Plants: The PAD provides that the State will consult and conduct research with “the US Fish and Wildlife Service (USFWS), Utah Division of Wildlife Resources, Arizona Gam and Fish, BLM and Natural Heritage Programs (NHP) of Utah and Arizona,” in order to develop a comprehensive list of threatened, endangered and special status species. PAD at A-6. This section fails to include the Tribe among those with whom the State will consult. The work plan should be amended to expressly provide that the State will include the Tribe in consultation and literature research in the process of identifying special status species.

Sections 6.1.1 Wildlife; 6.1.3 Plants: Each of the lists set forth in the draft work plan fails to include the special status species identified by the Tribe. *See* PAD at A-7 to A-8. The work plan should be amended to include the Tribe’s lists of significant plants and animals in the second bullet of each of these subsections.

Section 6.2.1.1.1 Available Data: This section identifies sources of information for wildlife species that may suffer impacts from the construction and operation of the proposed pipeline. *See* PAD at A-8 to A-9. This section should be amended to include the Tribe as a source of information for wildlife data.

Section 6.2.3.1 Available Data: This section identifies sources of information for plants that may suffer impacts from the construction and operation of the proposed pipeline. *See* PAD A-10. This section should be amended to include the Tribe as a source of information for plant data.

Section 6.3.1.1 Wildlife: This section refers to the possible need for acquisition of additional wildlife data if “required after consultation with resource management agencies.” PAD at A-11. The work plan should include the Tribe among the resource management agencies with which it must consult.

Section 6.3.1.3 Plants: This section refers to the possible need for acquisition of additional plant data if “required after consultation with resource management agencies.” PAD at A-11. The work plan should include the Tribe among the resource management agencies with which it must consult. Additionally, the PAD anticipates the need for field surveys after selection of the preferred alternative for the proposed pipeline. *Id.* To the extent that the State intends to conduct field research on the Kaibab Indian Reservation in order to gather additional plant data, the State must obtain permission from the Tribe. The work plan should expressly provide that the State will obtain tribal permission to conduct field research on the Reservation to gather additional plant data.

Section 7 Mitigation: This section anticipates mitigation efforts to “be based on standard construction and operating procedures and measures to avoid or reduce effects.” PAD at A-12. Because of the importance of certain animal and plant species to the Tribe, special mitigation measures may be required, in addition to standard mitigation procedures, and the State should consult with the Tribe to ascertain the extent of and methodology for such special mitigation.

Section 9 Dependency Items from Other Resources: The draft work plan identifies the noise, wetlands and vegetation studies as needed for a complete threatened, endangered and special status species analysis. PAD at A-13. Because of the importance of certain animal and plant species to the Tribe, the work plan should also include the cultural resources analysis in the list of dependency items.

14. Draft Transportation Resources Work Plan

Section 6.1 Data Needed: The draft work plan includes right-of-way data in the data that is needed to analyze impacts on transportation from the construction and operation of the proposed pipeline. PAD at A-3. As discussed herein, *see supra* at 2-4, a reasonable and prudent alternative that the Commission should consider to the proposed pipeline route identified in the PAD is the route following Arizona State Highway 389 as it crosses the Kaibab Indian Reservation. A condition of utilizing that alternative route for the proposed pipeline will be that the State must obtain a right-of-way to cross the Reservation. Accordingly, the work plan should expressly provide that the State will consult with the Tribe regarding rights-of-way issues on the Reservation.

Section 6.2 Data Available and Adequacy: The draft work plan lists various types of information that “is likely available from UDOT data.” PAD at A-3. Because it is possible that the pipeline could utilize the route following Arizona State Highway 389 as it crosses the Kaibab

Indian Reservation, the work plan should be amended to include data from the Arizona Department of Transportation, as well.

Section 7 Procedures for Developing Mitigation: The development of any mitigation measures regarding impacts to transportation on tribal lands must be made in consultation with the Tribe. The fourth sentence of this section, PAD at A-5, should be amended as follows: “The mitigation measures will be based on applicable state, federal and tribal statutes and regulations, past experience and best professional judgment to either satisfy a legal requirement or to satisfy the public interest requirement. In some cases significant impacts may not be able to be mitigated. All reasonably foreseeable mitigation options will be evaluated by the Federal Energy Regulatory Commission, Bureau of Land Management, the Bureau of Indian Affairs, and other responsible federal agencies and factored into the respective decision documents.”

Section 9 Dependency Items from Other Resources: The list of other analyses in this section should include the cultural resources analysis, given the possibility of an alternative pipeline route that would follow Arizona State Highway 389 as it crosses the Reservation.

15. Draft Vegetation Resources Work Plan

The Tribe has provided with these comments its list of significant plants, Attachment 1, as additional “[i]nformation that would help characterize existing environmental conditions and habitats.” SD1 § 5, at 17. The analysis of vegetation resources that may suffer impacts from the construction and operation of the proposed pipeline should include analysis of the impacts to the plants identified by the Tribe as significant.

Section 4.2 Significance Criteria for Each Impact Topic: The PAD refers to “consultation with fish and wildlife agencies” as part of its analysis of vegetation impacts from the proposed pipeline. PAD at A-3. The work plan should expressly include the Tribe among all fish and wildlife agencies with whom the State will consult in the analysis of vegetation resources.

Section 6.1 Data Needed: The PAD anticipates acquiring vegetation data from “aerial photographs of the project area, vegetative community mapping, vegetative community type survey results, soil surveys, surface and groundwater analysis from any reach or stream within the project area that may be influenced by operational changes from the project, extent of surface disturbance from construction and operation activities.” PAD at A-4. To the extent that the State intends to collect these data on the Kaibab Indian Reservation, or take aerial photographs above the Reservation, the State must obtain permission from the Tribe. The work plan should expressly provide that the State will obtain tribal permission to conduct field research and collect data on the Reservation for the analysis of impacts to vegetation resources from the construction and operation of the proposed pipeline.

Section 6.2 Data Available and Adequacy: The list of information sources should expressly include the Tribe’s list of significant plants. Attachment 1 hereto.

Section 6.3.1 Primary: The PAD provides that the State will conduct “[f]ield reconnaissance data to characterize baseline vegetation conditions.” PAD at A-4. To the extent that the State intends to conduct field reconnaissance on the Kaibab Indian Reservation in order to develop a baseline for vegetation conditions, the State must obtain permission from the Tribe. The work plan should expressly provide that the State will obtain tribal permission to conduct field research on the Reservation for the development of a baseline for vegetation conditions.

Section 7 Procedures for Developing Mitigation: The development of any mitigation measures regarding impacts to vegetation conditions on tribal lands must be made in consultation with the Tribe. The fourth sentence of this section, PAD at A-5, should be amended as follows: “The mitigation measures will be based on applicable state, federal and tribal statutes and regulations, past experience and best professional judgment to either satisfy a legal requirement or to satisfy the public interest requirement. In some cases significant impacts may not be able to be mitigated. All reasonably foreseeable mitigation options will be evaluated by the Federal Energy Regulatory Commission, Bureau of Land Management, the Bureau of Indian Affairs, and other responsible federal agencies and factored into the respective decision documents.”

16. Draft Visual Resources Work Plan

Section 3 Impact Topics: As stated herein, *see supra* at 18-19, 25, a visual resource or landscape may constitute a TCP. Thus, the list of impact topics in the draft work plan should include effects on TCPs as a result of landscape modification. Additionally, the fifth bullet point in the list should include the Tribe among the entities that may have scenic or visual management plans.

Section 4.2 Significance Criteria for Each Impact Topic: The significance criteria for impacts to visual resources which constitute TCPs should be any landscape modification which adversely affects the traditional use of a visual resource as a TCP. This significance criteria should be included in the list of bullet points to correspond to the inclusion of visual resources as TCPs in Section 3. Additionally, the reference to other agencies in the fifth bullet point should expressly include the Tribe.

Section 5.1.1 Definition of Baseline Conditions: The PAD provides that “[b]aseline conditions for visual sensitivity levels will be based on existing and planned land use from approved local, state, and federal management plans including residential, parks, trails, recreation, and designated open space areas.” PAD at A-4. With regard to visual resources as TCPs, the State should amend the work plan to expressly include consultation with the Tribe to determine visual sensitivity levels, and the work plan should include the Tribe among those entities that may have visual resource management plans.

Section 6.1 Data Needed: The PAD lists various data that the State will need to analyze impacts to visual resources. PAD at A-6. The work plan should be amended to expressly provide that the State will consult with the Tribe to determine if any visual resource TCPs may be affected by construction and operation of the proposed pipeline.

Section 6.3.1 Primary: The PAD identifies a need to conduct “on-site field work” to document existing visual resource conditions, for simulation photographs, and to conduct post-project visual quality analysis. PAD at A-7. To the extent that the State intends to conduct on-site field work on the Kaibab Indian Reservation for the visual resource impacts analysis, the State must obtain permission from the Tribe. The work plan should expressly provide that the State will obtain tribal permission to conduct on-site field work on the Reservation for the visual resource impacts analysis.

Section 7 Procedures for Developing Mitigation: The development of any mitigation measures regarding impacts to visual resources must be made in consultation with the Tribe. The fourth sentence of this section, PAD at A-5, should be amended as follows: “The mitigation measures will be based on applicable state, federal and tribal statutes and regulations, past experience and best professional judgment to either satisfy a legal requirement or to satisfy the public interest requirement. In some cases significant impacts may not be able to be mitigated. All reasonably foreseeable mitigation options will be evaluated by the Federal Energy Regulatory Commission, Bureau of Land Management, the Bureau of Indian Affairs, and other responsible federal agencies and factored into the respective decision documents.”

Section 9 Dependency Items from Other Resources: Because visual resources may constitute TCPs, the list of dependency items should include the cultural resources analysis.

17. Draft Water Quality Work Plan

Section 3 Impact Topics: The PAD identifies as an impact topic the effects “on groundwater underlying Sand Hollow Reservoir from the storage of Lake Powell water in the reservoir -- mixing with local surface water and existing groundwater.” PAD at A-2. As stated herein, *see supra* at 9, 23-24, the analysis of impacts to groundwater resources should extend to all groundwater in the proposed pipeline vicinity that could be affected by the existence of the pipeline itself, in particular, possible leaking from the pipeline into the substrate surrounding the pipeline. Such impacts to groundwater quality could be significant, and the work plan should expressly include impacts to groundwater quality along the entire proposed pipeline.

Section 4.1 Impact Area: The PAD identifies the water quality impact area as including “[g]roundwater aquifers that would be subject to water deliveries or alterations in flow.” PAD at A-2. The work plan should be amended to provide that all groundwater aquifers traversed by the proposed pipeline constitute impact areas because of the potential for water leaking from the pipeline into the surrounding substrate.

Section 5.1.2 Analysis of Alternatives: The PAD acknowledges that different alternatives for the proposed pipeline route would have different impacts on “intermittent washes,” and, therefore “a relative comparison of construction-related water quality impacts would be made.” PAD at A-3. The scope of this proposed analysis is inadequate. The work plan should also study operation-related water quality impacts, since leaks into the substrate surrounding the pipeline once installed could affect groundwater quality.

Section 6.1 Data Needed: The PAD looks only to “[e]xisting groundwater quality for the shallow groundwater underlying Sand Hollow Reservoir and Cedar City.” PAD at A-4. The work plan should be amended to include all existing groundwater quality data for the entire length of the proposed pipeline.

Section 7 Procedures for Developing Mitigation: The development of any mitigation measures regarding impacts to water quality must be made in consultation with the Tribe. The fourth sentence of this section, PAD at A-5, should be amended as follows: “The mitigation measures will be based on applicable state, federal and tribal statutes and regulations, past experience and best professional judgment to either satisfy a legal requirement or to satisfy the public interest requirement. In some cases significant impacts may not be able to be mitigated. All reasonably foreseeable mitigation options will be evaluated by the Federal Energy Regulatory Commission, Bureau of Land Management, the Bureau of Indian Affairs, and other responsible federal agencies and factored into the respective decision documents.”

18. Draft Wetland, Riparian Areas, and Jurisdictional Waters Resource Work Plan

Section 2 Issues: The PAD identifies as an issue the determination of “which ‘dry’ crossings are ‘jurisdictional waters of the United States’ during intermittent flows given the June 2007 Guidance on the Rapanos Decision.” PAD at A-1. Reliance upon the 2007 Rapanos Guidance is inadequate to protect intermittent washes because under Rapanos, the way most dry washes in Arizona will not be considered jurisdictional waters, and, therefore, they will not qualify for some of the protections of the Federal Water Pollution Control Act, 33 U.S.C. § 1362(7). *See Rapanos v. United States*, 547 U.S. 715, 732-33 (2006). The work plan should be amended to expressly provide that intermittent washes are common in the vicinity of the proposed pipeline, and should be included in the analysis of impacts to wetland and riparian areas. The language contained in **Section 3 Impact Topics** appropriately recognizes the limitations of Rapanos, and should be repeated in Section 2 as follows: “Although riparian areas may not be regulated as wetlands and other jurisdictional waters, they are of interest because they provide important habitat for wildlife, including refuge and forage areas. This is also the case for wetlands that might not be considered jurisdictional waters.” PAD at A-2.

Section 5.1.1 Definition of Baseline Conditions: The PAD anticipates “field reconnaissance . . . to identify and delineate existing wetlands, riparian areas and other jurisdictional waters; characterize wetland hydrology and hydrogeological settings; and determine wetland functions within the impact area.” PAD at A-3. To the extent that the State intends to conduct field reconnaissance on the Kaibab Indian Reservation for the analysis of

impacts to riparian and wetland areas, and jurisdictional waters, the State must obtain permission from the Tribe. The work plan should expressly provide that the State will obtain tribal permission to conduct field reconnaissance on the Reservation for the analysis of impacts to riparian and wetland areas, and jurisdictional waters.

Section 5.1.1.1 Review of Existing Data: The PAD anticipates mapping of riparian and wetland areas, and jurisdictional waters, and the final sentence of this section provides that “[a]reas of missing data will be identified, and information will be supplemented with field surveys where possible.” PAD at A-3. To the extent that the State intends to conduct mapping and field surveys on the Kaibab Indian Reservation for the analysis of impacts to riparian and wetland areas, and jurisdictional waters, the State must obtain permission from the Tribe. The work plan should expressly provide that the State will obtain tribal permission to conduct field surveys and mapping on the Reservation for the analysis of impacts to riparian and wetland areas, and jurisdictional waters.

Referring to the “where possible” qualification at the of the concluding sentence in this section, the State should also use its best efforts to map and survey all possibly affected riparian and wetland areas, and jurisdictional waters, even though such areas may be difficult to access. Certainly, if the pipeline can be constructed through a particular area, it must be available for analysis of impacts to riparian and wetland areas, and jurisdictional waters.

Section 5.1.1.2 Field Surveys: All field surveys on the Kaibab Indian Reservation must be made pursuant to the consent of the Tribe. The work plan should expressly provide that the State will obtain tribal permission to conduct field surveys on the Reservation for the analysis of impacts to riparian and wetland areas, and jurisdictional waters. The definition of “GPS” should be “Global Positioning System” not “Geographic Positioning System.” See PAD at A-3.

The PAD states that “[a]ccess for field surveys may not be possible for the entire study area.” PAD at A-3. The State should also use its best efforts to map and survey all possibly affected riparian and wetland areas, and jurisdictional waters, even though such areas may be difficult to access. Certainly, if the pipeline can be constructed through a particular area, it must be available for analysis of impacts to riparian and wetland areas, and jurisdictional waters.

Section 5.1.1.3 Determination of Jurisdictional Waters: The PAD states that the State will use a 2001 report from US Army Corps of Engineers, and the 2007 Rapanos Guidance document “for determining which streams and drainages may be jurisdictional waters.” PAD at A-3. As stated above, *see supra* at 34, the *Rapanos* analysis may be too limited for purposes of the analysis of impacts to riparian and wetland areas:

The Arizona Department of Environmental Quality has very serious concerns about the potential impact of the 2006 United States Supreme Court plurality decision in the *Rapanos* and *Carabell* cases, 165 L. Ed. 2d 159 (2006), hereinafter, the Decision, on Clean Water Act programs in Arizona. The Decision

could minimize, if not devastate surface water quality protections that have been implemented in Arizona at least since the 1972 Amendments. While the Decision alone is of grave concern, the implementation guidance jointly issued by the Environmental Protection Agency and the Army Corps of Engineers, 72 Fed. Reg. 31824 (June 8, 2007), hereinafter, Guidance, further puts Arizona's waters at great risk.

The *Rapanos* Decision arises out of cases involving jurisdiction over construction activities on or around “four Michigan wetlands, which lie near ditches or man-made drains that eventually empty into traditionally navigable waters . . .” 165 L. Ed. 2d at 164. It is, therefore, from our perspective, highly unfortunate that the Decision and Guidance are expected to have such an enormous impact on the quality of Arizona's arid environment and the health of its citizens. We believe that a different set of facts presented to the Court, for example facts involving a large discharge of pollutants to an ephemeral stream, necessarily would have led to a different conclusion that would have been more protective of the environment.

Written Testimony of Joan Card, Water Quality Division Director, Arizona Department of Environmental Quality, Before the United States Senate Environment and Public Works Committee, Regarding “The Clean Water Restoration Act of 2007” (Apr. 9, 2008), available at <http://epw.senate.gov>. The State should not unduly limit its analysis by relying solely on the 2007 Rapanos Guidance document, since the water resources at issue in *Rapanos* were drastically different from the water resources that could be affected by the construction and operation of the proposed pipeline.

Section 6.1 Data Needed: The PAD lists wetland and soils mapping, aerial photography, vegetation mapping, and roadway culvert location mapping. PAD at A-5. To the extent that the State intends to conduct mapping on and aerial photography over the Kaibab Indian Reservation for the analysis of impacts to riparian and wetland areas, and jurisdictional waters, the State must obtain permission from the Tribe. The work plan should expressly provide that the State will obtain tribal permission to conduct mapping on, and aerial photography over the Reservation for the analysis of impacts to riparian and wetland areas, and jurisdictional waters.

Section 6.2 Data Available and Adequacy: The PAD states that “[v]ideo coverage of portions of the study area filmed during a recent helicopter trip will assist in mapping of wetlands, riparian areas, and jurisdictional waters, assuming a key is developed so that locational reference is possible.” It is not clear whether the State sought or obtained tribal permission to make a video film of the Kaibab Indian Reservation from the air. To the extent that the State made a video film of the Reservation from the air, it should have first sought and then obtained

tribal permission to do so. If the State further intends to conduct aerial surveys over the Kaibab Indian Reservation, whether or not it includes filming, for the analysis of impacts to riparian and wetland areas, and jurisdictional waters, the State must obtain permission from the Tribe. The work plan should expressly provide that the State will obtain tribal permission to conduct aerial surveys over the Reservation, including any filming, for the analysis of impacts to riparian and wetland areas, and jurisdictional waters.

The PAD states precipitation and flow data are available through USGS and NOAA. PAD at A-5. The work plan should also include the precipitation and flow data stations operated by Mohave County. See <http://weather.co.mohave.az.us/perl/DWRReports.pl>.

The Tribe has included a list of significant plants with these comments. Attachment 1 hereto. The State should include that list the vegetation data needed for the analysis of riparian and wetland areas, and jurisdictional waters.

Section 6.3.1 Primary: The PAD provides that the State will rely on reconnaissance-level surveys performed in 2007 and 2008 “to identify and describe wetlands, riparian areas, and jurisdictional waters.” PAD at A-6. To the extent that the State wishes to perform any additional reconnaissance surveys on the Kaibab Indian Reservation, the State must obtain permission from the Tribe. The work plan should expressly provide that the State will obtain tribal permission to conduct reconnaissance surveys on the Reservation, for the analysis of impacts to identify and describe riparian and wetland areas, and jurisdictional waters.

Section 7 Procedures for Developing Mitigation: The development of any mitigation measures regarding impacts to riparian and wetland areas, and to jurisdictional waters must be made in consultation with the Tribe. The fourth sentence of this section, PAD at A-6, should be amended as follows: “The mitigation measures will be based on applicable state, federal and tribal statutes and regulations, past experience and best professional judgment to either satisfy a legal requirement or to satisfy the public interest requirement. In some cases significant impacts may not be able to be mitigated. All reasonably foreseeable mitigation options will be evaluated by the Federal Energy Regulatory Commission, Bureau of Land Management, the Bureau of Indian Affairs, and other responsible federal agencies and factored into the respective decision documents.”

Section 9 Dependency Items from Other Resources: The list of other studies and analyses, PAD at A-7, should include the Tribe’s lists of significant plants and wildlife species, and should also include the cultural resources analysis.

19. Draft Wildlife Resources Work Plan

The Tribe has provided with these comments its list of significant wildlife species, Attachment 2, as additional “[i]nformation that would help characterize existing environmental conditions and habitats.” SD1 § 5, at 17. The analysis of wildlife resources that may suffer impacts from the construction and operation of the proposed pipeline should include analysis of

the impacts to the wildlife species identified by the Tribe as significant.

Section 6.2 Data Available and Adequacy: The list of information sources should expressly include the Tribe's list of significant wildlife species. Attachment 2 hereto.

Section 6.3.1 Primary: The PAD provides that the State will conduct “[f]ield reconnaissance data on wildlife species and habitats along the LPP corridors.” PAD at A-5. To the extent that the State intends to conduct field reconnaissance on the Kaibab Indian Reservation in order to identify wildlife species and habitats, the State must obtain permission from the Tribe. The work plan should expressly provide that the State will obtain tribal permission to conduct field reconnaissance on the Reservation to identify wildlife species and habitats.

Section 7 Procedures for Development of Mitigation: The development of any mitigation measures regarding impacts to wildlife and habitats on tribal lands must be made in consultation with the Tribe. The fourth sentence of this section, PAD at A-5, should be amended as follows: “The mitigation measures will be based on applicable state, federal and tribal statutes and regulations, past experience and best professional judgment to either satisfy a legal requirement or to satisfy the public interest requirement. In some cases significant impacts may not be able to be mitigated. All reasonably foreseeable mitigation options will be evaluated by the Federal Energy Regulatory Commission, Bureau of Land Management, the Bureau of Indian Affairs, and other responsible federal agencies and factored into the respective decision documents.”

ADDITIONAL STUDY

An additional study should be included in the draft work plans. We describe the study below in a general fashion, but expect that the final study plan would be spelled out in detail as are the 19 draft work plans set forth in the PAD.

The State should develop a work plan to identify and provide for the protection of tribally significant areas, such as for the proposed route to the south of the Kaibab Indian Reservation. The work plan should include that any routes crossing Kanab Creek must be fenced and locked on both sides to prevent any unauthorized access into Kanab Creek. The work plan should also provide for consultation between the State and other Indian tribes whose resources and tribally significant areas may be affected by the construction and operation of the proposed pipeline. The work plan should require the State to consult with affected Indian tribes to identify areas that would require full ethnographical analysis, which analyses may or may not be made public according to the direction of the affected Indian tribes.

CONCLUSION

On behalf of the Tribe, we express our appreciation for the opportunity to provide comments on the PAD and SD1. We look forward to continuing to work with the Commission and the State on this significant endeavor.

Dated: July 7, 2008

Respectfully submitted,

/s/ Alice E. Walker

By: _____

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CERTIFICATE OF SERVICE

I hereby certify that pursuant to the eService requirements of FERC, I have forwarded the Acceptance for Filing email from the eFiling service via e-mail to all persons on the Service List for P-12966 for the foregoing *Comments of the Kaibab Band of Paiute Indians Regarding the Pre-application Document Filed by Utah Board of Water Resources, for Lake Powell Hydroelectric Project No. 12966 and Comments of the Kaibab Band of Paiute Indians Regarding the Scoping of Environmental Issues for the Proposed Lake Powell Pipeline Project, Ferc No. 12966, Utah and Arizona*, and further that I have placed true copy in the U.S. Mail, first-class postage prepaid thereon, on this 7th day of July, 2008 to the following:

John Weisheit
Conservation Director
Living Rivers
P.O. Box 466
Moab, UT 84532

/s/ D.A. Vitale

ATTACHMENT 1

**Plants of Cultural Concern to the
Kaibab Band of Paiute Indians of Northern Arizona**

Abutilon incanum	Indian mallow
Acacia greggii	Catclaw acacia
Agave utahensis var. kaibabensis	Kaibab agave
Agave utahensis var. utahensis	Utah agave
Ambrosia dumosa	White bursage
Artemisia bigelovii	Bigelow sagebrush
Artemisia filifolia	Sand sagebrush
Astragalus praelongus	Rattleweed, locoweed
Astragalus tephrodes	
Atriplex canescens	Four-wing saltbrush
Baccharis salicifolia	Seepwillow
Battarea stevinii	Mushroom
Cercis occidentalis var. orbiculata	California redbud
Chilopsis linearis	Desert willow
Chrysothamnus nauseus	Rubber rabbitbrush
Cirsium sp.	Pink thistle
Clematis ligusticifolia	Western virgin's bower, Wild clematis
Datura meteloides (=D. wrightii)	Sacred datura, jimsonweed
Descurainia pinnata	Yellow tansy mustard
Dyssodia pentachaeta (D. thurberi)	Fetid marigold
Echinocereus engelmannii	Engelman hedgehog cactus
Echinocereus triglochidiatus	Claretcup cactus
Encelia farinosa	White brittlebush
Encelia frutescens var. resinosa	Brittlebush
Ephedra nevadensis	Nevada Indian tea
Ephedra torreyana	Torrey Indian tea
Ephedra viridis	Indian tea
Equisetum laevigatum	Smooth scouring rush
Fallugia paradoxa	Apache plume
Ferocactus acanthodes	California barrel cactus
Franxinus pennsylvanica	Velvet ash
Gutierrezia microcephala	Three-leaf snakeweed, Matchweed
Juncus acutus var. sphaerocarpus	Spiny rush
Larrea tridentata	Creosote bush, Greasewood
Lycium andersonii	Wolfberry
Lycium fremontii	Fremont wolfberry
Mentha arvensis	Field mint
Mirabilis multiflora	Colorado four-o'clock
Muhlenbergia asperifolia	Scratch grass
Nasturtium officinale	Watercress
Nicotiana trigonophylla	Desert tobacco
Nolina microcarpa	Beargrass
Oenothera pallida	Pale evening primrose
Opuntia basilaris	Beavertail cactus
Opuntia erinacea	Grizzlybear cactus
Opuntia phaeacantha	Engelmann prickly pear
Oryzopsis hymenoides	Indian ricegrass
Parthenocissus vitacea	Virginia creeper

Phragmites australis
Populus fremontii
Prosopis glandulosa var. torreyana
Rhus trilobata var. simplicifolia
Rhus trilobata var. trilobata
Rumex hymenosepalus
Salix exigua
Salix gooddingii
Salsola iberica
Salvia davidsonii
Salvia dorrii
Sclerocactus parviflorus
Sonchus oleraceus
Sphaeralcea ambigua
Stanleya pinnata
Stephanomeria tenuifolia
Tamarix chinensis
Tessaria sericea
Thamnosma montana
Typha latifolia
Vitis arizonica
Yucca angustissima
Yucca baccata
Yucca whipplei

Giant common reed
Fremont cottonwood
Torrey mesquite
Squaw bush
Squaw bush
Wild rhubarb
Coyote willow
Goodding willow
Russian thistle, thumbleweed
Davidson sage
Purple sage, desert sage
Pineapple cactus, Devil's claw
Common sow-thistle
Desert globemallow
Prince's plume, Indian spinach
Wire lettuce
Tamarisk, salt cedar
Arrowweed
Turpentine broom
Broad-leaf cattail
Canyon grape
Narrowleaf yucca
Banana yucca
Whipple yucca

ATTACHMENT 2

**Wildlife Species of Cultural Concern to the
Kaibab Band of Paiute Indians of Northern Arizona**

Mule Deer
Rabbits
Cotton Tails
Chipmunks
Coyotes
Fox
Badgers
Squirrels (Flying and Non Flying)
Eagles
Mice/Rats
Porcupine
Bats
Crows/Ravens
All Snakes (i.e. Rattle, Blow)
Condors
Skunks
Raccoons

Lizards
Gophers
Owls
Morning Doves
Crickets
Grasshoppers
Bighorn sheep
Buffalo
Wood peckers
Antelope
Bobcats/Lynx
Mountain Lions
Ducks
All Hawk's
Prairie Dogs
Frogs

ATTACHMENT 3

ATTACHMENT 4

US principles and guidelines

Principles and guidelines for social impact assessment in the USA

The Interorganizational Committee on Principles and Guidelines for Social Impact Assessment

The 2003 version of Principles and Guidelines for Social Impact Assessment (SIA) in the USA provides guidance for the conduct of SIA within the context of the US National Environmental Policy Act of 1970. Guidelines are integrated within six principles focusing on: understanding of local and regional settings; dealing with the key elements of the human environment; using appropriate methods and assumptions; providing quality information for decision making; ensuring that environmental justice issues are addressed; and establishing mechanisms for evaluation/monitoring and mitigation. A social impact assessment model is outlined followed by suggested social impact assessment variables. The document concludes with the detailed steps in the SIA process.

Keywords: social impact assessment; principles; guidelines; steps; SIA variables; SIA model

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SINCE PASSAGE OF the US National Environmental Policy Act (NEPA) of 1970, environmental impact assessment has become the key component of environmental planning and decision making in the United States. Agency planners and decision makers have recognized a need for better understanding of the social consequences of policies, plans, programs and projects (PPPPs).

In response to this need, a group of social scientists formed the Interorganizational Committee on Guidelines and Principles for Social Impact Assessment¹ (SIA) in 1992, with the purpose of outlining a set of guidelines and principles that would assist public- and private-sector agencies and organizations to fulfill their obligations under the NEPA, related authorities and agency mandates (IOCGP, 1993). This monograph is the decade update of the original.

In the 2003 version, we continue to define social impact assessment in terms of efforts to assess, appraise or estimate, in advance, the social consequences that are likely to follow from proposed actions. These include: specific government or private projects, such as construction of buildings, siting power generation facilities, large transportation projects, managing natural resources, fish and wildlife; and preserving or leasing large tracts of land and the adoption of new policies and resulting plans

Box 1. Social impacts

By social impacts we mean the consequences to human populations of any public or private actions that alter the ways in which people live, work, play, relate to one another, organize to meet their needs and generally cope as members of society. The term also includes cultural impacts involving changes to the norms, values, and beliefs that guide and rationalize their cognition of themselves and their society.

and programs. The actions and their consequences are considered particularly in the context of the NEPA (P.L. 91-190, 42 U.S.C. 4371 *et seq*) and state laws and regulations that reflect NEPA.

The central requirement of NEPA is that before any agency of the federal government may take major actions potentially significantly affecting the quality of the human environment, that agency must first prepare an environmental assessment (EA) or environmental impact statement (EIS) requiring the integrated use of the social sciences. Similar requirements for state agencies are found in US States that have laws and/or regulations that reflect NEPA.

The social science components of EISs are given various labels, including social analyses, socio-economic assessments, community impact assessments, social impact assessments, or simply SIAs. The term social impact assessment first appeared when the Department of the Interior was preparing the EIS for the Trans-Alaska pipeline in the early 1970s.

Within federal agencies that have developed SIA guidelines there is variation on how the social component of NEPA is to be implemented. Prior to publishing the 1993 *Guidelines and Principles for SIA* there had not been a systematic, inter-disciplinary statement from the social science community as to what should be the content of an SIA. This version provides discretionary guidance on how to work through the SIA process in the context of the NEPA Statute and the Council on Environmental Quality (1986) NEPA implementing regulations.

The organizations and individuals in the Interorganizational Committee represent the relevant social science disciplines and design arts as well as social scientists who have done SIA in federal agencies, for the private sector, and for international donor agencies. In addition, most of the individuals do social impact assessment research and teach workshops and courses on the topic.

This document provides systematic and interdisciplinary principles and guidelines to assist government agencies and private-sector interests in using SIA to make better decisions under NEPA, related mandates and administrative requirements. The guidelines and standards provided are also designed for communities and individuals likely to be affected by proposed actions, in order that they might conduct independent assessments or evaluate the adequacy of an agency SIA.

Within these pages we cannot cover over three decades of research on social effects, much less every contingency that may occur in the course of implementing an approved action. However, we do provide a broad overview, focusing less on methodological details and more on the principles and guidelines for the preparation of technically and substantively adequate SIA within reasonable time and resource constraints.

How does SIA help in the decision process?

An SIA is focused on human environment problems and their resolution. Government policies, plans, programs, and projects are developed in response to identified or anticipated opportunities or problems. An impact assessment, whether social, economic or environmental, is a tool to help make decisions. Properly done, SIAs help the affected community or communities and the agencies plan for social change resulting from a proposed action or

bring forward information leading to reasons not to carry out the proposal.

The SIA process also brings local knowledge to the decision process. Those who live in the affected area are knowledgeable about their human environment. With the use of local knowledge, SIA saves both time and money as affected populations are identified and involved in the process. It also ensures that key stakeholders are identified and consulted during decision making. Thus, SIA can help improve both the scoping and public involvement processes, which are key requirements under NEPA.

In summary, as a decision tool, SIA provides information to agencies and communities about social and cultural factors that need to be considered in any decision; provides a mechanism for incorporating local knowledge and values into the decision; and can help a decision-maker identify the most socially beneficial course of action for local, regional, and national interests.

What is new in the 2003 version?

We have benefited from almost ten years of comments and wide use of the *Guidelines and Principles (G&P) for Social Impact Assessment*. Over 3,000 copies of the 1993 version have been distributed worldwide and been reprinted in professional journals and SIA books. In addition, most federal agencies have used the *G&P for SIA* as rationale to include social impact assessment during their planning and assessment process.

The new version expands the focus away from projects to include policies, plans, and programs. These we refer to as the four Ps (PPPPs). By policies we mean general approach to such issues as immigration, hazard and contaminated waste disposal, the relocation of households, global warming and the maintenance of food stocks. By plans we mean such issues as land-use designations, growth management or the general plan used to implement a policy. Programs are the outcomes of plans; examples might be striped bass management or a program to return wild salmon to Pacific Northwest Rivers. A project would be the building of irrigation facilities to enhance agricultural development or the expansion of an airport. We use examples at all four levels throughout this document.

The next section outlines the principles that guide the assessment as well as any good social science analysis. This is followed by guidelines for doing social impact assessments. Next there is a basic model for SIA, followed by an outline of the steps in doing an SIA. We conclude with a list of applicable publications and websites. Details regarding federal mandates, a glossary of terms and a list of acronyms may be found at <www.nmfs.noaa.gov/sfa/reports.htm> and <www.socialimpactassessment.net>.

Principles for social impact assessment

The following principles guide the concepts, process, and methods for doing social impact assessment. These principles are based on expert judgment of professional sociologists, anthropologists, social psychologists, geographers, land-use planners, economists, natural resource social scientists and landscape architects. These principles are meant to ensure sound scientific inquiry and the best practices established in the field over the last three decades. Figure 1 summarizes the principles and related guidelines.

Achieve extensive understanding of local and regional settings to be affected by the action or policy

- Identify and describe interested and affected stakeholders and other parties
- Develop baseline information (profiles) of local and regional communities

Focus on key elements of the human environment

- Identify the key social and cultural issues related to the action or policy from the community and stakeholder profiles
- Select social and cultural variables which measure and explain the issues identified

Identify research methods, assumptions and significance

- Research methods should be holistic in scope, i.e. they should describe all aspects of social impacts related to the action or policy
- Research methods must describe cumulative social effects related to the action or policy
- Ensure that methods and assumptions are transparent and replicable
- Select forms and levels of data collection analysis which are appropriate to the significance of the action or policy

Provide quality information for use in decision-making

- Collect qualitative and quantitative social, economic and cultural data sufficient to usefully describe and analyze all reasonable alternatives to the action
- Ensure that the data collection methods and forms of analysis are scientifically robust
- Ensure the integrity of collected data

Ensure that any environmental justice issues are fully described and analyzed

- Ensure that research methods, data, and analysis consider underrepresented and vulnerable stakeholders and populations
- Consider the distribution all impacts (whether social, economic, air quality, noise, or potential health effects) to different social groups (including ethnic/racial and income groups)

Undertake evaluation/monitoring and mitigation

- Establish mechanisms for evaluation and monitoring of the action, policy or program
- Where mitigation of impacts may be required, provide a mechanism and plan for assuring effective mitigation takes place
- Identify data gaps and plan for filling these data needs

Figure 1. Principles and guidelines for social impact assessment

Principle 1: Achieve extensive understanding of local and regional populations and settings to be affected by the proposed action, program or policy. The use of SIA provides the best source of scientific knowledge necessary to understand the social and cultural consequences of planned and unplanned actions.

Principle 2: Focus on the key elements of the human environment related to the proposed action, program or policy. Application of the SIA process will ensure that the social and cultural concerns, values, consequences (costs) and benefits for human communities and populations will be included in the decision-making process.

Principle 3: The SIA is based upon sound and replicable scientific research concepts and methods. The SIA process subscribes to the ethic that good science (scholarship) will lead to informed and better decisions. To ensure the best and most appropriate methods are used, SIA practitioners should use trained and qualified social scientists. Protecting the confidentiality of study participants is a guiding tenet.

Principle 4: Provide quality information for use in decision-making. The 'good science' ethic requires the collection of quality data representative of all issues and perspectives, and holistic and transparent analyses of information and alternatives, clearly presented. To ensure the quality and completeness of information and analysis, an SIA should be peer-reviewed after scoping and prior to release.

Principle 5: Ensure that any environmental justice issues are fully described and analyzed. SIA practitioners must identify disadvantaged, at risk and minority populations (for instance, race, national origin, gender, handicap/disability and religion) affected by the proposed

action, program, or policy and incorporate information about these populations in the SIA descriptions and analyses.

Principle 6: Undertake project, program or policy monitoring and evaluation and propose mitigation measures if needed. Use of the research design and databases established for the assessment of impacts should be the basis for monitoring and evaluating the actual impacts of the chosen alternative.

Guidelines for social impact assessment

In general, there is consensus, in federal and state mandates and among social impact practitioners, on: the types of impact that need to be considered; and on the need for

There is general consensus on: the types of impact to be considered; the need to include discussion of the proposed action; the components of the human environment where the impacts may be felt; likely social impacts; and the possible steps to enhance positive impacts and mitigate negative ones

the SIA to include a discussion of the proposed action. There is also general consensus on: the components of the human environment where the impacts are likely to be felt; likely social impacts; and the steps that could be taken to enhance positive impacts and to mitigate any negative ones.

Briefly, the consensus on types of impact to be considered would include social, cultural, demographic, economic, social-psychological, and sometimes political impacts. The discussion of the proposed action would describe, for example, any policy, plan, program, project or proposed facility. The consensus on the components of the human environment is that they would include descriptions and analyses of affected neighborhoods, communities and regions. The likely impacts are generally defined as the difference between the likely futures of the affected human environment with versus without the proposed action. There is also a general consensus that preferred alternatives should, when possible, avoid negative impacts and costs by appropriate modifications, efforts to minimize negative impacts and the provision of compensation for any that cannot be avoided or ameliorated.

As SIA textbooks point out (Burdge, 1999; Branch, *et al.*, 1984; Taylor *et al.*, 1995) and as suggested by the Council on Environmental Quality (CEQ) *Regulations for Implementing the Procedural Provisions of NEPA* (CEQ, 1986), the SIA practitioner should focus on the more significant impacts, should use appropriate measures and information, should provide qualitative and quantitative indicators where feasible and appropriate, and should present the social impacts in a manner that can be understood by decision-makers and affected communities alike.

The following guidelines are derived from the principles in the previous section. They are benchmarks for conducting an SIA. The principles are restated for clarity and flow of the discussion.

Principle 1. Achieve extensive understanding of local and regional settings to be affected by the action or program or policy

Guideline 1a. Identify and describe interested and affected stakeholders and other parties. Because different social groups have a 'stake' in the outcomes associated with public- and private-sector actions, the assessor must be proactive in identifying these social groups (stakeholders) and understand their interests and values. Through public involvement, the SIA practitioner begins to understand the local context and identify and involve all potentially interested and affected groups at the very early stages of the assessment process.

Public involvement can facilitate the SIA process by identifying potentially affected groups, and by providing an opportunity to hear the 'meaning' of social and biophysical impacts. Public involvement is crucial in recruiting participants for the planning process who are truly representative of affected groups. However, involvement must be truly interactive with communication flowing both ways between the proponent agency and affected parties.

Guideline 1b. Develop baseline information (profiles) of local and regional communities. The community profile is a 'map' of the existing conditions and past trends associated with the human environment in which the proposed action is to take place. The terms community profiles and the baseline study are here used interchangeably. Baseline

simply means a time line and associated social, cultural and community information from which to start the assessment.

For example, with construction projects, a geographical area is identified along with the distribution of special populations at risk. For policies, plans, programs, or other special assessments (for instance, technology, health, natural resources management), the relevant human environment may be a dispersed collection of interested and affected parties, pressure groups, organizations, and institutions. Typically, community and regional profiles include population and other demographic information, economic and employment data, descriptions of social and cultural institutions and their relationships to community and regional life, and an accounting of both social and economic capital and their distribution in the community and region.

Principle 2. Focus on key elements of the human environment

Guideline 2a. Identify the key social and cultural issues related to the action or policy from the community and stakeholder profiles. NEPA regulations require public involvement in order to identify key issues for focusing the assessment of impacts (and eliminating or minimizing less important issues). SIA practitioners must contend with stringent time and resource constraints that affect the scope of the assessment and what can be achieved in the time available. Given such constraints, a central question emerges: "If you cannot cover the social universe, on what should you focus?" The answer is, first, the most significant impacts in order of priority, and secondly, all significant impacts for all interested and affected parties must be identified early using a variety of rapid appraisal or public involvement techniques.

Impacts identified by the public: Clearly, impacts identified as important by the public must be given high priority. Many of these will surface during the NEPA scoping process; however, as noted earlier, some groups low in power that may be adversely affected are rarely early participants in the planning process. It is essential that broadly based public involvement occur throughout the SIA process, but additional means (for instance, key informants, participant observation and, if funds and time are plentiful, surveys of the general population) often must be used to ensure that the most significant public concerns are addressed.

Impacts identified by SIA practitioners: SIA practitioners have the expertise to help prioritize impact issues using a review of the SIA literature, analysis of similar settings, and professional experience. These professionals will suggest issues unrecognized or unarticulated by either the general public or the agencies.

Provide feedback on social impacts: Identify issues that could be solved with changes to the proposed action or alternatives early in the process. Findings from the early SIA stages should feed back to the project planners and thus into the design of the proposed action to minimize adverse impacts and enhance positive impacts. The assessment process, therefore, should be designed as a dynamic one involving cycles of design, assessment, redesign, and reassessment.

This process should be conducted before the agency becomes strongly committed to some form of action. Therefore, it may need to be carried out informally with agency planners prior to publication of the assessment for public comment. Public input early in the process appears to be very influential.

Guideline 2b. Select social and cultural variables that measure and explain the issues identified. SIA variables point to measurable change in human populations, communities, and social relationships resulting from a proposed action. Social impact assessment variables can be grouped under the general headings of: population change; community and institutional structures; political and social resources; community and family changes; and community resources.

While the social profiles of communities and regions will contain as much information as possible on a wide variety of social variables, the SIA must focus on the action proposed and the human environment involved. Not all SIA variables (issues) identified by the public and SIA practitioners will have sufficient information to satisfactorily measure and explain potential changes and issues identified. Often it will be necessary to triangulate impacts using a variety of variables assessed with different measures. Social and cultural assessment variables are outlined in the next section under "A basic model for social impact assessment".

Principle 3. Identify methods and assumptions and define significance

Guideline 3a. Research methods should be holistic in scope, that is, they should describe all aspects of social impacts related to the proposed action. The methods and assumptions used in the SIA should be summarized in the draft environmental impact statement or environmental assessment to allow decision makers and affected publics to evaluate the assessment process (as required by NEPA).

Practitioners will need to consult the CEQ Regulations. Definitions and examples of effects (primary, secondary and cumulative) are provided in 40 CFR 1508.7 and 1508.8 (CEQ, 1986). In these regulations "effects" and "impacts" are used synonymously. The CEQ Regulations are clear that an EIS has to focus on impacts found to be "significant" and Section 1508.27 defines significance in terms of "context" and "intensity" considerations. Context includes such considerations as society-as-a-whole, affected regions, affected interests and locality (for instance, when considering site-specific projects, local impacts assume greater importance than those of a regional nature).

The probable social impacts will be formulated in terms of predicted conditions without the actions (baseline condition), the predicted conditions with the actions and the predicted impacts that can be interpreted as the difference between the future with and without the proposed action. The empirical procedure is based on the social impact assessment model outlined below (Figure 2 in the next section).

Investigation of the probable impacts involves five major sources of information: detailed data from the sponsoring agency on the proposed action; the record of previous experience with similar actions as represented in the literature including other EIAs/SIAs; census and vital

SIA should use easily understood methods and assumptions that can be duplicated in similar settings: information must be collected using accepted social science methods and assumptions, and must be subjected to independent, formal peer-review

statistics; documents and secondary sources; and field research, including informant interviews, public hearings, group meetings and, if funds are available, surveys of the potentially impacted population. The investigation of the social impacts identified during scoping is the most important component.

Guideline 3b. Research methods must describe secondary and cumulative social effects related to the action or policy. Cumulative impacts are those that result from the incremental impacts of an action added to other past, present, and reasonably foreseeable future actions regardless of which agency or person undertakes them (see CEQ, 1986, 40 CFR 1508.7). A community's residential and retail growth and pressures on government services following the locating of a highway interchange are examples of secondary impacts. Cumulative impacts would add historical events in the vicinity of the interchange to the mix.

While they are more difficult to estimate precisely than primary impacts, it is very important that secondary and cumulative impacts be clearly identified in the SIA. CEQ (1997b) has prepared a *Cumulative Effects Handbook* which provides guidance on the subject and is available on-line on NEPA net (<<http://ceq.eh.doe.gov/nepa/nepanet.htm>>).

Guideline 3c. Ensure that methods and assumptions are transparent and replicable. Good scientific and research practice requires that any SIA should use methods and assumptions that are easily understood and can be duplicated in other similar settings. The Data Quality Act (2001) [P.L. 106-554, §515] reinforces this practice for any influential information and data, such as that used in environmental assessments or SIAs for federal actions, and guidance has been issued by the Office of Management and Budget [*Federal Register* 67(36), pages 8451-8460].

Information must be collected using accepted social science methods and assumptions, and must be subjected to an independent, formal peer-review before it can be used. Where data are to be kept confidential, the researcher must document the research design, methods and means of analysis and these must also be peer-reviewed to ensure that the methods and assumptions are transparent and replicable.

Guideline 3d. Select forms and levels of data collection and analysis that is appropriate to the significance of the

action or policy. Published scientific literature and primary and secondary data from the affected area are the three sources of data for all SIAs. Balance among the three may vary according to the type of the proposed action, as well as specific considerations noted below, but all three will be relevant. The SIA practitioner must be sure, for federal projects, that any information and data used meet the requirements for the Data Quality Act (2001).

Published scientific literature The SIA should draw on existing, previously reviewed and screened social science literature that summarizes existing knowledge of impacts based on accepted scientific standards. Examples include journals, books and documents available from similar projects. A list of easy to obtain and recommended sources is provided in the bibliography. Existing documentation is needed in identifying which social impacts are likely to accompany the proposed action. When it is possible to draw potentially competing interpretations from the existing literature, the SIA should provide a careful discussion of relative methodological merits of available studies.

As pointed out under "A basic model for social impact assessment" in the next section, the best guidance for future expectations is past experience. Therefore, consideration of existing literature should err on the side of inclusiveness, not on exclusion of potentially relevant cases. Caution is needed when the SIA presents a conclusion that is contradicted by the published literature; in such cases, the reasons for the differences should be explicitly addressed. For example, anthropological data on rural, and ethnically and racially diverse communities is best for understanding the cultural context of the impacted community.

Secondary data sources The best sources are the Bureau of Census, and vital statistics, geographical data, and routine data collected by state and other federal agencies. Examples of other secondary data sources include: agency caseload statistics (for instance, from mental health centers, social service agencies and other human service providers, law enforcement agencies, and insurance and financial regulatory agencies); published and unpublished historical materials (often available in local libraries, historical societies, and school district files); compilations produced by service organizations (such as chambers of commerce, the better business bureaus, tourist offices, social organizations, and church groups); and the files of local newspapers.

These secondary sources can be used in conjunction with key-informant interviews, to allow for verification of informant memories and of potential sources of bias in the available documentary record.

Primary data from the affected area Survey research, oral histories and informant interviews are examples of primary data that may be collected to verify other findings. If a social assessor concludes that community impacts will differ from those documented elsewhere, this decision must be based on the collection and analysis of primary data that specifically show why such alternative conclusions are more credible. Local residents are an important source of expertise, both about local social and economic conditions and the broader range of likely impacts from a proposed action. If a community has a particularly unique history and structure, it may react to a development event or policy

change differently than other communities. Following a basic tenet of social science research the practitioner must protect the confidentiality of study participants.

Principle 4. Provide quality information for use in decision-making

Guideline 4a. Collect qualitative and quantitative social, economic and cultural data sufficient to usefully describe and analyze all reasonable alternatives to the action. Within the boundaries of good scientific and research practice, it is more important to identify likely social impacts than to precisely quantify the more obvious social impacts. All assessors strive to identify and quantify significant impacts, thereby providing decision makers and the affected public with information that is both as complete and as accurate as possible.

In cases where this desirable goal cannot be met, it is better to be roughly correct on important issues than to be precisely correct on unimportant ones. Within the context of the social impact statement, there are two important differences between impact identification (what are the general categories or types of impact that are likely to occur) and impact evaluation (precisely how 'significant' are those impacts likely to be?).

Research has identified social impacts resulting from many types of action, and the experienced SIA practitioner can identify plausible and potentially significant impacts relatively quickly and efficiently. On the other hand, an accurate evaluation is a resource-intensive process and deals with the question of significance. Research on the decision-making process has found that experts and policy makers were particularly prone toward premature closure.

Given a partial listing of potential impacts, experts tended to assume they have been given a complete list and, in most cases, fail to recognize the potential impacts that have been omitted from consideration. While empirical estimates can appear to be quite precise, demographic and economic projections have been shown by empirical analysis to have an average absolute error in the range of 50–100%.

We support the use of qualitative and quantitative measures of social impact assessment variables, but realize that the evaluation of significance has an important judgment component. The OMB (2001) Guidance to the Data Quality Act [*Federal Register* 67(36), pages 8451–8460] and the subsequent guidance issued by the federal agency sponsoring the action will assist the SIA practitioner in setting appropriate levels of significance for data analysis.

It is important to be on the 'conservative' side in reporting likely social impacts. The purpose of the EIS is to provide an even-handed treatment of the potential for impacts, offering a scientifically reasonable assessment of this potential in advance of the proposed action. It is a very different matter from providing solid proof of impacts after all the evidence is in!

All EISs and SIAs are by their nature anticipatory. Therefore, questions about the 'proof' of impacts cannot be answered with true confidence in advance of the actions in question. Accordingly, if the evidence for a potential social and economic impact is not definitive in either direction, the 'conservative' conclusion is that the impact cannot be ruled out with confidence, and not that the impact 'is not proven.' In cases of doubt, in terms of statistical terminology, the proper interpretation is the

Type II test for power/sensitivity, and not the Type I test for the strength of consistency of an association.

Guideline 4b. Ensure that the data collection methods and forms of analysis are scientifically robust. The fewer reliable data there are on the human environment effects of projects or policy change, the more important it is to have the SIA work performed by competent social scientists. There are two possible exceptions to the rule-of-thumb that SIA practitioners be trained social scientists.

In some cases, proposed actions are considered by reasonable persons (specifically those within the agency with demonstrated social science and SIA expertise and those in the potentially effected community) to be likely to create only negligible or nonexistent impacts on the human environment. In these situations, a finding of no significant impact (FONSI) would be issued by the agency and an environmental assessment (EA) would be conducted instead of an EIS.

In other cases a significant body of empirical findings is available from the social science literature that can be applied relatively directly to the proposed action in question, and should be referenced, summarized, and cited by the person(s) preparing the SIA section of the EIS.

Thus, the rigor of SIA data collection and analysis requires the use of professional social science expertise and inclusion of the relevant literature. Any other course would be imprudent for both the agency and affected groups and communities.

Guideline 4c. Ensure the integrity of collected data. Both good scientific and research practice and the provisions of the 2000 Data Quality Act ensure the integrity of collected data. Trained social scientists employing social science methods will provide the best results and the most legally defensible. The courts have demonstrated deference to agency scientists in exercising their expert judgment.

To ensure integrity of the SIA process, the need for professionally qualified, competent people with a social science background cannot be overemphasized. Protection of the confidentiality of collected data is also key to integrity. However, the assessor must remember his/her responsibilities under the Freedom of Information Act (FOIA) in planning the assessment design.

An experienced SIA practitioner will 'know the data,' and be familiar and conversant with existing social science evidence pertaining to impacts that have occurred elsewhere and therefore are relevant to the impact area in question. This breadth of knowledge and experience can prove invaluable in identifying important impacts that may not surface as public concerns or as mandatory considerations found in agency NEPA compliance procedures. A social scientist will be able to identify the full range of important impacts and select the appropriate measurement procedures.

Having a social scientist as part of the EIA/SIA team will also reduce the probability that an important social impact could go unrecognized. In assessing social impacts, if the evidence for a potential type of impact is not definitive in either direction, then the appropriate conservative conclusion is that it cannot be ruled out with confidence. In addition, it is important that the SIA practitioner be conversant with the technical and biological perspectives brought to bear on the project, and the cultural context of the agency in which he/she works.

The SIA practitioner should identify disadvantaged, at risk and minority populations, describe and measure their social and cultural characteristics, and incorporate this information into the SIA and the baseline data sets

Guideline 4d. Gaps in data or information. SIA practitioners may be required to produce an assessment in the absence of relevant or even necessary data. The three elements of this guideline are intended to supplement the guidance already provided by CEQ (1986) 40 CFR 1502.22, as amended by the removal of the requirement for a "worse-case analysis" (*Federal Register* 51, No. 80, Friday, April 25, 1986, pages 15818-626):

"When an agency is evaluating reasonably foreseeable significant adverse effects on the human environment in an environmental impact statement and there is incomplete or unavailable information, the agency shall always make clear that such information is lacking. (a) If the incomplete information ... is essential to a reasoned choice among alternatives and (b) the overall costs of obtaining it are not exorbitant, the agency shall include the information in the environmental impact statement."

Only if the relevant information "cannot be obtained because the overall costs of obtaining it are exorbitant or the means to obtain it are not known," is the EIS permitted a gap in relevant information. In such cases, moreover, the EIS needs to include:

"(1) a statement of relevance of the incomplete or unavailable information ... (2) a summary of existing credible scientific evidence [that] is relevant ..., and (3) the agency's evaluation of such impacts based upon theoretical approaches or research methods generally accepted in the scientific community." (CEQ, 1986, 40 CFR 1502.22)

Principle 5. Ensure that any environmental justice issues are fully described and analyzed

Guideline 5a. Ensure that research methods, data, and analysis consider underrepresented and vulnerable stakeholders and populations. The Executive Order 12898 on Environmental Justice (Executive Office of the President of the United States, 1994) requires federal agencies to consider the impacts of any action on disadvantaged, at risk and minority populations. In the course of the SIA, the practitioner should take care to identify these special populations, describe and measure their social and cultural characteristics, and incorporate this information into the SIA and the baseline data sets. The assessor should be

alert for different social meanings of environmental impacts as interpreted through the values of these different groups.

Examples abound in the literature of special populations that could be considered poor, sensitive, vulnerable and/or low-powered. The elderly have been identified as a category of persons sensitive to involuntary displacement and relocation. Children have suffered learning problems resulting from long-term exposure to various forms of transportation noise (for instance, vehicular traffic, rapid rail). Minority and low-income persons in the 1960s were disproportionately targeted as optimal sites for road construction, waste disposal sites and similar undesirable land uses.

Persons with some form of disability or impairment constitute another sensitive category with important needs. Farmers often are affected by transmission lines, water projects, or housing and commercial developments that take large amounts of land. Commercial fishers are often impacted by coastal and harbor development that restricts fishing opportunities or reduces available dock space.

Women have different financial, health and social concerns and may be vulnerable to changes in community focus. For example, a change from a textile manufacturing base (employing women) to a power plant (employing men) could lead to significant unemployment. The reverse could happen if the local economy changes from logging to tourism. The special impacts on these populations should be highlighted in an SIA, not lost in undifferentiated summary statistics.

Guideline 5b. Clearly identify who will win and who will lose, and emphasize vulnerability of under-represented and disadvantaged populations. Impacts should be specified for differentially affected populations and not just measured in the aggregate. Identification of all groups likely to be affected by a proposed action is central to the concept of impact equity. There will always be 'winners' and 'losers' (benefits and burdens) as the result of a decision to construct a dam, build a highway or close an area to timber harvesting. However, no category of persons, particularly those that might be considered more sensitive or vulnerable as a result of age, gender, ethnicity, race, occupation or other factors, should have to bear the brunt of adverse social and biophysical impacts.

While most proposals are not zero-sum situations and there may be varying benefits for almost all involved, the SIA practitioner has a special duty to identify those whose adverse impacts might be lost in the aggregate of benefits. The assessor must be attentive to those groups that lack political efficacy; such 'low-powered' groups often are not heard and therefore do not have their interests properly represented.

Principle 6. Undertake evaluation/monitoring and mitigation

Guideline 6a. Establish mechanisms for evaluation/monitoring of the proposed action that involve agency and stakeholders and/or communities. Crucial to the SIA process is the monitoring of significant social impact variables and the mitigation programs that have been put in place. As indicated earlier, the identification of impacts might depend on the specification of contingencies. For example, if the in-migration of workers during the

construction phase is a work force of 1,000, special and additional housing will be needed, but if it is only 50 and the community is large, present accommodation may be sufficient.

Identifying and monitoring infrastructure needs is a key element of the local planning process. Two important points are: monitoring and mitigation should be a joint agency (proponent)-community responsibility; and both activities should occur on an iterative basis throughout the project life cycle (Figure 3).

Depending on the nature of the proposal and time horizons for completion/implementation, the focus of long-term responsibility for monitoring and mitigation is not easily defined. Research shows that trust and expertise are key factors in choosing the balance between proponent and community monitoring activities. Few federal agencies have the resources to continue monitoring for an extended period and therefore local communities should be provided resources to assume a portion of the monitoring and mitigation responsibilities.

Guideline 6b. Where mitigation of impacts is required, provide analyses and assessments of alternatives. A social impact assessment not only forecasts impacts, it should identify means to mitigate adverse impacts. Mitigation includes: avoiding the impact by not taking or modifying an action; minimizing, rectifying, or reducing the impacts through redesign or operation of the project or policy; or compensating for irreversible impacts by providing substitute facilities, resources, or opportunities (see CEQ, 1986, 40 CFR 1508.20; and under "Steps in the social impact assessment process").

Ideally, mitigation measures are built into the selected alternative, but it is appropriate to identify them even if they are not immediately adopted or if they would be the responsibility of another organization or government unit. Also, if an agency prepares an EA and identifies potentially significant social impacts, then that agency will be required to identify and implement mitigation measures to reduce the impact(s) below the threshold of significance if they wish to implement the action based on a FONSI rather than go on to prepare an EIS.

Guideline 6c. Identify data gaps and assess data needs. As the SIA progresses, data gaps and related methodological problems will emerge. These should be fully documented and incorporated with the findings of the SIA. For example, in natural resource management agencies, federal actions and programs will be changed and modified over time necessitating development of a new SIA. Knowledge of data gaps and data needs permit agencies to collect new information and to build baseline data sets.

A basic model for social impact assessment

Link between EIA and SIA

Impacts on human environment both resemble and differ from biophysical impacts.

- Social impacts can vary in desirability, ranging from the positive to the adverse.
- They also vary in scale — the question of whether a facility will create 50 or 1,000 jobs, for example, or

whether it will have the potential to spill 50 or 1,000 gallons of toxic waste.

- Another consideration involves the extent or duration of impacts in time and space. Like biophysical impacts, some social impacts can be of short duration, while others can last a lifetime; and some communities 'return to normal' quite quickly once a source of disruption is removed, while others do not.
- Social impacts can also vary in intensity or severity, a dimension that may be defined differently in a different context, just as the same 'objective' biophysical impact (for instance, a predicted loss of 75 sea otters) might have an almost imperceptible effect on populations in one location (for example, off the coast of Alaska) while amounting to a significant fraction of the remaining population in another location (off the coast of California).
- Similarly, there are differences in the degree to which social impacts are likely to be cumulative, at one extreme, or mutually counterbalancing, at the other.

In addition, it is important to consider the social equity or distributions of impacts on different populations. Just as the biological sections of EISs devote particular attention to species having special vulnerabilities, the social and economic sections of EISs must devote particular attention to the impacts on vulnerable and disadvantaged segments of the human population. Examples include: the poor, the elderly, adolescents, or unemployed women; members of minority and/or other groups that are racially, ethnically, and/or culturally distinctive; or occupational, cultural, political or value-based groups for whom a given community, region, or use of some component of the biophysical environment is particularly important.

In addition to the types of disturbance that can affect other species, humans are affected by changes in the distinctly human environment, including those associated with the phenomenon referred to as the 'social construction of reality'. Social constructions are not mere perceptions or emotions, to be distinguished from reality; rather, how we view a social situation determines how we behave. Furthermore, social constructions of reality are characteristic of all social groups, including the agencies that are attempting to implement change as well as the communities that are affected.

In the case of proposed actions that involve controversy (attitudes and perceptions toward a proposed policy change are one of the variables that must be considered in determining the significance of impacts (CEQ, 1986, 40 CFR 1508.27(4)), participants are often tempted to dismiss the concerns of others as being merely imagined or perceived. There are two important reasons not to omit

We use a comparative SIA method to study the course of events in a location where planned environmental change has occurred and to extrapolate from that analysis what is likely to happen in another location where a similar action is proposed

such concerns from SIAs and EISs. First, the positions taken by all sides in a given controversy are likely to be shaped by (differing) perceptions of the proposed action. The decision to accept one set of perceptions while excluding another may not be scientifically defensible. Second, if a proponent asserts that their critics are emotional or misinformed, for example, they are guaranteed to raise the level of hostility between themselves and community members and will stand in the way of a successful resolution of the problem.

In summary, some of the most important aspects of social impacts involve not, for example, the physical relocation of human populations, but the meanings or significance attached to these changes.

Social impact assessment model

To predict the probable impact of development, we seek to understand the behavior of individuals and communities affected by agency developments or policy changes. We use a comparative SIA method to study the course of events in a location where planned environmental change has occurred and to extrapolate from that analysis what is likely to happen in another location where a similar action is proposed. As shown in Figure 2, if we wish to know the probable effects of a proposed power plant in location (b), one of the best places to start is to assess the effects of a power plant that is operational in location (a). Example SIA variables to access impacts are shown later in this section.

It is almost impossible to catalogue all dimensions of social impacts because change has a way of creating other changes. A freeway extension that facilitates residential growth can lead to increased traffic and air pollution, creation of new schools, retail centers and other services, and the decline of downtown commercial centers.

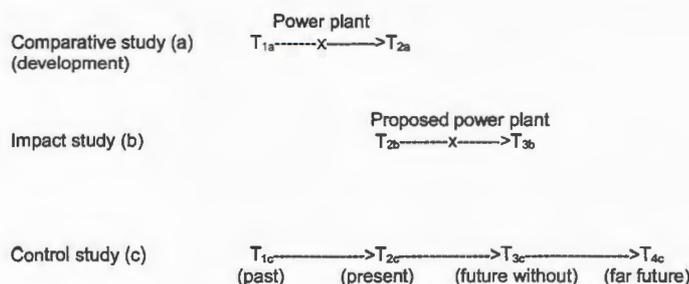


Figure 2. Basic social impact assessment model

In Table 1 (later in this section) we have identified some basic social dimensions that can be measured; they reflect fundamental and important characteristics of a community. Studied over time, these characteristics give us insight as to how social structure will be altered when change occurs. Faced with a proposal to implement a new ski area, for example, the community and the agency proposing the change can profit from the experience of other communities that have developed ski areas and thereby gain a reasonably accurate expectation of how the project will affect their community.

Forecasted impacts are the difference in the human environment between a future with the proposed action and a future without (see Figure 2). Since we cannot see the future, we look at other communities that have experienced similar policies or projects in the past. Thus, the social impact assessment model is comparative — the social impacts in one community may be projected to a location where a similar action is proposed. The model in Figure 2 also permits a follow-up SIA of the impacted community to assess what the actual impact has been, so that the fit between forecasts and outcome can be matched (the difference between T_{1a} and T_{2a}).

One way to capture the dynamic quality of something as far-reaching and complex as social impacts is to metaphorically take a series of snapshots over time as implementation of the agreed action unfolds and fill in what happened in between. Ideally, information about the community or geographic area of study is available both before and after the event to help in measurement. Social impacts then become the changes taking place between the two measurement points (T_{2b} and T_{3b}). The social assessor then attempts to forecast the change associated with the proposed action based on the research and information accumulated from comparative studies of similar impact settings (T_{1a} and T_{2a}).

Based on the directives outlined in NEPA and the CEQ regulations, we also need to identify irreversible and undesirable social effects of development before they occur to make recommendations for mitigation. As we point out in a later section, the appropriate federal agency in cooperation with state and local governments and the local community bears responsibility for coordinating mitigation efforts. The SIA model also allows us to address the issue of alternative plans and alternative impacts of a proposed action. Moreover, because social impacts can be measured and understood, recommendations for mitigating actions on the part of the agencies can be made. In the next section we outline a procedure for mitigating potentially adverse impacts.

Another strength of the comparative SIA model is that, with appropriate data sources (those that can be collected frequently, such as, land transfer records, population and

employment numbers), it allows for a dynamic interpretation of events and can provide monitoring of short-term impacts. Moreover, this kind of frequent monitoring provides a continual source of evaluation or check on the direction of forecasts made about social impacts.

Stages in policy/project development

All projects go through a series of steps or stages, starting with initial and detailed planning (to include impact assessment), followed by implementation and/or construction carrying through to operation and maintenance (Figure 3). At some point the implemented action might be abandoned or decommissioned, or official policy could change. Social impacts will be different for each stage.

Scoping of issues prior to analysis may lead the assessor to focus only on one stage. For example, one community might be concerned about public reaction resulting from a proposal to site a hazardous waste disposal facility, another with the construction aspects of reservoirs, while a third might be faced with a change in the designation of adjacent public land from timber production to wilderness use. The specific stage is an important factor in determining impacts; and not all social (or biophysical) impacts will occur at each stage. Figure 3 illustrates the stages in federal agency planning and implementation.

Stage 1. General planning/policy development and preliminary impact assessment Social impacts actually begin the day the proposed action is announced and can be measured from that point. We often assume that no impacts will take place until stage 3 (construction/implementation begins) through dirt-moving operations or, for example, restrictions on water use. However, real, measurable, and often significant impacts on the human environment begin to take place as soon as there are changes in social or economic conditions following announcement. From the time of the earliest announcement of a pending policy change or rumor about a project, both hopes and hostilities can begin to mount; speculators can lock up potentially important properties, politicians can maneuver for position, and interest groups can form or redirect their energies. These changes occur by merely introducing new information into a community or region.

Depending upon the proposed action, activities in this stage include: creation of a public involvement program; system planning; preliminary project concept; attentive action design; notification of both public officials and the general public and gathering their input; relevant 'outside' agency contacts and gathering their input; preliminary 'fatal flaw' impact assessment; preliminary work toward acquisition of property or right-of-way permits; licensing;

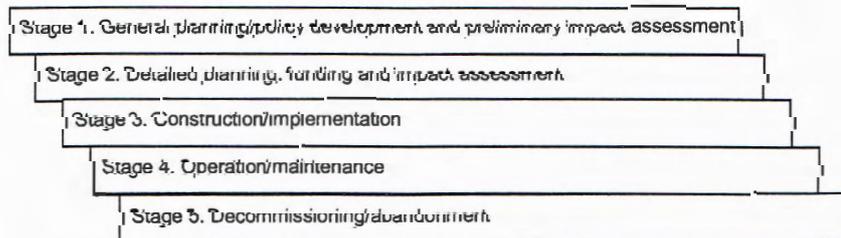


Figure 3. Stages in project/policy development

and groundwork for any necessary changes in laws, regulations, or procedures. Basic policy decisions, such as the mix of problem solutions and prioritizations of implementation, are determined. These policy decisions determine the benefits and burdens of, and to, individuals and communities that are immediately and ultimately impacted.

Stage 2. Detailed planning, funding and impact assessment Once the local land-use plan is in place, reality and fiscal aspects come into play. Prioritized implementation activities with designated funding sources guide these more detailed activities. As funds and funding sources are recognized, more detailed project planning takes place, including the assessment of social impacts. Examples include detailed project design, revision, continuing public input, licensing, evaluation of alternatives and their varied impacts, and, ultimately, the decision to proceed with the proposed action or an alternative.

Stage 3. Construction/implementation The construction/implementation stage, begins when a decision is made to proceed, a permit is issued or a law or regulation takes effect. For typical construction projects, this involves clearing land, building access roads, developing utilities, and so on. Acquisition of needed right of way, displacement and relocation of people, if necessary, occur during this phase.

Depending on the scale of the project, the buildup of a migrant construction work force also may occur. If significant in-migration occurs, the new residents may create a strain on community infrastructure, and social stresses as a result of changing patterns of social interaction. Communities may have difficulties in responding to the increased demands on school, health facilities, housing and other social services. Further stresses may be created by resentments between newcomers and long-term residents, by sudden increases in the prices for housing and local services, and even by increased uncertainty about the future.

Stage 4. Operation/maintenance The operation/maintenance stage occurs after the construction is complete and/or the policy is fully operational. In many cases, this stage will require fewer workers than the construction/implementation phase, and, particularly if operations continue at a relatively stable level for an extended period of time, the effects during this stage can often be the most beneficial of any stage. Communities seeking industrial development will often focus on this stage, for example, because of the long-term financial benefits that may follow. It is also during this stage that the communities can adapt to new social and economic conditions, accommodation can take place and the expectations of positive benefits, such as stable population, quality infrastructure and employment opportunities, can be realized.

In natural resource management, the operational stage will see shifts in activities by stakeholders. Where resource allocation is insufficient to support previous operations, consolidation will occur or stakeholders will switch to alternative activities. In farming, grazing or forestry, land may be sold or leased, thus reducing the number of operators. Alternatively, small stakeholders may stay in business but supplement their income with second jobs, or, in the case of commercial fishing, switch to other fisheries.

The projects and policy decisions that require, and benefit from, SIA range from prison and plant sitings to highway, reservoir, power plant construction, and managing old growth forests to maintain a biologically diverse region

Stage 5. Abandonment/decommissioning Abandonment/decommissioning begins when the proposal is made that the project or policy and associated activity will cease at some time in the future. As in the planning stage, the social effects of decommissioning begin when the intent to close down is announced and the community or region must again adapt, but this time to the loss of the project or an adjustment to a policy change.

Sometimes this means the loss of the economic base as a business closes its doors. At other times, the disruption to the local community may be lessened or at least altered if one type of worker is replaced by another. Such a case was the 1994 closing of the Hanford Facility in Washington State, where nuclear production facilities closed down, but employment actually increased as environmental cleanup specialists were hired to help deal with the contamination at the facility.

In other cases, disruption may be exacerbated if the community is not only losing its present economic base, but has lost the capacity to return to a former economic base. Morgan City, Louisiana which had been the self-proclaimed "shrimp capital of the world" in the 1950s is a good example of this. During the 1960s and 1970s, employment in this community shifted to offshore oil development. When oil prices collapsed in the 1980s, the community found it could not return to the shrimp industry because shrimp-processing facilities had closed down, and most of the shrimp boats had been allowed to decay or their crews had left the area.

Policy and project decision settings

The projects and policy decisions that require, and benefit from, social impact assessment range from prison and plant sitings to highway, reservoir, power plant construction, and managing old growth forests to maintain a biologically diverse region. Accordingly, the location of proposed actions may range from isolated wilderness areas to urban neighborhoods, each with special characteristics that can affect social impacts.

Social impacts (and economic and biophysical changes) will vary depending on the type of activity and existing social structure. The following examples of policies, plans, programs and projects (PPPPs) were taken from the *Digest of Environmental Impact Statements*, which is a cumulative listing of all the environmental impact statements done by federal agencies in the USA.

- mineral extraction, including surface and underground mining, and new oil and gas drilling;

- federal health-care policies to include social security, Medicare and Medicaid;
- hazardous and sanitary waste sites, including the construction and operation of disposal sites for a variety of hazardous and sanitary wastes (also included are facilities that burn or otherwise destroy chemical and toxic wastes);
- power plants including both nuclear and fossil-fuel electrical generating facilities and associated developments;
- reservoirs, including all water impoundments for flood control, hydro power, conservation, recreation, and cooling lakes and diversion structures;
- industrial plants (manufacturing facilities built and operated by the private sector, for instance, refineries, steel mills and assembly lines);
- land-use designations, such as, zoning activity, comprehensive growth-management plans, and the reclassification of land use (timber production to wilderness);
- living natural resource management plans, including fisheries, endangered species, bird and wildlife, and range and forest;
- military and governmental installations, including base closures and openings;
- schools; both public and private, primary, secondary and university;
- transportation facilities, including airports, streets, terminals;
- linear developments, including subways, railroads, highways, power lines, aqueducts, bike paths, bridges, pipelines, sewers, fences, walls and barrier channels, green belts, waterways;
- trade facilities, including businesses, shopping centers;
- designation of sacred sites;
- parks, preserves, refuges, cemeteries, recreation areas;
- housing facilities, including apartments, office buildings, hospitals.

Identifying social impact assessment variables

SIA variables point to measurable change in human population, communities, and social relationships resulting from a proposed action. Based on a half century of research on local community change, rural industrialization, reservoir and highway development, natural resource development, and social change in general, we outline a list of social variables under the general headings of: population change; community and institutional structures; political and social resources; community and family changes; and community resources (Table 1).

- Population change refers to present population and expected change; ethnic and racial diversity, influxes and outflows of temporary residents, and the arrival of seasonal or leisure residents.
- Community and institutional structures mean the size, structure, breadth and level of organization of local government, and linkages to the larger political systems. Also included are historical and present patterns of employment and industrial diversification, the size and level of activity of voluntary associations and interest groups, religious organizations and, importantly, how these institutions relate to each other.
- Political and social resources refer to the distribution of power authority, the identification of interested and affected parties, and the leadership capability and capacity within the community or region.

- Community and family changes refer to factors that influence the daily life of individuals and families, including family living and work arrangements, attitudes, perceptions, family characteristics and friendship networks. These changes range from attitudes toward the policy to an alteration in family and friendship networks and perceptions of risk, health, and safety.
- Community resources include patterns of natural resource and land use, and the availability of housing and community services to include health, police and fire protection and sanitation facilities. A key to the continuity and survival of human communities is their historical, archaeological and cultural resources. Under this collection of variables we examine possible changes for indigenous populations and religious sub-cultures.

At this point in the discussion of an SIA model we have demonstrated a conceptual procedure for both examining and accumulating information about social impacts. We have also outlined a matrix that demonstrates that social impacts will be different depending on the project/policy type and the stage of development. The next step in the development of the model is to suggest the social impact variables for stages in project development given different project/policy types and settings.

SIA variables, project/policy stage and setting

The five stages of project/policy development affect the social processes that produce changes in characteristics of the community or region. The SIA specialists must construct a matrix to direct their investigation of potentially significant social impacts. Sample matrices are shown in Tables 1 and 2. For each project/policy stage, the assessor should identify potential impacts on each SIA variable identified in the matrix. This approach ensures that no critical areas are overlooked.

We emphasize that Table 1 does not represent all social impact assessment variables that may be of interest for any project. It is presented to illustrate the issues that represent the beginning of such a task. The task for the assessor is to spell out the magnitude and significance of impacts for each cell like those identified in the illustrations.

Table 2 provides an abbreviated illustration of how the SIA variables (as suggested in Table 1) might be applied within the context of both the setting type and the stage of the SIA process. The first example is the siting of a hazardous waste facility. Perceptions about problems of public health and safety, and concerns as to how different agencies work together could emerge during the planning stages. If a decision is made to go ahead, construction would be accompanied by an influx of temporary workers. In the case of the new highway, displacement and relocation concerns will surface during planning and safety concerns during the operational stage. These analytic procedures would be repeated for each of the SIA variables for each stage in the assessment process. The procedures for accomplishing this task are outlined in the next section on steps in the SIA process.

Steps in the social impact assessment process

The social impact assessment itself may contain the ten steps outlined in Figure 4. These steps are logically

Table 1. Matrix relating project stage to social impact assessment variables

Social impact assessment variables ^a	General planning, policy development preliminary assessment	Detailed planning, funding & impact assessment	Construction implement	Operation/ maintenance	Decommission/ abandonment
Population change					
Population size density & change					
Ethnic & racial comp. & distribution					
Relocating people					
Influx & outflows of temporaries					
Presence of seasonal residents					
Community & institutional structures					
Voluntary associations					
Interest group activity					
Size & structure of local government					
Historical experience with change					
Employment/income characteristics					
Employment equity of disadvantaged groups					
Local/regional/national linkages					
Industrial/commercial diversity					
Presence of planning & zoning					
Political & social resources					
Distribution of power & authority					
Conflict newcomers & old-timers					
Identification of stakeholders					
Interested and affected parties					
Leadership capability & characteristics					
Interorganizational cooperation					
Community and family changes					
Perceptions of risk, health & safety					
Displacement/relocation concerns					
Trust in political & social institutions					
Residential stability					
Density of acquaintanceships					
Attitudes toward proposed action					
Family & friendship networks					
Concerns about social well-being					
Community resources					
Change in community infrastructure					
Indigenous populations					
Changing land use patterns					
Effects on cultural, historical, sacred & archaeological resources					

Note: ^a These variables are suggestive and illustrative and are intended to provide a beginning point for the social assessor. Taylor *et al* (1995) (and the US Forest Service Manual and Handbook (1982)) use the categories of: population change; life style; attitudes, beliefs and values; and social organization. Burdge (1999) uses population impacts; community and institutional arrangements; communities in transition; individual and family-level impacts; and community infrastructure needs. Branch *et al* (1984) use the categories of social impact assessment variables in their social organization model: direct project inputs; community resources; community social organization; and indicators of individual and family well-being. The US Bureau of Reclamation (BOR) (2002) uses the seven categories of population; community composition; community infrastructure needs; community attitudes and institutional structure; community identity and attitudes toward water; individuals and families; and social justice and Native American responsibilities.

sequential, but often overlap in practice. This sequence is patterned after the EIA steps as listed in the 1986 *CEQ Guidelines*. The corresponding NEPA steps are included within Figure 4.

Public involvement

This means developing an effective public involvement plan to involve all potentially affected public groups. It requires identifying and working with all potentially affected individuals and groups starting at the very beginning

of planning for the proposed action and alternatives. Groups affected by proposed actions include: those who live nearby; those who will hear, smell or see a development; those who are forced to relocate because of a project; and those who have an interest in the proposal but may not live in proximity.

Others affected include those who might normally use the land on which the project is located (such as farmers who have to plow around a transmission line). Also there are those affected by the influx of seasonal residents because they may have to pay higher prices for food or rent,

Table 2. Social impact assessment variables, by policy/project setting (type) and stage in SIA process

Policy/ project settings	Stage in SIA process				
	General planning, policy develop preliminary assessment	Detailed planning funding & impact assessment	Construct/ implement	Operation/ maintenance	Decommission/ abandonment
Hazardous waste site	Inter-organization cooperation	Perceptions of risk, health & safety	Influx of temporary workers	Trust in political/social institutions	Alteration in size of local government
Highway project	Formation of attitudes toward the project	Displacement & relocation concerns	Residential stability	Perceptions of risk, health & safety	Community infrastructure
Forest Service to Park Service Management	Attitude toward proposed action	Interested & affected parties	Trust in political & social institutions	Influx of recreation users	Re-distribution of power authority

or pay higher taxes to cover the cost of expanded community services.

The practitioner must be aware of literacy levels, language barriers, and cultural differences in preparing the public involvement program. Potentially affected public groups also may be identified through spatially oriented census data, literature review, networking with agency contact lists or referrals from field staff. Once identified, representatives from each interested and affected party should be systematically consulted to determine potential areas of concern/impact and ways each representative might be involved during initial planning and the final decision. A full range of public involvement techniques

should be used to collect information about public response to a proposed action. In this first step, the pieces are put in place for a public involvement program which will last through implementation and become the foundation for monitoring. Most agencies will have a public involvement unit for support.

Describe proposed action

This involves describing the proposed action or policy and, if appropriate, reasonable alternatives. During this step, the proposed action is described in enough detail to begin to identify the data requirements needed from the

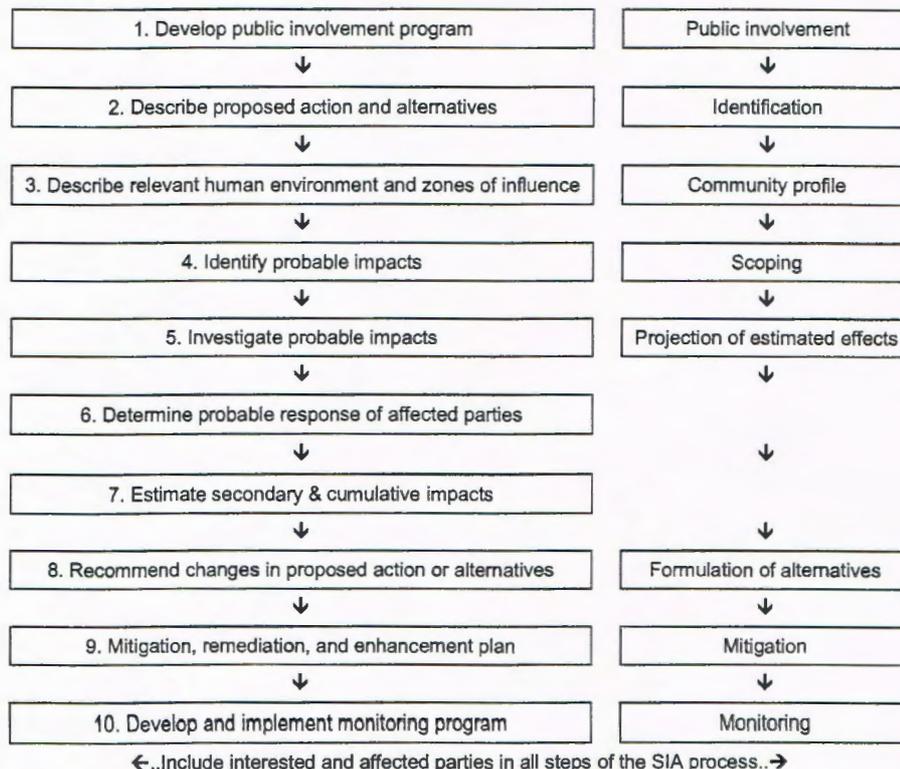


Figure 4. Steps in the social impact assessment process

proponent to do a preliminary assessment. For example, in new road construction, the assessor would need to know location; land requirements; need for ancillary facilities (transmission lines, sewer and water lines); construction schedule; size of the work force (construction and operation, by year or month); facility size/shape; need for local work force; and institutional resources.

The list of social impact assessment variables shown in Table 1 is used as a guide for obtaining data from project proponents. Sometimes the description of the proposed alternatives may not include all the information needed for an SIA. Another problem is the provision of summary numbers when disaggregated numbers are needed. For example, the social assessor may be given numbers for the total peak work force of a construction project, when information is needed on local and non-local commuting workers as well as those hired from outside the area.

Community profiles (baseline study)

This stage involves describing the relevant human environment/zones of influence and baseline conditions. The community profile is the existing conditions and past trends associated with the human environment in which the proposed action is to take place. The terms community profiles and the baseline study are here used interchangeably. Baseline simply means a geographical and time line to start the assessment. For example, with construction projects, a geographical area is identified along with the distribution of special populations at risk; but for policies, plans, programs, or other special assessments (such as, technology, health), the relevant human environment may be a more dispersed collection of interested and affected parties, pressure groups, organizations, and institutions.

The example dimensions for investigation of the human environment listed below apply for construction projects and geographically located programs and policies (the social impact assessment variables listed in Table 1 provide additional guidance for the community profile):

- Relationships with the biophysical environment, including: ecological setting; aspects of the environment seen as resources/problems; areas having economic, recreational, esthetic and/or symbolic significance to indigenous populations; residential arrangements and living patterns, including relationships among communities/social organizations; and if available, attitudes toward environmental and patterns of natural resource use.
- Historical background, including: initial settlement and subsequent shifts in population; key developmental events and eras, including experience with boom–bust effects and a discussion of broader employment trends; past or ongoing community controversies, particularly those involving technology and/or the environment; and other experiences likely to affect the level or distribution of the impacts of, and/or local receptivity to, the proposed action.
- Political and social resources, includes: who has the authority and resources to address issues and problems; the capacities of relevant systems or institutions (for instance, the school system); friendship networks and patterns of cleavage or cooperation among potentially affected groups; levels of residential stability; distributions of socio-demographic characteristics such as age

and ethnicity; presence of distinctive or potentially vulnerable groups (for instance, low income); and linkages among geopolitical units (federal, state, county, local and inter-local).

- Culture, attitudes and social-psychological conditions, including: attitudes toward the proposed action; trust in political and social institutions; perceptions of risks; relevant psychological coping and adjustment capacity; cultural cognition of society and environment; assessed quality of life; and important values that may be relevant to, or affected by, the proposed action.
- Economic and financial background (to the extent not listed in other parts of the community profile) include: historical numbers of persons employed by financial sectors and type of firm; payroll size and the amounts of business and sales receipts and taxes by sector and type of firm.
- Population characteristics including: the demographics of relevant groups (including all significant stakeholders and underrepresented and disadvantaged populations and groups); major industrial and agricultural activities; the labor markets to include available labor by occupational category by race and nation origin; unemployment and underemployment numbers; present population and expected changes; availability of housing, infrastructure and services; size, gender and age structure of households; and seasonal migration patterns to include both leisure and labor migrants.

The level of effort devoted to the description of the human environment should be commensurate with the size, cost and degree of expected impacts of the proposed action. At a minimum, the existing literature on comparable or analogous impact events, key local informants and readily available documents such as government reports should be consulted. On-site investigations are a must. If available, always use the findings from previous field studies, general surveys, rapid appraisals and mini-surveys.

Scoping

After obtaining a technical understanding of the proposed action, identify the full range of probable social impacts that will be addressed based on discussion/interviews with sponsoring agency and potentially affected populations. During initial scoping, the SIA practitioner selects the SIA variables for further assessment situations. Consideration needs to be devoted to both the impacts perceived by the sponsoring agency and those perceived by

After obtaining a technical understanding of the proposed action, identify the full range of probable social impacts that will be addressed based on discussion/interviews with sponsoring agency and potentially affected populations

interested and affected publics and key stakeholders. At this point in the process, available methods are reviews of the existing social science literature and public scoping based on appropriate public participation techniques. Ideally, all affected publics contribute to the selection of SIA variables for assessment, either through a participatory process or by review and comment on the decisions made by responsible officials and the interdisciplinary SIA-EIA team.

Relevant criteria for selecting 'significant' social impacts comparable to those spelled out in the CEQ (1986) Regulations (40 CFR 1508.27), include the:

- probability of the event occurring;
- number of people and/or indigenous populations that will be affected;
- duration of impact (long term vs short term);
- value of benefits and/or costs (benefits and burdens) to impacted groups (intensity of impacts);
- extent to which identified social impacts are reversible or can be mitigated;
- likelihood that an identified impact will lead to secondary or cumulative impacts;
- relevance for present and future policy decisions;
- uncertainty over possible effects;
- presence or absence of controversy over the issue.

Investigate probable impacts

This involves investigating the probable social impacts, which will be formulated in terms of predicted conditions without the actions (baseline condition), the predicted conditions with the actions and the predicted impacts, which can be interpreted as the differences between the future with and without the proposed action. The empirical procedure is based on the social impact assessment model outlined (see Figure 2).

Investigation of the probable impacts involves five major sources of information: detailed data from the sponsoring agency on the proposed action; record of previous experience with similar actions as represented in reference literature to include other EIAs-SIAs; census and vital statistics; documents and secondary sources; and field research, including informant interviews, hearings, group meetings and, if funds are available, surveys of the general population. Population 'pockets' within the area need to be over-sampled if there is reason to believe there will be disproportionate impacts. The investigation of the social impacts identified during scoping is the most important component.

Methods of projecting the future lie at the heart of the SIA process and much of the process of analysis is tied up in this endeavor. Care must be taken to ensure the quality and transparency of methods and data and to provide for critical review (compare with Data Quality Act, 2001). Most of the methods to analyze social impacts fall into the following categories:

- Comparative method: The SIA model (Figure 2) uses the comparative research approach. The present is compared to the future with the proposed action. Based on past research and experiences in similar cases, determination of significance is made based on the comparative data presented.
- Straight-line trend projections means taking an existing trend and simply projecting the same rate of change

into the future; we assume that what happened in the past is likely to happen in the future. For example, recreation visitations increase each year at about the same rate they did in the past.

- Population multiplier methods means each specified increase in population implies designated multiples of other variables, such as jobs, housing units and other infrastructure needs.
- Statistical significance means calculations to determine probabilistic differences between with and without the proposed action. A social assessor could employ comparative statistical methods to determine statistical significance for appropriate SIA variables.
- Scenarios refers to logical-imaginings based on construction of hypothetical futures through a process of mentally modeling the assumptions about the SIA variables in question.
- Expert judgment: persons familiar with the study area could be asked to present scenarios and assess the significant implications for the proposed action.
- Calculation of 'futures forgone': a number of methods have been formulated to determine what options would be given up irrevocably as a result of a plan or project, for instance, river recreation and agricultural land use after the building of a dam. The wetlands mitigation strategy is such an example.

The record of previous experience is very important to the estimation of future impacts. It is largely contained in case reports and studies and the experience of other assessors. Variations in the patterns of impacts and responses in these cases also should be registered. Expert knowledge is used to enlarge this knowledge base and to judge how the proposed action is likely to deviate from typical patterns. The documents and secondary sources provide information on existing conditions, plans, reported attitudes and opinions, and contribute to the present assessment. The field research involves interviews with persons who have different interests at stake, different perspectives, and different kinds of expertise.

Wherever feasible, it should also involve a search through a wide range of documentation that is often available in forms ranging from official statistics to the minutes of organizations, the meetings and letters to the editor. The opinions of the various publics toward the proposed action should also be part of the record. If time and funding permits, surveys of the general population are valuable to assess public opinion, because spokespersons do not always represent the views of the rank and file. Public meetings should be used to identify possible impacts but not to collect data for projections.

Determine responses to impacts

This step involves determining the significance of the identified social impacts. Projecting is both a very important and a very difficult assessment task, but the responses of affected parties frequently will have significant higher-order impacts. After the direct impacts have been estimated, the assessor must next estimate how the affected publics will respond in attitude and actions. Their attitudes before implementation predict their attitudes afterwards, though there is increasing data that show fears are often overblown and that expected (often promised) benefits fail to meet expectations.

The actions of affected publics are to be estimated

using comparable cases and interviews with those affected about what they expect to do. So much depends on whether local leadership arises and the objectives and strategies of these leaders, that this assessment step often is highly uncertain, but at least policy makers will be notified of potential problems and unexpected results.

This step is also important because adoption and responses of affected publics can have consequences of their own, whether for an agency that proposes an action (as when political protest stalls a proposal) or for the affected communities, whether in the short term or in the longer term (as in the previously noted example of Morgan City, Louisiana).

Patterns in previous assessments guide this analysis, and expert judgment and field investigations are used to determine whether the study case is following the typical patterns or how it is developing uniquely. Being able to show both the proponent and potentially affected publics that significant impacts are being incorporated into the assessment is critical to the success of this step.

Secondary and cumulative impacts

This involves estimating subsequent impacts and cumulative impacts. Secondary or indirect impacts are those caused by the primary or direct impacts; they often occur later both in time and geographic distance than primary impacts. Cumulative impacts are those resulting from the incremental impacts of an action added to other past, present, and reasonably foreseeable future actions regardless of which agency or person undertakes them (see CEQ, 1986, 40 CFR 1508.7).

A community's residential and retail growth and pressures on government services following the siting of a highway interchange are examples of secondary impacts. Cumulative impacts would be the sum of the proposed action plus past and present activity in the same area. While they are more difficult to estimate precisely than primary impacts, it is very important that secondary and cumulative impacts be clearly identified in the SIA.

Alternatives to the proposed action

This involves recommending new or changed alternatives and estimate or project their consequences. Each alternative or recommended change in the proposed action should be assessed separately. The methods used in step five (estimation) apply here but usually on a more modest scale. More innovative alternatives and changes probably should be presented on an experimental basis. Expert judgment and scenarios are helpful in developing alternatives or variations. The number of iterations here will depend upon time, funding and the magnitude of the proposed action.

Mitigation

A social impact assessment not only forecasts impacts, it should identify means to mitigate adverse impacts. Mitigation includes avoiding the impact by not taking or modifying an action; minimizing, rectifying, or reducing the impacts through redesign or operation of the project or policy; or compensating for irreversible impacts by providing substitute policies, facilities, resources, or opportunities (see CEQ, 1986, 40 CFR 1508.20).

Ideally, mitigation measures are built into the selected

By articulating the impacts that will occur and making efforts to avoid or minimize the adverse consequences, or compensating the residents or the community for the losses, benefits may be enhanced and avoidable conflicts can be managed or minimized

alternative, but it is appropriate to identify mitigation measures even if they are not immediately adopted or if they would be the responsibility of another organization or government unit. (Federal legislation that mandates mitigation measures may be found at <www.nmfs.noaa.gov/sfa/reports.htm>.)

We suggest a sequencing strategy to manage social impacts modeled after one used with wetland protection and other natural resource issues. During the first sequence, the wetlands managers strive to avoid all adverse impacts if possible. In the second sequence, managers strive to minimize any adverse impacts that cannot be avoided. During the third sequence, managers compensate for adverse impacts. Compensation for the loss of a wetland, for example, could be to acquire a different wetland, enhance a degraded site, or create a new wetland. The amount of compensation can be based on the type of wetland or resources damaged/lost, the severity of the impact and location of the wetland mitigation site.

The first two steps of sequencing — avoiding and minimizing — can apply to the project itself or to the host community or the impacted region. For example, the project may be revised to avoid or minimize adverse social impacts (for instance, by extending the construction period to minimize in-migration), or the community may be able to take steps to attenuate, if not avoid, any adverse effects. Application of the sequencing concept for the mitigation of adverse social impacts requires that the assessor first rank the level of importance of each significant SIA variable determined during the estimated effects SIA step.

The first step in evaluating potential mitigation for each social impact variable is to determine whether the proponent or sponsoring agency could modify the proposed action to avoid adverse social impacts. For example, a road that displaces families could be re-routed.

Next is to identify ways to minimize adverse social impacts. For example, most citizens are uncomfortable with the idea of locating a waste facility or prison near their community. Attitudes (particularly negative ones) formed about an undesirable land use, cannot be eliminated, but might be moderated if the public has complete information about the proposal and is included in the decision-making process or is provided with sufficient legal and structural arrangements that assure safe operation.

There are at least three benefits of identifying irresolvable social impacts that may result from a proposed action. The first is identifying methods of compensating individuals and the community for unavoidable impacts. The second occurs when the community may identify

ways of enhancing other quality of life variables as compensation for adverse effects. The third happens when the identification of the irresolvable social impacts makes community leaders and project proponents more sensitive to the feelings of community residents. By articulating the impacts that will occur and making efforts to avoid or minimize the adverse consequences, or compensating the residents or the community for the losses, benefits may be enhanced and avoidable conflicts can be managed or minimized.

Monitoring

A monitoring program must be developed that is capable of identifying both deviations from the proposed action and unanticipated social impacts (Magnuson-Stevens Act [compare with §302(g) and §302 (h)]). Furthermore, the monitoring plan should track project/program development and compare real impacts with projected impacts, and should spell out the nature and extent of additional steps to be taken when unanticipated impacts or impacts larger than the projections occur.

Monitoring programs are necessary for projects and programs that lack detailed information or have high variability or uncertainty. It is important to recognize, in advance, the potential for 'surprises' that may lie completely outside the range of options considered during the assessment process. If monitoring procedures cannot be adequately implemented then mitigation agreements should work to the benefit of all parties involved in a decision-making process and should allow an approved action to move forward.

It is generally only at this stage that the community or affected groups have the influence to 'get it in writing.' For example, a monitoring program, with subsequent provision for mitigation, was negotiated between the US Department of Energy and the State of Texas to build the Superconducting Super Collider Laboratory. The process allowed for the payment of approximately US\$800,000 to local jurisdictions to monitor the impacts of the construction activity.

Conclusion

Social impact assessment is predicated on the notion that decision makers should understand the consequences of their decisions before they act and that the people affected will not only be apprised of the effects, but have the opportunity to participate in designing their future. The social environment is different than the biophysical environment because it reacts in anticipation of change, but can adapt in reasoned ways to changing circumstances if it is a participant in the planning process. In addition, persons in different social settings interpret social change in different ways and react in different ways.

Perhaps because of this complexity, or the political consequences of making explicit the social consequences of policies, plans, programs and projects, social impact assessment has not been well integrated into US federal agency decision making. The principles and guidelines presented herein are designed to assist agencies and other institutions in implementing SIA within the context of the NEPA process. If a well-prepared SIA is integrated into the decision-making process, better decisions will result.

Notes

1. *Members of the original team. For more administrative details contact Rabel J Burdge at burdge@cc.wvu.edu or go to www.nmfs.gov/sfa/reports.htm.

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Project Appraisal (now combined with *Impact Assessment*).

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Society and Natural Resources, <www.tandf.co.uk>; <sample-snr@tandfpa.com>.

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Social impact assessment related websites

International Association for Impact Assessment was organized in 1980 to bring together researchers, government employees,

practitioners, and users of all types of impact assessment, <www.iaia.org>.

International Association for Public Participation (IAP2) was established in 1990 to serve as a focal point for networking about public involvement activity and techniques. The journal is *Interact: the Journal of Public Participation*, published semi-annually, <www.pin.org/iap2.htm>.

National Association of Environmental Professionals was founded in 1975 for persons who work on a variety of environmental planning issues. They publish *The Environmental Professional*, <www.naep.org>.

US Council on Environmental Quality has NEPA guidance, regulations, scoping procedures, and links to other US Federal agencies environmental programs, <<http://ceq.eh.doe.gov/nepa/nepanet.htm>>.

US Department of Transportation web site on Community Impact Assessment is <www.ciatrans.net>. The Florida DOT/FHWA CIA website is <www.ciatrans.net>.

Canadian Environmental Assessment Agency has excellent links to sites in other organizations and countries, or write to CD-ROM Library, 200 Sacre Couer Blvd. Hull, QC K1A 0H3, <http://www.ceaa.gc.ca/index_e.htm> also <<http://founder.library.ualberta.ca/FTP/EN/Laws/Chap/C/>>.

Australian EIA Network has information on environmental impact assessment (EIA) and its process within Australia, <<http://www.environment.gov.au>>.

New Zealand Ministry of the Environment has a range of information on recent publications, <<http://www.mfe.govt.nz>>.

<www.socialimpactassessment.net>, web site on social impact assessment maintained by Rabel Burdge. Includes updated SIA bibliographies, recent publications, workshops, training guides, job opportunities, conferences, ordering SIA publications, course outlines, consultation opportunities and links to other sites.

Homepage of the EIA Centre at the University of Manchester, United Kingdom. See the Leaflet Series, Index of Leaflets <<http://www.art.man.ac.uk/eia/EIAC.htm>>.

Kaibab Band of Paiute Indians



RESOLUTION OF THE GOVERNING BODY OF THE KAIBAB BAND OF PAIUTE INDIANS Cultural Ecology Ordinance

K-19-99

WHEREAS, the Kaibab Band of Paiute Indians are a federally recognized tribe established by Executive Order on June 11, 1913 and July 17, 1917 are granted certain rights in accordance with the Indian Reorganization Act of June 18, 1934; and

WHEREAS, the quality of life on the Kaibab Indian Reservation depends on the quality of the environment; and

WHEREAS, the Kaibab Band of Paiute Indians has the sovereign authority to enact and enforce regulations to promote and improve the health, welfare, and safety of all persons within the Kaibab Indian Reservation,

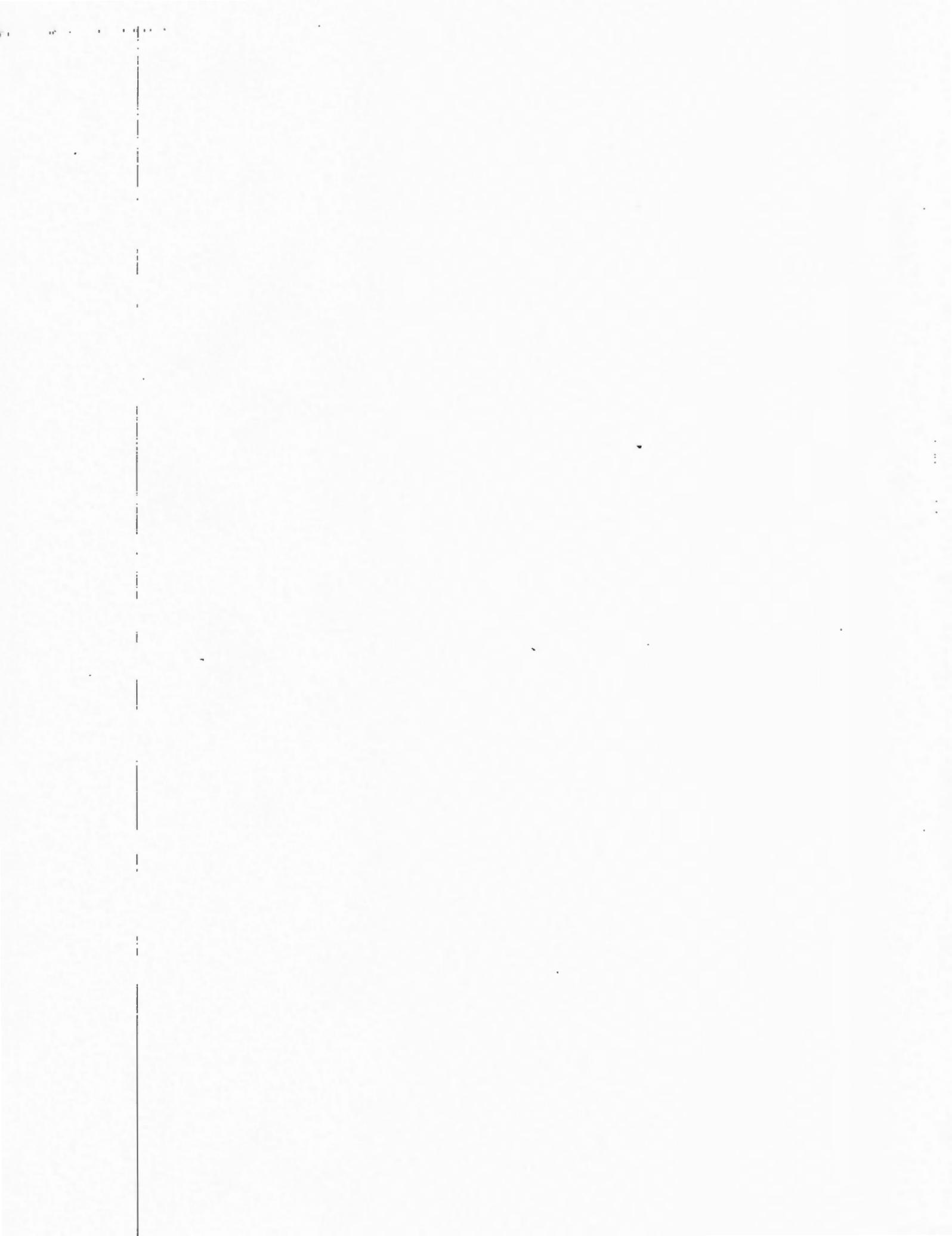
WHEREAS, the Tribal Council desires to prevent the destruction of Kaibab Tribal natural and cultural resources, and to promote economic and cultural development consistent with tribal cultural environmental values and tradition, and to provide emergency and disaster planning, and to enable the Tribe to stop activities that are harmful to the quality of life and environment:

NOW, THEREFORE BE IT RESOLVED that the Kaibab Paiute Tribal Council hereby enacts the Comprehensive Cultural Ecology Ordinance.

Tribal Affairs

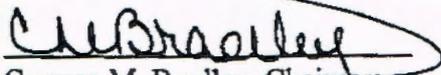
HC 65 Box 2
Pipe Spring, Arizona 86022

Phone (520) 643-7245
Fax (520) 643-7260



C E R T I F I C A T I O N

I, hereby certify that the foregoing resolution was regularly adopted by the Kaibab Paiute Tribal Council on April 15, 1999, at a Regular meeting at which a quorum was present with 2 **INFAVOR**, 1 **OPPOSED**, 1 **ABSTAIN**, 1 **ABSENT**, **VACANT** 1 pursuant to the authority vested in the Kaibab Paiute Tribal Council by Section 1 (a) of Article VI, of the Tribal Constitution and By-Laws ratified by the Tribe on June 20, 1987 and approved by the Secretary of the Interior on July 14, 1987 pursuant to Section 16 of the Act of June 18, 1934.

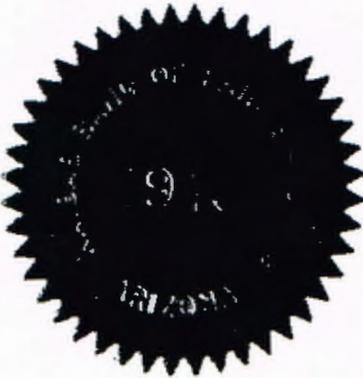


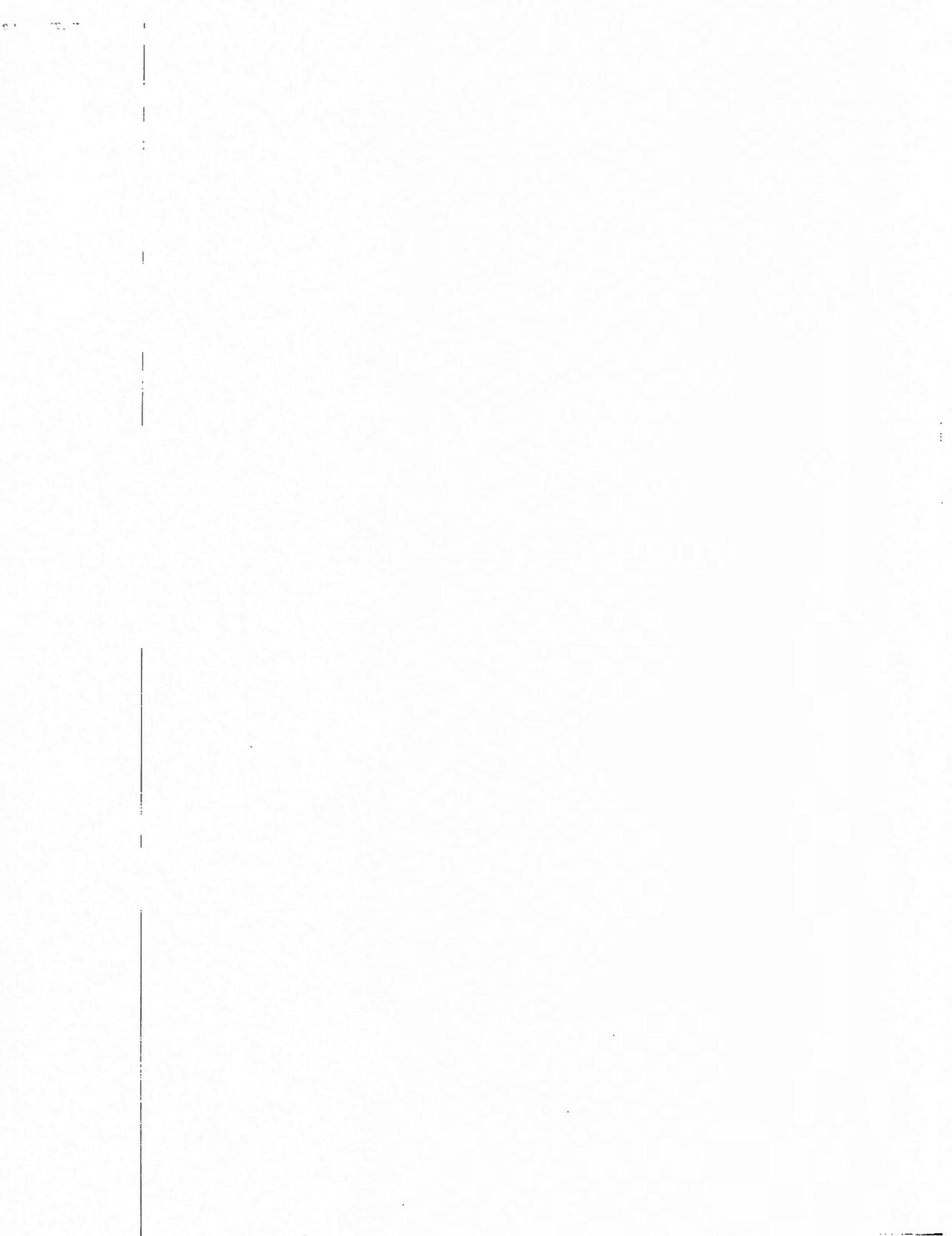
Carmen M. Bradley, Chairperson
KAIBAB PAIUTE TRIBAL COUNCIL

attest:



SeLena R. Benson, Secretary





**COMPREHENSIVE CULTURAL ECOLOGY ORDINANCE
OF THE KAIBAB BAND OF PAIUTE INDIANS**

Enacted by Tribal Council Resolution K-19-99 April, 15. 1999.

General Overview:

Chapter One: Policy and Purpose. The purpose of this Ordinance is to improve the quality of life on the Kaibab Indian Reservation by protecting and enhancing the quality of the tribal environment.

Chapter Two: Tribal Impact Assessment. This chapter provides that all projects affecting the tribal environment shall disclose the potential costs and benefits to the tribe.

Chapter Three: Hazard and Nuisance Control. This chapter a) sets up a planning process to inform the community of environmental hazards, and b) allows the Kaibab Band of Paiute Indians to stop activities that threaten or cause harm to the public health or the environment.

Chapter Four: Specific Resource Protection. This chapter allows for creation of procedures for protecting the quality of air, water, soils, and other natural and cultural resources of the Kaibab Indian Reservation environment and for intergovernmental coordination of activities that may be conducted on traditional or aboriginal Kaibab Paiute Lands off the Reservation.

Chapter Five: Compliance and Enforcement. This chapter provides the procedures for due process and issuing orders to stop activities threatening or causing harm to the public health or the Tribal environment and allows for the Tribe to be reimbursed for the costs of removal, cleanup, and remediation.

THE ORDINANCE:

By Enacting This COMPREHENSIVE CULTURAL ECOLOGY ORDINANCE, the Tribal Council adds the following to the law of the Kaibab Band of Paiute Indians:

**COMPREHENSIVE CULTURAL ECOLOGY CODE
OF THE KAIBAB BAND OF PAIUTE INDIANS**

CHAPTER ONE:

POLICY AND PURPOSE

- §101 Environmental Protection Policy
- §102 Purpose and Scope
- §103 Authority and Jurisdiction. Judicial Interpretation
- §104 Definitions

CHAPTER TWO:

TRIBAL IMPACT ASSESSMENT

- §201 Environmental Assessment Procedures
- §202 Environmental Assessment Reports

CHAPTER THREE:

HAZARD AND NUISANCE CONTROL

Subchapter A: EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW

- §301 Tribal Emergency Response Commission
- §302 Responsibilities and Duties

Subchapter B: ENVIRONMENTAL NUISANCE CONTROL

- §310 Nuisance Abatement
- §311 Nuisance Defined

CHAPTER FOUR:

SPECIFIC RESOURCE PROTECTION

- §400 Resource Protection Ordinances
- §401 Water Quality, Air Quality, Land Quality, and other media specific protections
- §402 Inter-agency Cooperation

CHAPTER FIVE:

COMPLIANCE AND ENFORCEMENT

- §500 Cease and Desist Order; hearing; injunction
 - §501 Emergency Order to Stop or Remove an Environmental Nuisance Condition
 - §502 Right to enter premises for inspection or abatement
 - §503 Reimbursement of Costs
-

CHAPTER ONE: POLICY AND PURPOSE

§101 Environmental Protection Policy.

It shall be the policy of the Kaibab Band of Paiute Indians to improve the quality of life on the Kaibab Indian Reservation, to promote harmony among all living beings and the life giving forces of the Kaibab environment [TUVEEP-UAAN], to promote efforts which will prevent or eliminate damage to the environment which will stimulate the health and well-being of humankind; to enrich the understanding of the network of living systems and natural resources important to the Tribe; and to promote sustainable development for the Tribe's future generations.

§102 Purpose and Scope

- a) The purpose of this Ordinance is to protect and improve the quality of life on the Kaibab Indian Reservation by promoting sustainable, appropriate economic development consistent with the political integrity, economic security, health, and welfare of the community, to provide for emergency response to hazardous, dangerous, and unhealthful conditions on the Reservation, and for other purposes.
- b) This Ordinance: 1) states the Tribe's environmental protection policy and provides for the establishment of procedures to assess and mitigate the cultural, social, economic, and ecological effects of proposed development activities on all lands within the jurisdiction of the Tribe; 2) provides the authority to control and abate hazardous, dangerous, and unhealthful conditions within the Kaibab Indian Reservation; 3) authorizes the Chairperson to appoint a Tribal Emergency Response Commission responsible for creating a tribal emergency preparedness plan as required by the Emergency Planning and Community Right-to-Know Act [42 U.S.C. § 11001 et seq.]; and 4) recognizes and incorporates by reference the Tribe's existing resource protection codes and ordinances including the Wildlife, Fisheries and Parks Ordinance; Range Management Ordinance; Cultural Resources Ordinance; and such other ordinances as may be enacted to protect Tribal resources.

§103 Authority and Jurisdiction

- a) This Ordinance is enacted under Article VI, Section 1 (h) of the Constitution of the Kaibab Band of Paiute Indians of the Kaibab Indian Reservation, Arizona and the sovereign authority of the Kaibab Band of Paiute Indians to regulate all conduct that would threaten the political integrity, economic security, health and welfare of the Kaibab Band of Paiute Indians and by such authority as is delegated to the Kaibab Band of Paiute Indians by the United States Congress.
- b) By enacting this Ordinance, the Tribal Council of the Kaibab Band of Paiute

Indians authorizes the tribal environmental program, and its successor organization, to enact necessary rules and procedures to carry out these purposes and intents in accordance with the Tribe's administrative procedures.

- c) The Tribal Council of the Kaibab Band of Paiute Indians hereby authorizes the Tribal Chairperson to implement the procedures set forth herein in furtherance of the policy and purposes of this Ordinance.
- d) The Tribal Council of the Kaibab Band of Paiute Indians hereby authorizes and directs the Tribal Chairperson to negotiate with local, state, or federal agencies, and private contractors to protect Tribal interests in off-Reservation activities affecting the Reservation environment and traditional, aboriginal Kaibab Paiute lands.
- e) Jurisdiction under this Ordinance extends to all lands within the exterior boundaries of the Kaibab Paiute Indian and persons thereon for the regulation of conduct when that conduct threatens or has some direct effect on the political integrity, the economic security, or the health or welfare of the tribe (*Montana v. United States* 448 U.S. 544) and as provided for in Article II, Section 2 of the Constitution of the Kaibab Band of Paiute Indians of the Kaibab Indian Reservation, Arizona.
- f) Judicial interpretation of this ordinance shall be persuaded and informed by reference first to the unwritten common law tradition of the Kaibab Band of Paiute Indians, then by reference to appellate decisions of Indian Courts of Appeals, the Ninth Circuit Federal Court of Appeals, and the United States Supreme Court.

§ 104 Definitions

- a) *Abatement* means the removal, termination, or destruction of a *nuisance*.
- b) *Environment* refers to waters, air, land forms, living things, residential communities, wildlife habitat, cultural resources, sacred landscapes, ceremonial areas, scenic vistas, and aesthetic views, together with their interactions and relationships.
- c) *Fee lands* refers to private or non-trust lands.
- d) *Hazardous material* means a material or combination of materials that, because of its quantity, concentration, or physical, chemical, or infectious characteristics, may cause or significantly contribute to an increase in mortality or an increase in serious irreversible or incapacitating reversible illness, or pose a substantial present or potential hazard to human health, fish, plant, wildlife, or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed.

- e) *Kaibab Community* refers to all residents of the Kaibab Indian Reservation.
- f) *Living beings and living things* refers to all biological forms of life as well as all life as understood in Southern Paiute culture and tradition whether manifest as animate or inanimate, material or spiritual.
- g) *Network of Living Systems* includes all ecological relationships and incorporates the interaction among biological, geological, and spiritual entities as understood in Southern Paiute culture and tradition.
- h) *Nuisance* refers to unreasonable, unlawful, or dangerous conditions or uses of property to the discomfort, annoyance, inconvenience, or damage of another. It includes activities offensive to community moral standards and is any behavior which unreasonably interferes with the health, safety, peace, comfort, or convenience of the Kaibab community.
- i) *Person* refers to any individual, partnership, association, trust, estate, corporation, or political entity or any other legal entity or its legal representatives, agents, employees, or assigns.
- j) *Pollutant* refers to any substance or energy entering the environment as a result of human activity which has the potential to alter the physical, chemical, biological, cultural, or aesthetic properties of the environment.
- k) *Pollution* refers to the contamination of soil, air, and water by noxious substances, noise, heat, and light. The term specifically includes petroleum [oil and gas] products and all substances defined as pollutants under federal environmental law.
- l) *Project* refers to any activity, development, program, or plan having the potential for disturbing, utilizing, harvesting, taking, removing, or modifying tribal or reservation resources.
- m) *Reservation resources* refers to the physical, cultural, and biological resources within the Kaibab Indian Reservation including, but not limited to, water, air, land, minerals, cultural and historical materials and sites, plant and animal life, and aesthetic values.
- n) *Tribal Council* means the governing body of the Kaibab Band of Paiute Indians.
- o) *Tribal water* means springs, intermittent streams, washes, surface waters, wells, aquifers, wetlands, and groundwater within the exterior boundary of the Kaibab Indian Reservation.
- p) *Tribe or Tribal* refers to the federally recognized Kaibab Band of Paiute Indians.

- q) *Objectionable waste* refers to motor oil, organic solvents, batteries, poisons, dangerous chemicals, medical materials (needles, medicines), and other dangerous or obnoxious household, industrial, or agricultural materials.
- r) *Water storage facilities* refers to water tanks, water towers, stock watering facilities, guzzlers, ponds, cisterns, and other containment and delivery devices.

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CHAPTER TWO: TRIBAL IMPACT ASSESSMENT

§201 Environmental Assessment Procedures

Through this Chapter, the tribal environmental program, and its successor program, department, or agency, in cooperation with other tribal resource protection programs (range, cultural resources, wildlife, etc.), is authorized to design and implement guidelines and procedures by which any proposed project or activity having a potentially significant impact or effect on tribal lands and environment shall consider the environmental, cultural, social, and economic costs and benefits to the tribal community.

§202 Environmental Assessment Reports

All projects that may have a significant effect *on the tribal environment* shall provide to the Tribal Council a concise assessment of the anticipated effects of the project in accordance with the guidelines and procedures implemented under §201. Such an assessment shall be equivalent in scope and detail to those required under the National Environmental Policy Act [42 U.S.C. §4371 et seq.] and the guidelines of the Council for Environmental Quality [40 C.F.R. Parts 1500-1508].

§203 Consent to Jurisdiction

Any person conducting an activity pursuant to this chapter is deemed to consent to Tribal jurisdiction.

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CHAPTER THREE: ENVIRONMENTAL HAZARD AND NUISANCE CONTROL

Subchapter A: EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW

§301 Tribal Emergency Response Commission

- a) This chapter complies with federal requirements that all states and Indian Tribes develop plans to inform their constituent communities of chemical hazards in the

vicinity and notification plans in the event of a hazardous materials release or spill. Emergency Planning and Community Right-to-Know Act (EPCRA) [42 U.S.C. 11001 et seq].

- b) The Tribal Chairperson shall appoint no less than four enrolled members of the Kaibab Band of Paiute Indians to serve, without compensation, as Tribal Emergency Response Commissioners for a staggered term of one or two years. The Tribal Chairperson shall issue invitations to members of neighboring communities having expertise in emergency services, evacuation, fire control, and other relevant areas to serve as *ex officio* members of the Tribal Emergency Response Commission. At least one of the members of the Commission shall be an employee of the tribal environmental program.

§302 Responsibilities and Duties

The Tribal Emergency Response Commission shall:

- a) oversee the development of a tribal plan to respond to emergency chemical spills and other manmade and natural disasters;
- b) oversee the conduct of an inventory of all hazardous and dangerous materials and conditions on the Kaibab Indian Reservation;
- c) make recommendations for the removal of hazardous materials and dangerous conditions from the Reservation.
- d) enhance the preparedness of the occupants and neighbors of the Kaibab Indian Reservation for a wide range of emergency conditions arising from natural and man-made disasters;
- e) promote awareness of hazardous materials and appropriate responses to spills of hazardous materials;
- f) comply with federal regulations requiring all states and tribes to form Emergency Response Commissions;
- g) submit a Chemical Emergency Notification Plan and Chemical Emergency Response Plan to the Tribal Council;
- h) assist in developing legislation to implement the Tribal Emergency Preparedness program.

Subchapter B: ENVIRONMENTAL NUISANCE CONTROL

§310 Nuisance Abatement

The Tribal Chairperson, or delegatee, may take immediate action to abate or stop any environmental nuisance. Any person who maintains an environmental nuisance may be required to reimburse the Tribe for the costs of removal, remediation, and cleanup. The procedure for abatement of nuisance conditions is stated at Chapter Five of this Ordinance.

§311 Nuisance Examples.

An environmental nuisance is any condition in the soil, air, water or other aspect of the tribal environment that threatens or causes harm to the public health or the environment. The following, and similar, conditions may constitute environmental nuisances:

- a) Any unauthorized practice which defaces or destroys any cultural, historical, archaeological, or natural resource, sacred area, landmark, road sign, billboard, tribal property, roads, trails, or any public facility. Such practices include, but are not limited to, graffiti, off-road vehicle operation, burning, excavating, or dumping. Such activities carried out under Tribal or Federal permit are not included under this section.
- b) Maintaining an illegal drug processing laboratory.
- c) A place, condition, or building which is not maintained in a safe, or sanitary condition, or which may constitute a breeding place for disease carrying insects or rodents.
- d) Sewage, human excreta, wastewater, garbage, or other organic wastes deposited, stored, discharged, or exposed so as to be a factor in the transmission of disease to or between any person or persons.
- e) A vehicle, including any recreational vehicle, vessel, camper, or trailer, or container which is used in the transportation of garbage, toxic materials, hazardous materials, or human excreta and which is defective and allows leakage or spillage of contents.
- f) An improperly maintained septic tank or cesspool.
- g) Pollution or contamination of any *Tribal waters or water storage facilities*, air, or soils.
- h) The storage, collection, transportation, disposal, and reclamation of radioactive and hazardous materials, garbage, trash, rubbish, manure, and other *objectionable wastes* other than as provided and authorized by law and rule.
- i) Abandoned motor vehicles.

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CHAPTER FOUR: SPECIFIC RESOURCE PROTECTION

§400 Resource Protection Ordinances

This section incorporates by reference other tribal resource protection ordinances, including those pertinent to range, wildlife, cultural resources, and natural resources, and allows for their inclusion within this Comprehensive Cultural Ecology Ordinance. Nothing in this provision changes any organizational, programmatic, or jurisdictional component of any other tribal ordinance.

§401 Water Quality, Air Quality, Land Quality, and other media-specific protections.

The Kaibab tribal environmental program or its successor department, program, or agency, and related natural and cultural resource programs, are authorized to conduct necessary research, to secure grants and other funding, and to generate specific procedures, rules, and guidelines for protecting and enhancing the quality of tribal air, water, land, and other elements of the Reservation environment. Such procedures and rules shall be made in accordance with the Tribe's administrative rule-making procedures.

§402 Inter-agency Cooperation

The Kaibab tribal environmental program or its successor department, program, or agency, and related natural and cultural resource programs, are authorized to participate in regional and local coalitions, consortia, and other organizations of state, federal, and tribal entities concerned with environmental management on traditional and aboriginal Kaibab Paiute lands on the Arizona Strip and adjacent lands within state of Utah and to participate in the development of inter-agency Memoranda of Understanding and Memoranda of Agreement for consideration by the Tribal Council.

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CHAPTER FIVE – COMPLIANCE AND ENFORCEMENT

§501 Non-Compliance

- a) Any project not in compliance with Chapter Two of this Ordinance, or any applicable federal or tribal law or regulation, or if the activity poses an imminent threat to the health and safety of the Kaibab community or environment, or causes unanticipated harm to the environment shall be subject to an order to cease and desist the activity issued by the Tribal Chairperson or delegatee.
- b) If the owner, operator, or person in charge of the project fails to cure the noncompliance within five working days of receipt of the order, or continues work on

the activity in violation of the order, vehicles and equipment may be impounded or access restricted to the area or site until the noncompliance is cured. The person shall be served with a statement of the reasons for the cease and desist order and actions to be taken for the order to be lifted.

- c) If the activity poses an immediate threat to the public health or safety or to the environment, the Tribal Chairperson or delegatee may proceed as for nuisance abatement below.

§502 Nuisance Abatement Order; hearing; injunction

- a) If the Tribal Chairperson, or delegatee, has reasonable cause to believe from information furnished to the Tribal Chairperson, or delegatee or from the tribal Chairperson's, or delegatee's, own investigation that a person is out of compliance with this Ordinance, the Tribal Chairperson, or delegatee, may serve, by certified mail, or by personal service, an abatement order, on the person requiring the person to abate the nuisance.
- b) If the person fails or refuses to comply with the order or if after reasonable attempts the Tribal Chairperson, or delegatee, is unable to serve the order, the Tribal Chairperson, or delegatee, may abate the nuisance at the Tribe's expense.
- c) The Tribe shall be entitled to recover, from the person responsible for maintaining the nuisance, the reasonable costs of abatement incurred in accordance with any terms of the order that have been upheld after all rights to appeal or judicial review have been exhausted or waived.
- d) An abatement order issued pursuant to this section becomes final unless an appeal is made pursuant to tribal administrative and judicial procedures.
- e) If a person fails or refuses to comply with an abatement order issued under this section, the Tribal Chairperson, or delegatee, may file an action in the Kaibab Paiute Tribal Court to compel compliance with an order to abate an environmental nuisance. The court shall proceed as in other actions for injunctions.

§513 Emergency Order to Stop or Remove an Environmental Nuisance Condition

- a) If an environmental nuisance exists on property or lands leased, assigned, or held under custom and tradition, the Tribal Chairperson, or delegatee, may order the owner or occupant or operator to remove the nuisance within twenty-four hours at the expense of the owner or occupant. The order may be given to the owner or occupant or operator personally or left at the residence of the owner or occupant.

- b) If the owner or occupant or operator fails or refuses to comply with the order, the Tribe shall cause the nuisance to be removed, and the owner, occupant or other person who caused the nuisance shall pay the expenses of removal, cleanup, remediation, and restoration. Any such emergency order shall be filed with the Tribal Court within 24 hours after such order is served upon the person charged with maintaining the nuisance.
- c) If an environmental nuisance exists on fee lands, state lands, non-tribal, or non-trust lands or roadways within the exterior bounds of the Kaibab Indian Reservation, any such emergency order shall also be lodged with the court of the district wherein such non-trust lands or roadways lie.

§514 Right to enter premises for inspection or abatement

- a) If the Tribal Chairperson, or delegatee, deems it necessary to enter a building, structure, vehicle, or other property within its jurisdiction for the purpose of examining, destroying, removing, or preventing an environmental nuisance and is refused entrance, the Tribal Chairperson, or delegatee, may make a complaint of the refusal under oath to the Tribal Judge.
- b) The Tribal Judge shall issue a warrant directing a peace officer accompanied by and under the direction of at least one member of the Tribal Council or delegatee, to enter the premises between the hours of sunrise and sunset to examine, destroy, remove, or prevent the environmental nuisance.

§515 Reimbursement of Costs

Any person who maintains an environmental nuisance or causes injury to Tribal land, water, soil, or other natural resources as a result of any violation of this Ordinance, may be required to reimburse the Tribe for the costs of removal, remediation, restoration, and cleanup, including any associated attorney fees, legal costs, and administrative expenses.

-----end-----

enacted April 15, 1999 by Tribal Resolution K-19-99

Daryl Vitale

11/25/08

From: Alice Walker
Sent: Tuesday, November 25, 2008 3:50 PM
To: Daryl Vitale
Subject: FW: FERC Receipt of Filing in P-12966-000, et al.:

Alice E. Walker
Greene, Meyer & McElroy, P.C.
1007 Pearl Street, Suite 220
Boulder, Colorado 80302
ph (303) 442-2021
fx (303) 444-3490
awalker@greenelawyer.com

-----Original Message-----

From: eFiling@ferc.gov [mailto:eFiling@ferc.gov]
Sent: Tuesday, November 25, 2008 3:45 PM
To: Alice Walker; eFiling@ferc.gov
Subject: FERC Receipt of Filing in P-12966-000, et al.:

Confirmation of Receipt

This is to confirm receipt by the FERC Office of the Secretary of the following electronic submission:

-Submission ID: 170128
-Docket(s) No.: P-12966-000, et al.:
-Filed By: KAIBAB BAND OF PAIUTE INDIANS -Signed By: ALICE WALKER -Filing Desc: Comments of the KAIBAB BAND OF PAIUTE INDIANS Re Revised Proposed Study Plan Filed by Utah Board of Water Resources under P-12966-000, et. al..
-Submission Date/Time: 11/25/2008 5:41:49 PM -Filed Date: 11/26/2008 8:30:00 AM

Additional detail about your filing is available via the following link:

<https://ferconline.ferc.gov/SubmissionStatus.aspx?hashcode=JRNBNpt5uKfB678S9p5bag>

You will receive an email, shortly, concerning the status of your submission.

Thank you for participating in the FERC Electronic Filing System. If you have any questions, or if you detect errors in your submission or the FERC-generated PDF, please contact FERC at:

E-Mail: efiling@ferc.gov <mailto:efiling@ferc.gov> (do not send filings to this address) Voice Mail: 202-502-8258.

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Utah Board of Water Resources

11/25/08

Project No. P-12966-000

COMMENTS OF THE
KAIBAB BAND OF PAIUTE INDIANS REGARDING
REVISED PROPOSED STUDY PLAN FILED BY
UTAH BOARD OF WATER RESOURCES, FOR
LAKE POWELL HYDROELECTRIC PROJECT NO. 12966

On behalf of the Kaibab Band of Paiute Indians (“Kaibab Tribe”), we submit the following comments on the *Revised Proposed Study Plan (“PSP”) for the Lake Powell Hydroelectric Project No. 12966* (Aug. 2008). The instant comments incorporate and supplement the comments filed by the Kaibab Tribe on July 7, 2008, in this matter. *See Comments of the Kaibab Band of Paiute Indians Regarding the Pre-Application Document Filed By the Utah Board of Water Resources, for Lake Powell Hydroelectric Project No. 12966, and Comments of the Kaibab Band of Paiute Indians Regarding the Scoping of Environmental Issues for the Proposed Lake Powell Pipeline Project, FERC No. 12966, Utah and Arizona* (July 7, 2008) (“Tribe’s Opening Comments”).

The Kaibab Tribe focuses its comments on the PSP on two principle matters. First, the Tribe focuses on the Cultural Resources Study Plan and the failure of that study plan to include the comments submitted by the Kaibab Tribe in the Tribe’s Opening Comments. Second, the Tribe notes where the Utah Board of Water Commissioners (“State”) failed to incorporate comments that were part of the Tribe’s Opening Comments. In the Tribe’s Opening Comments, the Kaibab Tribe submitted detailed comments on the proposed work study plans included in the Pre-Application Document (May 5, 2008) (“PAD”). Some of those comments were omitted in the PSP. All of the Kaibab Tribe’s previous comments are incorporated herein by reference, and are made a part hereof, and the Kaibab Tribe in no way intends to waive any of the previous comments it submitted for the record in this matter.

As an overall comment, the Kaibab Tribe wishes to emphasize the importance of the programmatic agreement to which it will be a party. *See* PSP at 17. The Tribe will participate fully in that process in order to ensure that all aspects of the Tribe’s interests are protected as the proposed pipeline process goes forward.

Additionally, the PSP is inconsistent in its treatment of the preferred alignment for the proposed pipeline, and the alternative alignment that would principally follow Arizona State Highway 389. The PSP should be amended throughout to ensure that all of the study plans include both possible pipeline routes, and to reference all appropriate Arizona laws and regulations which are applicable to the portions of the proposed pipeline that may lie in Arizona. With respect to the

portion of the pipeline that may lie on the Kaibab Indian Reservation (“Reservation”), the PSP should be amended to refer to all Kaibab tribal laws and regulations.

Study Plan 1: AIR QUALITY

On page 17 of the Tribe’s Opening Comments, the Tribe recommended that the “draft work plan should provide an explanation for the one-half mile impact area” identified as the relevant corridor for studies and analysis. The Kaibab Tribe also stated that the one-half mile impact area seems too limited and is inconsistent with the impact area identified in the PAD. The PSP no longer identifies a corridor width for the conduct of air quality studies, but it is not clear from the PSP whether the State has responded favorably to the Tribe’s comments, or whether the State has abandoned its definition of the study area. The Kaibab Tribe reiterates that the PSP should expressly define the study area for the air quality studies in the study plan.

Section 1.4.3 Issues and Data Needs.

On page 2, the PSP states that the air quality specific analyses will include “air quality limits within the study area.” The PSP should clarify whether the study area will be limited to the one-half mile impact area, and why that limited corridor is adequate for analyzing potential air quality impacts of the proposed pipeline.

On page 18 of the Tribe’s Opening Comments, the Kaibab Tribe requested the State to prepare a full emissions inventory for the life of the project which clearly identifies all pollutants produced and used by the proposed project. The PSP does not state whether there will be a full emissions inventory for the life of the project, however, in this section the PSP states that the air quality specific analyses will include “Data on Project features and the emissions from them.” The PSP should specifically state whether it considers project features and emissions from them to be an emissions inventory, and the time frame for considering them. Similarly, the PSP states that a “[d]etermination of power sources for pumping and potential impacts of developing additional generating capacity (to the extent feasible)” is necessary. The PSP should specifically state whether this analysis is intended to be part of the emissions inventory.

Unlike the Draft Work Plans in the PAD, the PSP does not contain a section addressing mitigation of impacts to air quality. The air quality study plan should include a plan for mitigation. On page 18 of the Tribe’s Opening Comments, the Kaibab Tribe commented that the Procedures for Developing Mitigation should include of the Tribe’s Ecology Code because it relates to the protection of air quality. The existence of the Tribe’s Ecology Code directly contravenes the statement in the PSP that “[n]o specific agency resource management goals have been identified with regard to air quality that would be addressed by this study plan.” PSP § 1.3. This statement is incorrect and should be amended to specifically refer to and incorporate the Tribe’s Ecology Code.

Study Plan 2: AQUATIC RESOURCES

Unlike the Draft Work Plans in the PAD, the PSP does not contain a section addressing mitigation of impacts to aquatic resources. The aquatic resources study plan should include a plan for mitigation.

Study Plan 3: CULTURAL RESOURCES

It appears from the PSP that very few of the Kaibab Tribe's comments on the draft work plan for cultural resources were included. The Tribe reiterates all of the comments it submitted in the Tribe's Opening Comments, and provides additional comments herein.

A general comment regarding the cultural resources study plan is that there is a need to clarify terminology. The term "ethnographic study" should be used to describe the work that must be conducted by professional ethnographers and the affected Indian tribes to identify tribally-significant resources, while the term "consultation" should be restricted to government-to-government interactions.

In addition, in all aspects of the cultural resources study, the PSP should acknowledge the need for tribal monitors to oversee the conduct of the studies and all field work. Many of the areas, vegetation, animals, soils and rocks have cultural and religious significance to the Kaibab Tribe and only Kaibab tribal monitors can ensure that the studies do not adversely effect those elements of the environment.

We provide additional comments on the cultural resources study plan below.

Section 3.2 Study Description and Objectives and Information to be Obtained (§5.11(d)(1)).

In the Tribe's Opening Comments, it noted that the term "traditional cultural properties" ("TCP") is too limited. Yet the definition in the PSP fails to incorporate the Tribe's comment that the State should expand the cultural resources study plan to include all Native American cultural sites. The determination of cultural affiliation is a critical step as well, and will yield a number of tribes that must be part of some or all of the studies. This is an initial step that will determine who the State must include in the conduct of the cultural resources study.

In the Tribe's Opening Comments, the Kaibab Tribe requested that the definition of cultural resources be broadened. On page 16, of the PSP, the State says that "cultural resources" have been "previously defined and addressed" by the PAD. The PSP does not incorporate the National Park Service definition of "traditional cultural resources" as suggested by the comments. Accordingly, the Kaibab Tribe reiterates its request that the definition of TCP be broadened, consistent with National Park Service Bulletin No. 38:

There are many definitions of the word “culture;” but in the National Register programs the word is understood to mean the traditions, beliefs, practices, lifeways, arts, crafts, and social institutions of any community, be it an Indian tribe, a local ethnic group, or the people of the nation as a whole

One kind of cultural significance a property may possess, and that may make it eligible for inclusion in the Register, is traditional cultural significance. “Traditional” in this context refers to those beliefs, customs, and practices of a living community of people that have been passed down through the generations, usually orally or through practice. The traditional cultural significance of a historic property, then, is significance derived from the role the property plays in a community’s historically rooted beliefs, customs, and practices. Examples of properties possessing such significance include:

- a location associated with the traditional beliefs of a Native American group about its origins, its cultural history, or the nature of the world;
- a rural community whose organization, buildings and structures, or patterns of land use reflect the cultural traditions valued by its long-term residents;
- an urban neighborhood that is the traditional home of a particular cultural group, and that reflects its beliefs and practices;
- a location where Native American religious practitioners have historically gone, and are known or thought to go today, to perform ceremonial activities in accordance with traditional cultural rules of practice; and
- a location where a community has traditionally carried out economic, artistic, or other cultural practices important in maintaining its historic identity.

A traditional cultural property, then, can be defined generally as one that is eligible for inclusion in the National Register because of its association with cultural practices or beliefs of a living community that (a) are rooted in that community’s history, and (b) are important in maintaining the continuing cultural identity of the community.

National Park Service, <http://www.nps.gov/history/nR/publications/bulletins/nrb38/nrb38%20introduction.htm#tcp> (last visited Nov. 21, 2008).

On page 17, the PSP lists various federal statutes with which the cultural resources study will comply. Missing from that list is the Archaeological Resources Protection Act, 16 U.S.C. §§ 470aa to 470mm (“ARPA”). The list should also include Executive Order No. 13007 and Executive Order 13175, National Park Service Bulletin No. 30, Cultural Landscapes, and National Park Service Bulletin No. 38, Traditional Cultural Properties, as relevant federal guidance documents.

On page 17, the PSP states that it will “[a]ddress specific concerns about cultural resources noted by the Kaibab Band of Paiute Indians with respect to aboriginal land and the Kaibab Indian Reservation.” While the Kaibab Tribe appreciates the PSP’s acknowledgment of the need for the Tribe’s involvement, other Indian tribes will also be affected by the proposed project. *See* PSP at 18 (acknowledging that various Pueblo tribes, the Hualapai Tribe, the Havasupai Tribe, the Yavapai Apache Tribe, and the Navajo Nation have interests in the region to be affected by the proposed pipeline), 19 (acknowledging the need for consultation with the Kaibab Tribe, various Pueblo and Upper Yuman tribes and the Navajo Nation). Certainly, the other Southern Paiute groups have a strong interest in the proposed pipeline project and the State should include consultation with them as part of the cultural resources study. Accordingly, the PSP should include other tribal participation, in addition to the participation of the Kaibab Tribe.

Section 3.4.1 Existing Information and Additional Information Needs (§5.11(d)(3), Overview and Background.

On pages 18 and 19, the PSP makes reference to occupation of the region in the vicinity of the proposed pipeline by “Anasazi, Paiute, Fremont, and earlier Archaic cultures.” PSP at 18. These terms have been interpreted as implying the occupation of an area by a specific people at a specific time, yet it is now widely understood that many peoples simultaneously used the region in the vicinity of the proposed pipeline. The PSP should eliminate the terms Anasazi, Fremont, and Archaic cultures, and instead should refer to the specific time periods associated with these labels and dominant style of life that prevailed during identified time periods.

On page 19, the definition of the historic period must include the events, places, and objects that are cultural significant to contemporary Indian people, and the PSP should acknowledge the contemporary element of the historic period.

On page 19, the PSP states that “[t]he potential to encounter traditional cultural properties is not known. That will be determined in consultation with the FERC and appropriate Native American tribes who traditionally occupied the area.” The existence of TCPs is well known in the vicinity of the proposed pipeline and the past studies identifying the TCPs are critical for understanding the potential impacts of the project. TCP data come from on-the-ground studies, and is not limited to “consultation” with affected Indian tribes. The PSP should specifically identify the need for field surveys in order to identify all TCPs.

Section 3.4.2 Primary Data Needed.

This section fails to acknowledge that the Indian tribes potentially affected by the proposed pipeline are experts. The PSP should be revised to specifically include Indian tribal experts in the identification of cultural resources and the development of measures to mitigate damages to them.

Section 3.4.3 Secondary Data Needed.

On page 20, the PSP states that the cultural resources study will include researching the tribal offices of the Kaibab Tribe. However, tribal offices cannot be researched like a state library. Rather, in order to examine documents held in tribal offices, the State must develop engagement protocols which address the procedures for sharing culturally sensitive data. Additionally, the examination of tribal documents should not be limited to the Kaibab Tribe, but should include all of the Indian tribes that the proposed pipeline will possibly affect.

Section 3.6.1 Introduction and Overall Approach.

On pages 19 and 20 of the Tribe's Opening Comments, the Kaibab Tribe requested that the cultural resources work plan identify the Tribe as the "principal entity that can determine how to treat archaeological sites, artifacts and human remains." The revised PSP does not assign the Tribe as the principal entity. Instead, the PSP states that the analysis of impacts on cultural resources will be undertaken after all agencies involved, including the Kaibab Tribe, agree to a joint programmatic agreement. PSP at 21. The development of the programmatic agreement should not be viewed as a substitute for looking to the Tribe as the principal entity that can determine how to treat archaeological site, artifacts and human remains, and the PSP should be amended to specifically provide that even within the confines of the programmatic agreement, the Tribe will be the entity to make such determinations.

On page 20 of the Tribe's Opening Comments, the Kaibab Tribe commented that the State should expand the impact area to include areas that will suffer adverse impacts from fugitive dust. The revised study plan no longer has a section addressing this issue, nor does it have a titled section "Impact Area." Instead, the PSP generally mentions a two-mile wide corridor, on pages 20 and 22, as the area from which to obtain data from in order to understand the nature of the cultural resources within the area. Further justification of this narrow and limited corridor is required. The PSP should be amended to include the description of the impact area, including all impacts from fugitive dust.

Section 3.6.2 Proposed Study Methodology (§5.11(d)(5)), Define Baseline Conditions.

On page 22, the PSP the list of cultural resource topics has American Indian and western archaeology scientific definitions and, thus, all items on the list belong at some level to both the archaeology and the ethnography studies. Thus, the development of the cultural resources baseline conditions should expressly include both archaeology and ethnography. Indeed, TCPs

are one kind of cultural resource, and other cultural resources involve the biotic and abiotic features of nature as well as places reflecting human use and production. Accordingly, the PSP should require that the same level of detail be given to ethnography as is given for archaeology.

Section 3.6.3.1 Significance Criteria for Cultural Resources, and Section 3.6.3.2 Mitigation of Potential Impacts.

On pages 23 and 24, the PSP discusses the development of significance criteria and mitigation procedures. Yet nowhere in these sections does the PSP involve the affected Indian tribes in the establishment of cultural significance or the mitigation of potential impacts. It is well-settled that Indian tribes determine the significance of cultural resources for them and their cultures. It is a separate and distinct process from the establishment by archaeologists and historians of the science-value of physical remains. While the Kaibab Tribe will be part of the programmatic agreement that will help define the process for developing significance criteria and mitigation procedures, the PSP should expressly state that tribal involvement in these processes is critical and will occur.

Section 3.6.3.3 Historic Preservation Management Plan.

On page 24, the PSP fails to acknowledge that Indian tribes place cultural significance on historic periods, artifacts, places, and events, and those matters can only be identified by the tribes. Accordingly, only the affected Indian tribes can recommend culturally appropriate mitigation and management. The PSP should expressly acknowledge that the affected Indian tribes will determine cultural significance for purposes of the historic preservation management plan.

Section 3.6.4 Analysis of Cumulative Impacts.

On page 24, the PSP discusses cumulative impacts analysis, without reference to established federal procedures for including tribally sensitive cumulative impacts studies. Federal agencies have established and recognized tribally-defined cumulative impacts analyses. *See Final Environmental Impact Statement for the Nevada Test Site and Off-Site Locations in the State of Nevada*, vol. 1, App. G (Aug. 1996), available at <http://www.globalsecurity.crg/wmd/library/report/enviro/eis-0243> (last visited Nov. 21, 2008). The PSP should require that the cultural resources study adhere to the procedures set forth in Appendix G for cumulative impacts analysis.

Section 3.6.5 Report Preparation.

On page 24, the PSP states that “[t]he report will be prepared for limited distribution to only those Federal agencies, Tribes and SHPO offices responsible for managing cultural resources and is not intended for public review or distribution.” Additionally, the Kaibab Tribe retains the right to review and edit all portions of the report involving Kaibab resources before

the report is shared with the study team, other federal and state agencies, and tribes. The PSP should acknowledge the Kaibab Tribe's right.

Section 3.7 Schedule and Level of Effort (§5.11(d)(6)).

On page 24, the PSP states that the cultural resource studies will require professional anthropologists, which we presume includes cultural anthropologists and ethnographers as well as physical archaeologists, with appropriate experience. The concept of "appropriate experience" must be defined.

Additionally, the PSP states that cultural resource professionals will be registered with and approved by Utah and Arizona, the two State Historic Preservation Officers ("SHPOs"), the Bureau of Land Management, the National Park Service, and the Bureau of Reclamation. It is not clear whether all of these federal and state agencies have a registration and approval process for cultural anthropologists, and the PSP should expressly state where registration and approval is required. More importantly, Indian tribes retain the right to approve cultural anthropologists who work with them, and this requirement should be included in the "registration and approval" requirement. Additionally, the PSP should acknowledge that some Indian tribes have their own Tribal Historic Preservation Officers ("THPO") who will approve cultural anthropologists.

Study Plan 5: GROUNDWATER RESOURCES

On page 23 of the Tribe's Opening Comments, the Kaibab Tribe requested that the State expand its investigation of groundwater recharge impacts to include the groundwater resource in and around the Kaibab Indian Reservation. The PSP does not incorporate this comment, and the Tribe reiterates it in the instant comments. Further, the groundwater resources study plan does not incorporate the request that the State expressly provide that tribal permission will be sought in order to conduct investigations or install piezometers. Nor does the PSP state that federal and tribal regulatory requirements will apply. The PSP should be amended to expressly include these critical comments.

Section 5.2.1 Goals and Objectives.

On pages 23 and 24 of the Tribe's Opening Comments, the Kaibab Tribe stated that the groundwater impact area should be expanded to include the impacts of the construction and operation of the proposed pipeline on the groundwater resources of the Kaibab Indian Reservation. While the PSP does not limit the impact area to St. George and vicinity, it does not define the metes and bounds of the groundwater impact area. The PSP lists as one of the primary objectives the identification of what impacts could occur on groundwater resources from project construction, operation, and/or maintenance. PSP at 38. This sentence does not limit the impact area to St. George and vicinity, thus it could include the Kaibab Reservation, however, the PSP should specifically define the impact area.

Section 5.4.2 Study Area Definition.

On page 39, the PSP states that the “study area” will include the alternative alignments along the Lake Powell Pipeline and Cedar Valley Pipeline. The list includes the areas of the possible pipeline alignments that will be given “particular attention.” *Id.* at 39-40. This list does not include the Kaibab Indian Reservation, and the PSP should be amended to include the Reservation as an area requiring particular attention.

Section 5.6.1 Proposed Study Methodology (§5.11(d)(5)), Introduction and Overall Approach.

On page 24 of the Tribe’s Opening Comments, the Kaibab Tribe admonished the State to obtain permission from the Tribe in order to perform “field reconnaissance” as well as to install observation wells on the Reservation, and suggested the inclusion of the following language: “All new wells and piezometers will be permitted and constructed in accordance with federal, tribal and state regulatory requirements, using a state-licensed driller that is acceptable to the relevant federal agencies and Indian tribes.” The PSP does not contain any information about “field reconnaissance” or installation of wells. PSP at 41. The PSP should be amended to specifically require field reconnaissance for all well and piezometer issues.

Section 5.6.2.2 Task 2 - Field Investigations.

On page 41, the PSP states that additional field data will be collected and this would include the measurement of groundwater levels in existing wells that are open to shallow, unconfined aquifers. The PSP does not state whether the State will seek to install observation wells on the Reservation. The PSP states that “[p]roduction well locations” will be determined, *id.*, and that “spring and seep locations that may be affected . . . would be identified and inspected [and] [w]etland locations and riparian areas . . . will be identified.” *Id.* at 42. Nowhere in this section does the PSP incorporate the Tribe’s comment that the State must obtain permission from the Tribe in order to perform field inspections on the Reservation. The PSP should be amended to expressly provide that the State will seek tribal permission as a pre-condition to any effort to install observation wells on the Reservation.

On page 24 of the Tribe’s Opening Comments, the Kaibab Tribe provided comments regarding the development of mitigation measures; however, the PSP does not incorporate this comment. The PSP should be revised to expressly include mitigation measures, and include the Tribe’s comments regarding mitigation.

Study Plan 6: LAND USE PLANS AND CONFLICTS

Section 6.1 Introduction.

On page 25 of the Tribe’s Opening Comments, the Kaibab Tribe requested that the State expand the criteria for land use impacts. The PSP no longer has a section titled “Significance

Criteria for Each Impact Topic.” Nor is there a list of significance criteria or a section on land use impacts in the land use plans. The PSP should be amended to expressly identify significance criteria and land use impacts.

Section 6.6.1 Data Collection.

On page 25 of the Tribe’s Opening Comments, the Kaibab Tribe stated that the State must ask the Tribe for permission before any field inspections may occur on the Reservation and that the study plans should expressly provide that the State will obtain all necessary tribal permission. The PSP no longer has a section titled “Field Reconnaissance” but language similar to that in the Draft Study Work Plan now reads “[f]ield reconnaissance will include a physical inspection of the Project area [instead of ‘each alternative alignment’].” PSP at 55. However, this section fails to incorporate the Tribe’s comment requiring tribal permission prior to any data collection activities on the Reservation. The PSP should be amended to expressly require that the State obtain tribal permission prior to any data collection activities on the Reservation.

On page 25 of the Tribe’s Opening Comments, the Kaibab Tribe provided comments regarding the development of mitigation measures; however, the PSP does not incorporated this comment. The PSP should be revised to expressly include mitigation measures, and include the Tribe’s comments regarding mitigation.

Study Plan 7: NOISE

Section 7.2.1 Goals and Objectives.

On page 26 of the Tribe’s Opening Comments, the Kaibab Tribe stated that the development of any mitigation measures regarding impacts to tribal lands must be made in consultation with the Tribe, and suggested language for the amendment. The PSP did not incorporate this comment. The only mention of mitigation measures is the statement that a primary objective is to “[i]dentify what, if any, mitigation measures would be necessary to protect human safety and other environmental resources at locations that may be affected by Project noise.” PSP at 59. The PSP should be revised to expressly include mitigation measures, and include the Tribe’s comments regarding mitigation.

Study Plan 8: PALEONTOLOGICAL RESOURCES

Section 8.4.3 Issues and Data Needs.

On page 26 of the Tribe’s Opening Comments, the Kaibab Tribe stated that the work plan must expressly provide that the State obtain tribal permission for all field survey and recordation of paleontological resources. On page 64, the PSP states that the paleontological resource analyses will include “[p]erforming field inventory and recording paleontological resources within the Project area.” However, the PSP does not mention field work on the reservation, nor does it acknowledge that the State must obtain permission from the Tribe before it may conduct

any such work. The PSP should be amended to expressly provide that the State will obtain tribal permission prior to the conduct of any data collection activities on the Reservation.

Section 8.6.2.3 Task 3 - Data Analyses.

On page 26 of the Tribe's Opening Comments, the Kaibab Tribe provided comments for the mitigation procedures for paleontological resources. The PSP did not incorporate those comments. Instead, the PSP now limits mitigation to the following: sampling, salvage, rerouting and monitoring. PSP at 67. The monitoring provision only mentions the need for a "qualified paleontologist on site," and fails to include either the Tribe as a monitor, or the Bureau of Indian Affairs as a monitor. *Id.* The PSP should be amended to expressly incorporate the Tribe's previous comments on mitigation procedures, and should also include the Tribe and the Bureau of Indian Affairs among the monitors to be present on all paleontological sites.

Study Plan 9: RECREATION RESOURCES

Section 9.6.2 Methods for Preliminary Analysis and Preliminary Design.

On page 27 of the Tribe's Opening Comments, the Kaibab Tribe stated that the Tribe's regulations and statutes must be included in mitigation measures. The PSP does not incorporate the Tribe's comments when discussing mitigation. *See* PSP at 74-75. The PSP should be amended to expressly include mitigation measures and to provide that the Tribe's regulations and statutes be included in the laws that will guide such mitigation measures.

Study Plan 10: SOCIOECONOMICS/WATER RESOURCE ECONOMICS

Section 10.2.1 Goals and Objectives.

On page 27 of the Tribe's Opening Comments, the Kaibab Tribe stated that the study plan "should include an additional issue for analysis of the recovery and reclamation of all structures and facilities associated with the proposed project should it be only partially constructed, or abandoned some in the future because it has become obsolete." The PSP states that the study will be "[d]escribing any economic impacts related to mitigation/resource management on the Kaibab Indian Reservation relative to the existing highway alternative." PSP at 77. The State disagreed with the Tribe's study request on the grounds that the Commission does not approve hydroelectric projects in the absence of approved and secure funding by the licensee, and that the project may not be abandoned unless the State applies to the Commission to surrender the license. PSP Att. B, Responses to Study Requests at 13. The PSP should clarify in the socioeconomics/water resource economics study that there will be no project abandonment once funding is approved and without Commission approval to surrender the license.

On page 27 of the Tribe's Opening Comments, the Kaibab Tribe provided comments regarding the development of mitigation measures; however, the PSP does not incorporate this

comment. The PSP should be revised to expressly include mitigation measures, and include the Tribe's comments regarding mitigation. The minimal reference to mitigation measures fails to include the Kaibab Tribe or the Bureau of Indian Affairs, PSP at 84, and the PSP should be amended to expressly include the Tribe and the Bureau of Indian Affairs.

Study Plan 12: SPECIAL STATUS PLANT SPECIES AND NOXIOUS WEED ASSESSMENT STUDY PLAN

Section 12.2 Study Description and Objectives (§ 5.11(d)(1)).

On page 32 of the Tribe's Opening Comments, the Kaibab Tribe stated that there should be an express provision that the State obtain tribal permission to conduct research on the Reservation. The PSP states that "[p]lant surveys will provide baseline information about existing conditions as well as detailed distribution and abundance information on each special status plant species within the proposed project corridor." PSP at 93. However, the PSP fails to acknowledge that the State may only conduct work on the Reservation by first obtaining tribal permission to do so. Therefore, the PSP should be amended to acknowledge that the work will occur on the Reservation, and tribal permission is required before that work may be conducted.

Additionally, the identification of the location of plants that are significant to the Tribe should not be included in public documents associated with the proposed pipeline. The language in the cultural resources study plan should also be incorporated in the vegetation community mapping study plan such that all documentation should "be prepared for limited distribution to only those Federal agencies, Tribes and SHPO offices responsible for managing cultural resources and is not intended for public review or distribution." PSP at 24. Additionally, the Kaibab Tribe retains the right to review and edit all portions of the report involving Kaibab significant plants before the report is shared with the study team, other federal and state agencies, and tribes. The PSP should acknowledge the Kaibab Tribe's right.

Interestingly, the PSP states that "[t]he extensive number of species considered to be plants of cultural concern by the Kaibab Band of Paiute Indians will be reconsidered by the Tribe to include only those species of particular importance and interest to the Tribe that are not ubiquitous or abundant." PSP at 93; *see also id.* at 95 ("the list will be narrowed by the Tribe"). The Tribe has not agreed to reconsider its list of culturally significant plants, nor has the State asked the Tribe to reconsider its list. This statement should be removed from the PSP until such time as the Tribe has actually agreed to narrow its list of culturally significant plants. In the meantime, the PSP should include the Tribe's list of culturally significant plants in its entirety. In addition, the statement on page 95 of the PSP that "the list will be narrowed by the Tribe to include those species of particular importance and interest to the Tribal members," should be amended to delete the phrase "Tribal members" and replace it with "Tribe."

Section 12.6.3 Task 3 - Draft Report Preparation.

On page 30 of the Tribe's Opening Comments, the Kaibab Tribe stated that all mitigation efforts should occur in consultation with the Tribe. While the PSP states the study plan will include recommendations to avoid or minimize damage to plants, it fails to include the Tribe as an entity for consultation on this issue. The PSP should be amended to expressly include the Tribe in all mitigation consultation. Moreover, the mitigation plan should include express provisions for minimizing the spread of noxious weeds. In particular, the spread of tamarisk in the project area should be addressed at the outset, such as by requiring that all equipment working in areas already infested with tamarisks be washed prior to moving to an area that is not infested.

Study Plan 13: SPECIAL STATUS WILDLIFE SPECIES AND HABITAT

On page 38 of the Tribe's Opening Comments, the Kaibab Tribe stated that tribal permission must be obtained prior to the conduct of field reconnaissance on the Reservation. The PSP breaks up the study plan by summarizing the Proposed Study and Methodology for each species that is listed. Some species will require field surveys and some will not, as described below; however, nowhere does the PSP acknowledge the need for tribal permission prior to the conduct of any field surveys on the Reservation:

- The California Condor will require "ongoing coordination and monitoring." PSP at 103.
- The Mexican Spotted Owl will not require a field study. *Id.* at 104.
- The Southwestern Willow Flycatcher might require a field survey. *Id.* at 106.
- The Utah Prairie Dog would require field surveys. *Id.* at 107.
- The Yellow-billed Cuckoo would not require a field survey. *Id.* at 108.
- The Coral Pink Sand Dunes Tiger Beetle would not require a field survey. *Id.* at 109.
- The Desert Tortoise require a field survey. *Id.*
- The Black Footed Ferret would not require a field survey. *Id.* at 110.
- The Brown Pelican would not require a field survey. *Id.* at 111.
- The Chiricuhua Leopard Frog would not require a field survey. *Id.*
- The Hualapai Mexican Vole would not require a field survey. *Id.* at 112.
- The Relict Leopard Frog would not require a field survey. *Id.* at 113.
- The Yuma Clapper Rail would not require a field survey. *Id.*
- Field studies are not proposed for the following species: Black Swift, American Bittern, Fulvus Whistling Duck, White-Faced Ibis, Greater Sage Grouse, American Three-Toed Woodpecker, Bobolink, mountain Plover, Dark Kangaroo Mouse, Spotted Bat, California Leaf-nosed Bat, Big Free-tailed bat, house Rock Valley Chisel-toothed Kangaroo Rat, Desert Night Lizard, Desert iguana, Mojave Rattlesnake, and the Speckled Rattlesnake. *Id.* at 116-18.
- Field surveys would be utilized for the following species: Arizona toad, Great Plains toad, Common Chuckwalla, Gila Monster, Sidewinder, Western Threadsnake, Zebra-tailed Lizard, Northern Sagebrush Lizard, Western Banded Gecko, Bald Eagle, Burrowing Owl, Ferruginous Hawk, Lewis's Woodpecker, Long-billed Curelew, Northern Goshawk,

Short Eared owl, Peregrine Falcon, Loggerhead Shrike, Fringed Myotis Bat, Allen's Big-eared bat, Big Free-tailed Bat, Western Red Bat, Small-footed Myotis Bat, Long-eared Myotis bat, Kit Fox, and the Pygmy Rabbit. *Id.* at 118-127.

There is no mention of field studies being performed on the Reservation nor is there mention of obtaining tribal permission if there were to be a field study performed on the Reservation. The PSP should expressly acknowledge that field work will be required on the Reservation, as well as the need for tribal permission prior to the conduct of any field reconnaissance on the Reservation.

Study Plan 13 does not contain any mitigation development language. Consistent with the comments on page 28 of the Tribe's Opening Comments, the PSP should be amended to include the Tribe's suggested mitigation language.

Section 13.9.3.2 Proposed Study and Methodology.

The PSP states that "[t]he Kaibab Band of Paiute Indians' list of Wildlife of Cultural Concern contains multiple species; the list will be narrowed by the Tribe to include those species of particular importance and interest to Tribal members." PSP at 128. The Tribe has not agreed to reconsider its list of culturally significant wildlife species, nor has the State asked the Tribe to reconsider its list. This statement should be removed from the PSP until such time as the Tribe has actually agreed to narrow its list of culturally significant wildlife species. In the meantime, the PSP should include the Tribe's list of culturally significant plants in its entirety. In addition, in the same statement on page 128 of the PSP, the phrase "Tribal members" should be deleted and replaced with "Tribe."

Study Plan 14: TRANSPORTATION

Section 14.6.2.3 Task 3 - Data Analysis.

On page 31 of the Tribe's Opening Comments, the Kaibab Tribe made comments regarding procedures for developing mitigation, however, the PSP fails to incorporate those comments. The Tribe stated that tribal statutes and regulations as well as the Bureau of Indian Affairs regulations should be included in the mitigation development. The PSP states that "mitigation measures will be identified and developed to mitigate significant impacts." PSP at 136. However, the PSP fails to include tribal statutes and regulations as well as the Bureau of Indian Affairs' regulations. The PSP should be amended to expressly include such statutes and regulations.

Study Plan 15: VEGETATION COMMUNITY MAPPING

On page 31 of the Tribe's Opening Comments, the Tribe stated that it provided a list of tribally significant plants. The potential impacts of the proposed pipeline on those plants must be analyzed as part of the vegetation community mapping study. Additionally, the identification of the location of plants that are significant to the Tribe should not be included in public documents

associated with the proposed pipeline. The language in the cultural resources study plan should also be incorporated in the vegetation community mapping study plan such that all documentation should “be prepared for limited distribution to only those Federal agencies, Tribes and SHPO offices responsible for managing cultural resources and is not intended for public review or distribution.” PSP at 24. Additionally, the Kaibab Tribe retains the right to review and edit all portions of the report involving Kaibab significant plants before the report is shared with the study team, other federal and state agencies, and tribes. The PSP should acknowledge the Kaibab Tribe’s right.

Study Plan 16: VISUAL RESOURCES

Section 16.6 Proposed Study Methodology (§5.11(d)(5)).

On page 32 of the Tribe’s Opening Comments, the Kaibab Tribe stated that the significance criteria for impacts to visual resources which constitute TCPs should include any landscape modification which adversely affects the traditional use of the TCP. Although TCPs are considered to be an area of “high visual sensitivity,” PSP at 149, the PSP does not incorporate a significance criteria to be any adverse affects to traditional use. The PSP should include specific significance criteria for addressing impacts to visual resources, including TCPs.

Section 16.6.3.8 Mitigation Measures.

On page 33 of the Tribe’s Opening Comments, the Kaibab Tribe proposed mitigation measures; however, those comments were not incorporated into the PSP. The PSP states that the mitigation measures will be based only upon state and Federal statutes and regulations. PSP at 152. The Kaibab Tribe, and the tribal statutes and regulations, are not included. Nor do the mitigation measures include the Bureau of Indian Affairs among the agencies that will evaluate the mitigation options. The PSP should be amended to include the Tribe’s comments regarding mitigation measures, and to include both the Tribe and the Bureau of Indian Affairs in all mitigation efforts and evaluation.

On page 33 of the Tribe’s Opening Comments, the Kaibab Tribe provided comments regarding dependency items from other resources. There is no longer a section addressing dependency items, nor is there any language addressing the Tribe’s comments. The PSP should be amended to address the Tribe’s original comments and to explain how the visual resources analysis will depend on items from other study plans.

Study Plan 17: SURFACE WATER QUALITY

Section 17.2.1 Goals and Objectives.

On page 33 of the Tribe’s Opening Comments, the Kaibab Tribe suggested that the analysis of impacts to groundwater resources should extend to all groundwater resources. The PSP states that the goal of the water quality study is to determine potential impacts on surface

water quality. PSP at 155. A listed objective of the study is to “[d]etermine how groundwater resources would be quantitatively impacted by recharge associated with Project operation.” *Id.* However, despite the State’s agreement that pipeline leaking should be part of the water quality analysis, PSP Att. B, Responses to Study Requests at 14, the PSP does not expressly discuss the water quality effects from possible leaking from the pipeline. *See* Tribe’s Opening Comments at 34. The PSP should be amended to take into account all impacts to water quality from the construction, operation and maintenance of the proposed pipeline, including the impacts from leaking.

Also on page 33 of the Tribe’s Opening Comments, the Kaibab Tribe stated the water quality impact area should include “groundwater aquifers that would be subject to water deliveries or alterations in flow.” However, the PSP fails to address this significant water quality issue. The PSP should be amended to consider all water quality impacts to both surface water and groundwater from the proposed pipeline.

Section 17.6.2.5 Task 5 - Report Preparation.

On page 161, the PSP contains some language addressing mitigation: “[f]ield investigation activities and methods will be described, and data evaluations and results will be presented. Results will be discussed with a focus on the study objectives. Conclusions, where warranted, will be provided, and will address prevention or mitigation of potential impacts to surface water quality.” However, this language fails to incorporate the comments provided by the Kaibab Tribe on mitigation measures on page 34 of the Tribe’s Opening Comments. The PSP should be amended to expressly provide for mitigation measures, and to incorporate the Tribe’s comments regarding such measures.

Study Plan 18: SURFACE WATER RESOURCES

On page 28 of the Tribe’s Opening Comments, the Kaibab Tribe stated that the State must obtain permission from the Tribe prior to conducting aerial photographs over the Reservation. The PSP no longer discusses aerial photographing. The PSP should be amended to clarify whether aerial photography is planned, and should acknowledge the need to obtain tribal permission prior to seeking to conduct aerial photography over the Reservation.

Section 18.6.4 Prepare a Technical Report.

On page 28 of the Tribe’s Opening Comments, the Kaibab Tribe provided comments regarding mitigation measures that were set forth in the PAD. The PSP does not include the Tribe’s comments. Moreover, the only language discussing mitigation measures states, “[a] technical report will be prepared to document the impact analysis for water resources. The technical report will include the following sections . . . Mitigation and Monitoring - will summarize mitigation and monitoring methods for the proposed Project.” PSP at 166. Merely describing mitigation and monitoring after-the-fact is inadequate. The PSP should specifically

identify the mitigation measures that the State will undertake and should include the Tribe in all aspects of mitigation affecting tribal interests.

Study Plan 19: WATER SUPPLY AND CLIMATE CHANGE

Section 19.4.3 Issues and Data Needs.

On page 27 of the Tribe's Opening Comments, the Kaibab Tribe stated that the study of the water supply from the Colorado River, in light of long-term drought, should be analyzed as part of the analysis of the impacts of the proposed pipeline. In particular, the Tribe stated that the study "should include other climate change issues, such as flooding, lower snow packs in the Upper Basin of the Colorado River, precipitation occurring at different times of the year, and warmer winters." The PSP states that the water supply and climate change study will analyze the issues identified by the Tribe. PSP at 170-71. In addition, the PSP states that it will use the "Bureau of Reclamation CRSS model . . . to determine potential effects on downstream water rights such as those associated with the Navajo, Ute, Paiute, and Hopi tribes." *Id.* at 171. The PSP should not limit its analysis of climate changes to downstream effects, since climate change issues will affect upstream conditions as well.

Additionally, the PSP does not mention the Kaibab Tribe as a source of information on streamflows and conditions in the Colorado River over time. The Tribe maintains such information, and the PSP should be amended to acknowledge the Tribe as a source of streamflow and river condition information.

Study Plan 20: WETLANDS AND RIPARIAN RESOURCES

Section 20.6.1 Introduction and Overall Approach.

On page 35 of the Tribe's Opening Comments, the Kaibab Tribe stated that to the extent the State intends to conduct data analysis, field surveys and any other reconnaissance on the Reservation, the State must obtain the permission of the Tribe prior to doing so. On page 178, the PSP states that "consultation with federal and state resources management agencies will be performed." The PSP should be amended to include the Tribe and its resources management agencies among those with whom the State will consult, and should also expressly acknowledge the need to obtain tribal permission prior to conducting any data analysis, field surveys or any other reconnaissance on the Reservation.

Section 20.6.2.3 Task 3 - Data Analyses.

On page 35 of the Tribe's Opening Comments, the Kaibab Tribe stated that an express provision be inserted: "Although riparian areas may not be regulated as wetlands and other jurisdictional waters, they are of interests because they provide important habitat for wildlife, including refute and forage areas. This is also the case for wetlands that might not be considered

jurisdictional waters.” The PSP should expressly include impacts on riparian areas and intermittent washes as part of the wetlands and riparian areas analyses.

On pages 35 and 36 of the Tribe’s Opening Comments, the Kaibab Tribe noted that limiting the analysis of riparian areas and wetlands to the test set forth in *Rapanos v. United States*, 547 U.S. 715, 732-33 (2006), may be too limited. The PSP states that a “final baseline GIS map will be produced that delineates jurisdictional wetlands and waterways and other non-jurisdictional wetlands and riparian areas within the Project area.” PSP at 179. The PSP should clarify that it is not limiting its analysis to the *Rapanos* test.

On page 37 of the Tribe’s Opening Comments, the Kaibab Tribe stated that tribal statutes and regulations must be included among those to which the State will adhere for mitigation purposes. The Tribe also commented that the Bureau of Indian Affairs must be among the federal agencies that work to develop mitigation options. The PSP language states: “The mitigation measures will be based on applicable state and Federal [tribes were not included here] statutes and regulations, past experience and best professional judgment to either satisfy the public interest requirement. In some cases significant impacts may not be able to be mitigated. All reasonably foreseeable mitigation options will be developed in consultation with and evaluated by the Federal Energy Regulatory Commission, Bureau of Land Management, tribes, [Bureau of Indian Affairs was not included here] and other responsible federal or other resource agencies and factored into the respective decision documents.” PSP at 180. The PSP should be amended accordingly.

Study Plan 21: WILDLIFE RESOURCES

Section 21.4.3 Issues and Data Needs.

On page 37 of the Tribe’s Opening Comments, the Kaibab Tribe stated that it was providing a list of wildlife species of significance to the Tribe. On pages 184 and 185, the PSP lists various data sources, but fails to either acknowledge the Tribe’s list or incorporate it.

On page 38 of the Tribe’s Opening Comments, the Kaibab Tribe stated that the work plan must acknowledge the need to obtain tribal permission prior to the conduct of any field reconnaissance on the Reservation. Not only does the PSP fail to acknowledge the need for tribal permission for all studies the State wishes to conduct on the Reservation, it discusses the conduct of “aerial orthophotography of the Project preferred and alternative alignments,” and “[a]erial videography of the Project preferred alignment.” PSP at 185. It is not clear why aerial videography would be conducted only of the preferred alignment, and not of the alternative alignment. The PSP should explain why aerial orthophotography will occur for both the preferred and alternative alignments, yet aerial videography will occur only for the preferred alignment. More importantly, the PSP should be amended to expressly acknowledge the need for tribal permission for all field reconnaissance, including aerial reconnaissance, on the Reservation.

Section 21.6.2.4 Task 4 - Report Preparation.

On page 187, the PSP contains minimal mitigation language: “The technical memorandum will include mitigation measures to reduce significant impacts resulting from the Project.” The Kaibab Tribe offered more extensive mitigation language on page 38 of the Tribe’s Opening Comments; however, none of those comments appear in the PSP. The PSP should be amended to provide specific mitigation measures, including the comments provided in the Tribe’s Opening Comments.

CONCLUSION

On behalf of the Kaibab Band of Paiute Indians, we express our appreciation for the opportunity to provide comments on the PSP. We look forward to continuing to work with the Commission and the State on this significant endeavor.

Dated: November 25, 2008

Respectfully submitted,

/s/ Alice E. Walker

By: _____

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CERTIFICATE OF SERVICE

I hereby certify that pursuant to the eService requirements of FERC, I have forwarded the Acceptance for Filing email from the eFiling service via e-mail to all persons on the Service List for P-12966 for the foregoing *Comments of the Kaibab Band of Paiute Indians Regarding Revised Proposed Study Plan Filed By Utah Board of Water Resources, for Lake Powell Hydroelectric Project No. 12966*, and further that I have placed true copy in the U.S. Mail, first-class postage prepaid thereon, on this 25th day of November, 2008 to the following:

John Weisheit
Conservation Director
Living Rivers
P.O. Box 466
Moab, UT 84532

/s/ D.A. Vitale

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Utah Board of Water Resources

1/7/09

Project No. P-12966-000

COMMENTS OF THE
KAIBAB BAND OF PAIUTE INDIANS REGARDING
THE REVISED STUDY PLAN FILED BY
UTAH BOARD OF WATER RESOURCES, FOR
LAKE POWELL HYDROELECTRIC PROJECT NO. 12966

On behalf of the Kaibab Band of Paiute Indians (“Kaibab Tribe”), we submit the following comments on the *Utah Board of Water Resources, Lake Powell Hydroelectric System, Revised Study Plan In Accordance with 18 U.S.C. §5.11, Project No. 12966* (Dec. 2008). The instant comments incorporate and supplement the comments filed by the Kaibab Tribe on July 7, 2008 and November 25, 2008 in this matter. *See Comments of the Kaibab Band of Paiute Indians Regarding the Pre-Application Document Filed By the Utah Board of Water Resources, for Lake Powell Hydroelectric Project No. 12966, and Comments of the Kaibab Band of Paiute Indians Regarding the Scoping of Environmental Issues for the Proposed Lake Powell Pipeline Project, FERC No. 12966, Utah and Arizona* (July 7, 2008) (“Tribe’s Opening Comments”); *Comments of the Kaibab Band of Paiute Indians Regarding Revised Proposed Study Plan filed by Utah Board of Water Resources, For Lake Powell Hydroelectric Project No. 12966* (Nov. 25, 2008) (“Tribe’s Second Comments”). For ease of reference, the Kaibab Tribe herein refers to the Proposed Study Plan that was issued in August of 2008 as “PSP,” and the Revised Study Plan that was issued in December of 2008 as “RSP.”

Study Plan 1: AIR QUALITY

On page 2 of the Tribe’s Second Comments, the Kaibab Tribe requested that the PSP expressly define the study area for the air quality studies in the study plan. The RSP includes a very vague definition of the study area. The Kaibab Tribe reiterates its comment that the RSP should expressly define the study area for the air quality studies in the study plan.

Section 1.4.3 Issues and Data Needs.

On page 2 of the Tribe’s Second Comments, the Kaibab Tribe made a number of requests regarding the breadth of the study area, an emissions inventory, and mitigation of impacts to air quality. The RSP fails to address the Kaibab Tribe’s comments, and the Tribe incorporates those comments here. The Kaibab Tribe also requested that the study plan specifically identify the Tribe’s Ecology Code as a source of relevant resource management goals that should be addressed by the new PSP. Tribe’s Second Comments at 2. While the RSP indicates the possible existence of tribal resource management goals, the Kaibab Tribe reiterates its comment

that the RSP should be amended to specifically identify the Kaibab Tribe's Ecology Code as a source for resource management goals with respect to air quality.

Study Plan 2: AQUATIC RESOURCES

The RSP fails to include a mitigation plan with respect to aquatic resources. The Kaibab Tribe reiterates its comment that the aquatic resources study plan should include a plan for mitigation. Tribe's Second Comments at 3.

Study Plan 3: ARCHAEOLOGICAL AND HISTORIC-ERA RESOURCES

In the PSP, Study Plan 3 was entitled "Cultural Resources," and included ethnographic studies. The RSP now includes a separate study for ethnographic resources, and does not include traditional cultural properties ("TCPs") in the archaeological and historic-era resources study plan, instead including them in the new ethnographic resources study plan. While the Kaibab Tribe agrees with this change, the Tribe objects to the last minute nature of the change, which effectively permits the Tribe (and all other commenters) only one opportunity to comment on such a major revision to the study plans. The Kaibab Tribe requests that it be afforded another opportunity for comment after the next iteration of the study plans are issued.

Section 3.2 Study Description and Objectives and Information to be Obtained (§5.11(d)(1)).

On page 5 of the Tribe's Second Comments, the Kaibab Tribe noted that the PSP failed to list the Archeological Resources Protection Act, 16 U.S.C. §§ 470aa to 470mm ("ARPA") among the various federal statutes with which the cultural resources study will comply. The RSP similarly fails to list ARPA, even though the RSP discusses treatment of archeological sites at length. The RSP should be amended to explicitly include ARPA in the list of federal statutes with which the study must comply. The RSP also fails to include the executive orders and National Park Service bulletins suggested by the Tribe. The Kaibab Tribe reiterates those comments here. The Tribe also requested that the PSP acknowledge that consultation with tribes other than the Kaibab Tribe should be included. The Tribe reiterates that request.

Section 3.4.1 Existing Information and Additional Information Needs (§5.11(d)(3)), Overview and Background.

The PSP included references to "Anasazi, Paiute, Fremont, and earlier Archaic cultures." On page 5 of the Tribe's Opening Comments, the Tribe commented that use of these terms was misleading, and the Tribe requested that the study plan eliminate these references and replace them with references to specific time periods and the dominant style of life that prevailed during the identified time periods. The RSP contains the same references, and the Tribe reiterates its comment that the terms should be replaced with more appropriate terms.

Section 3.4.2 Primary Data Needed.

This section discusses the performance of field surveys “once the south alignment is finalized.” RSP at 23. Any surveys performed in the course of these studies must be performed for all identified alternative alignments, not just the south alignment, and the RSP should be amended accordingly. The RSP also fails to acknowledge the Kaibab Tribe’s comment that the study plan should specifically include affected Indian tribes as experts in the identification of cultural resources and the development of measures to mitigate damages to them. The RSP should be amended to acknowledge this.

Section 3.4.3 Secondary Data Needed.

On page 6 of the Tribe’s Second Comments, the Tribe commented that in order for the State or its contractors to examine documents held in tribal offices, the State must develop engagement protocols which address the procedures for sharing culturally sensitive data. Furthermore, the State should not limit its examination of tribal documents to those maintained by the Kaibab Tribe, but should include all of the Indian tribes potentially affected by the proposed pipeline. The Tribe reiterates those comments here.

Section 3.6.1 Introduction and Overall Approach.

The PSP indicated that analysis of impacts to cultural resources would be undertaken after all agencies involved, including the Kaibab Tribe, agreed to a joint programmatic agreement. The Kaibab Tribe commented that the Tribe is the principal entity that can determine how to treat archaeological sites, artifacts and human remains. Tribe’s Second Comments at 6. The RSP does not mention any programmatic agreement, instead merely including “consultation between FERC designated Native American Tribes (claiming ancestral affiliation) to identify issues concerning archaeological and historic-area resources.” RSP at 25. The Kaibab Tribe repeats its comment that the Tribe is the principal entity that can determine how to treat archaeological sites, artifacts and human remains, and the RSP should expressly acknowledge this fact, since consultation to “identify issues” is insufficient to protect such resources.

The Kaibab Tribe reiterates its previous comments regarding the description of the impact area including all impacts from fugitive dust, as the RSP fails to incorporate or address these comments. *See* Tribe’s Second Comments at 6.

Section 3.6.3.1 Monitoring.

On page 3 of the Tribe’s Second Comments, the Kaibab Tribe stressed that the study plan should require tribal monitors to oversee the conduct of the studies and all field work. While the RSP discusses monitoring of construction activities, RSP at 28, it fails to mention the need for tribal monitors. The Kaibab Tribe is the principal entity that can determine how to treat archaeological sites, artifacts and human remains. Other Indian tribes will have special

knowledge in other areas of the proposed pipeline. The RSP should specifically acknowledge the need for tribal monitors for all study, field work and construction activities.

Section 3.6.3.2 Traditional Cultural Properties.

The RSP notes the sensitive nature of TCPs, yet indicates that such sensitivity requires cooperation between the Contractor, the Utah State Water Board, and the Project Consulting Archaeologist/Ethnographer, with no mention of Indian tribes. RSP at 28-29. The RSP should be revised to expressly provide that Indian tribes are the principal entities to determine the cultural significance of a TCP and only the affected Indian tribes can recommend culturally appropriate mitigation and management.

Section 3.6.3.3 Discovery.

The RSP provides that upon discovery of archaeological, historic and paleontological¹ resources in the course of construction, the construction project manager must stop all work. Thereafter, the State must notify and consult with the State Historic Preservation Officer (“SHPO”) and the Advisory Council on Historic Preservation regarding the appropriate procedure to address such discovery. RSP at 29. Nowhere in this section does the RSP include the Kaibab Tribe or any other Indian tribe among those with whom the State must consult in the event of such discovery. As stated above, the Kaibab Tribe is the principal entity with expertise regarding the protection of all archaeological, historic and paleontological resources in the vicinity of the proposed pipeline. The omission of the Tribe from the authorities with which the State must consult is inexcusable. The RSP should be amended to expressly require that the State must consult with the Kaibab Tribe and any other Indian tribe on how to handle archaeological, historic and paleontological resources discovered in the course of the construction of the proposed pipeline.

Section 3.6.3.4 Discovery of Human Remains.

As with discovery generally, the RSP inexcusably fails to include the Kaibab Tribe and other Indian tribes as among the authorities with whom the State must consult in the event of the discovery of human remains in the course of the construction of the proposed project. The Native American Graves Protection and Repatriation Act expressly provides that consultation with tribes is not only required, but is paramount. 25 U.S.C. § 3002(d)(1). Moreover, Executive Order No. 13007, 61 Fed. Reg. 26771 (1996), provides:

- (a) Each executive branch agency with statutory or administrative responsibility for the management of Federal lands

¹Notably, Study Plan 8: Paleontological Resources, addresses paleontology, and it appears to be repetitive, if not inconsistent, to also address paleontological resources in the archaeological and historic-era resources study plan.

shall, as appropriate, promptly implement procedures for the purposes of carrying out the provisions of section 1 of this order, including, where practicable and appropriate, *procedures to ensure reasonable notice is provided of proposed actions or land management policies that may restrict future access to or ceremonial use of, or adversely affect the physical integrity of, sacred sites. In all actions pursuant to this section, agencies shall comply with the Executive memorandum of April 29, 1994, "Government-to-Government Relations with Native American Tribal Governments."*

(b) Within 1 year of the effective date of this order, the head of each executive branch agency with statutory or administrative responsibility for the management of Federal lands shall report to the President, through the Assistant to the President for Domestic Policy, on the implementation of this order. Such reports shall address, among other things, (i) any changes necessary to accommodate access to and ceremonial use of Indian sacred sites; (ii) any changes necessary to avoid adversely affecting the physical integrity of Indian sacred sites; and (iii) *procedures implemented or proposed to facilitate consultation with appropriate Indian tribes and religious leaders and the expeditious resolution of disputes relating to agency action on Federal lands that may adversely affect access to, ceremonial use of, or the physical integrity of sacred sites.*

Executive Order No. 13007, 61 Fed. Reg. 26771 (1996). Informing and including affected Indian tribes is, therefore, paramount and the RSP should be revised to expressly acknowledge these requirements.

3.6.5.1 Significance Criteria for Cultural Resources, and Section 3.6.3.2 Mitigation of Potential Impacts.

The Tribe previously commented that only Indian tribes may determine the significance of cultural resources for them and their cultures, which is a separate and distinct process from the determination by archaeologists and historians of the science value of physical remains. Tribe's Second Comments at 7. Nowhere in the RSP in the discussion of the significance criteria is the Kaibab Tribe, or any other Indian tribe, mentioned. The Tribe reiterates its comment that the RSP should expressly state that tribal involvement in the development of significance criteria is critical and will occur.

Section 3.6.4 Analysis of Cumulative Impacts.

The Kaibab Tribe reiterates its comment that the RSP should require that the cumulative impact analysis for the cultural resources study should adhere to the procedures set forth in *Final Environmental Impact Statement for the Nevada Test Site and Off-Site Locations in the State of Nevada*, vol. 1, App. G (Aug. 1996), available at <http://www.globalsecurity.org/wmd/library/report/enviro/eis-0243> (last visited Jan. 4, 2009). Tribe's Second Comments at 7.

3.6.5 Report Preparation.

The Kaibab Tribe reiterates its comment that the RSP should indicate that the Kaibab Tribe retains the right to review and edit all portions of the report involving Kaibab tribal resources before the report is shared with the study team, other federal and state agencies, and other tribes.

3.7 Schedule and Level of Effort (§5.11(d)(6)).

The Kaibab Tribe reiterates its comment that the concept of "appropriate experience" must be defined. Furthermore, the PSP should reflect that Indian tribes retain the right to approve cultural anthropologists who work with them.

Study Plan 5: GROUNDWATER RESOURCES

In the Tribe's Opening Comments and in the Tribe's Second Comments, the Kaibab Tribe provided substantial comments on the analysis of impacts to groundwater resources. The RSP does not appear to incorporate any of the changes suggested by the Tribe in its previous comments. The Kaibab Tribe reiterates those comments here. The RSP should be amended to incorporate the Tribe's prior comments. *See* Tribe's Opening Comments at 23-24; Tribe's Second Comments at 8-9.

Study Plan 6: LAND USE PLANS AND CONFLICTS

Section 6.6.1 Data Collection.

The RSP fails to incorporate the Kaibab Tribe's comment that the State must obtain tribal permission prior to entering any tribal land during field reconnaissance. *See* Tribe's Second Comments at 10. The Tribe requests that the RSP be modified to specifically acknowledge that tribal permission is required before any field reconnaissance is performed on tribal lands.

Study Plan 7: NOISE

Section 7.2.1 Goals and Objectives.

On page 26 of the Tribe's Opening Comments and again on page 10 of the Tribe's Second Comments, the Kaibab Tribe stated that the development of any mitigation measures regarding impacts to tribal lands must be made in consultation with the Tribe, and suggested language for the amendment on page 26 of the Tribe's Opening Comments. The RSP fails to incorporate this comment. The only mention of mitigation measures is the statement that a primary objective is to "[i]dentify what, if any, mitigation measures would be necessary to protect human safety and other environmental resources at locations that may be affected by Project noise." RSP at 71. The RSP should be revised to expressly include mitigation measures, and include the Tribe's comments regarding mitigation.

Study Plan 8: PALEONTOLOGICAL RESOURCES

Section 8.4.3 Issues and Data Needs.

On page 10 of the Tribe's Second Comments, the Kaibab Tribe reiterated its prior comment that the RSP should expressly acknowledge that the State must obtain permission from the Tribe prior to performing any field work on the Reservation. The RSP should be amended to include this acknowledgment.

Section 8.6.2.3 Task 3 - Data Analyses.

On page 26 of the Tribe's Opening Comments and again on page 11 of the Tribe's Second Comments, the Kaibab Tribe provided comments for the mitigation procedures for paleontological resources. The RSP fails to incorporate those comments. Instead, the RSP limits mitigation to the following: sampling, salvage, rerouting and monitoring. RSP at 83-84. The monitoring provision continues to fail to include either the Kaibab Tribe as a monitor, or the Bureau of Indian Affairs as a monitor. The RSP should be amended to expressly incorporate the Tribe's previous comments on mitigation procedures, and should also include the Tribe and the Bureau of Indian Affairs among the monitors to be present on all paleontological sites.

Study Plan 9: RECREATION RESOURCES

Section 9.6.2 Methods for Preliminary Analysis and Preliminary Design.

On page 27 of the Tribe's Opening Comments and again on page 11 of the Tribe's Second Comments, the Kaibab Tribe stated that the Tribe's regulations and statutes must be included in mitigation measures. The RSP does not incorporate the Tribe's comments when discussing mitigation. *See* RSP at 90-91. The RSP should be amended to expressly include mitigation measures and to provide that the Tribe's regulations and statutes be included in the laws that will guide such mitigation measures.

Study Plan 10: WATER RESOURCE ECONOMICS/SOCIOECONOMICS

Section 10.2.1 Primary Goals and Objectives.

On page 27 of the Tribe's Opening Comments and again on pages 11 and 12 of the Tribe's Second Comments, the Kaibab Tribe stated that the study plan "should include an additional issue for analysis of the recovery and reclamation of all structures and facilities associated with the proposed project should it be only partially constructed, or abandoned some in the future because it has become obsolete." The State disagreed with the Tribe's study request on the grounds that the Commission does not approve hydroelectric projects in the absence of approved and secure funding by the licensee, and that the project may not be abandoned unless the State applies to the Commission to surrender the license. PSP Att. B, Responses to Study Requests at 13. The RSP should clarify in the socioeconomics/water resource economics study that there will be no project abandonment once funding is approved and without Commission approval to surrender the license.

On page 27 of the Tribe's Opening Comments and again on page 12 of the Tribe's Second Comments, the Kaibab Tribe provided comments regarding the development of mitigation measures; however, the RSP does not incorporate this comment. The RSP should be revised to expressly include mitigation measures, and include the Tribe's comments regarding mitigation. The minimal reference to mitigation measures fails to include the Kaibab Tribe or the Bureau of Indian Affairs, PSP at 105, and the RSP should be amended to expressly include the Tribe and the Bureau of Indian Affairs.

Study Plan 12: SPECIAL STATUS PLANT SPECIES AND NOXIOUS WEED ASSESSMENT STUDY PLAN

Section 12.2 Study Description and Objectives (§5.11(d)(1)).

On page 12 of the Kaibab Tribe's Second Comments, the Tribe objected to the statement in the PSP that states that "[t]he extensive number of species considered to be plants of cultural concern by the Kaibab Band of Paiute Indians will be reconsidered by the Tribe to include only those species of particular importance and interest to the Tribe that are not ubiquitous or abundant." See PSP at 93; *see also id.* at 95 ("the list will be narrowed by the Tribe"). The Tribe commented that it has not agreed to reconsider its list of culturally significant plants, nor has the State asked the Tribe to reconsider its list, and recommended that this statement be removed from the study plan until such time as the Tribe has actually agreed to narrow its list of culturally significant plants. See Tribe's Second Comments at 12.

The RSP continues to state that "[t]he extensive number of species considered as plants of cultural concern by the Kaibab Band of Paiute Indians will be reconsidered by the Tribe to include only those plants of particular importance and interest to the Tribe that are not ubiquitous or abundant." RSP at 118; *see also* RSP at 120. The Kaibab Tribe reiterates its objection to this

statement. The RSP should include the Tribe's list of culturally significant plants in its entirety until such time as the Tribe has agreed to narrow its list. In addition, the statement on page 120 of the RSP that "the list of species to be addressed by species-specific surveys will be narrowed in coordination with the Tribe to include those species of particular importance and interest to Tribal members" should be amended to delete the phrase "Tribal members" and replace it with "Tribe." *See* Tribe's Second Comments at 12.

Section 12.6.3 Task 3 - Draft Report Preparation.

On page 30 of the Tribe's Opening Comments and again on page 13 of the Tribe's Second Comments, the Kaibab Tribe stated that all mitigation efforts should occur in consultation with the Tribe. While the RSP states the study plan will include recommendations to avoid or minimize damage to plants, RSP at 124, it continues to fail to include the Tribe as an entity for consultation on this issue. The RSP should be amended to expressly include the Tribe in all mitigation consultation. The Kaibab Tribe also reiterates its comment that the mitigation plan should include express provisions for minimizing the spread of noxious weeds. *See* Tribe's Second Comments at 13.

Study Plan 13: SPECIAL STATUS WILDLIFE SPECIES AND HABITAT

Section 13.9.3.2 Proposed Study and Methodology.

Like the PSP, the RSP states that "[t]he Kaibab Band of Paiute Indians' list of Wildlife of Cultural Concern contains multiple species; the list will be narrowed by the Tribe to include those species of particular importance and interest to Tribal members." RSP at 164; *accord* PSP at 128. The Tribe has not agreed to reconsider its list of culturally significant wildlife species, nor has the State asked the Tribe to reconsider its list. This statement should be removed from the RSP until such time as the Tribe has actually agreed to narrow its list of culturally significant wildlife species. In the meantime, the RSP should include the Tribe's list of culturally significant wildlife species in its entirety. In addition, in the same statement on page 164 of the RSP, the phrase "Tribal members" should be deleted and replaced with "Tribe."

Study Plan 14: TRANSPORTATION

Section 14.6.2.3 Task 3 - Data Analysis.

On page 31 of the Tribe's Opening Comments and again on page 14 of the Tribe's Second Comments, the Kaibab Tribe made comments regarding procedures for developing mitigation measures; however, the RSP fails to incorporate those comments. The Tribe stated that tribal statutes and regulations as well as the Bureau of Indian Affairs regulations should be included in the development of mitigation measures. Like the PSP, the RSP states that "mitigation measures will be identified and developed to mitigate significant impacts." RSP at 175; PSP at 136. However, like the PSP, the RSP fails to include tribal statutes and regulations

as well as the Bureau of Indian Affairs' regulations. The RSP should be amended to expressly include all such statutes and regulations.

Study Plan 15: VEGETATION COMMUNITY MAPPING

Section 15.6.3 Task 3: Field Checking/Verification.

The RSP states that “[p]lant species of cultural interest to the Kaibab Band of Paiute Indians that are common regionally may be addressed as part of the vegetation community mapping study, as determined in coordination with the Tribe.” RSP at 180. The word “may” in this sentence should be changed to “will.”

Section 15.6.5 Task 5: Prepare Study Report.

The Kaibab Tribe reiterates its comment that the identification of the location of plants that are significant to the Tribe should not be included in public documents associated with the proposed pipeline. Tribe’s Second Comments at 14-15. The language in the cultural resources study plan should also be incorporated in the vegetation community mapping study plan such that all documentation should “be prepared for limited distribution to only those consulting Federal and state agencies, Tribes and SHPO offices responsible for managing archaeological and historic-era resources and is not intended for public review or distribution.” RSP at 32. Additionally, the Kaibab Tribe reiterates its comment that it retains the right to review and edit all portions of the report involving Kaibab Tribe significant plants before the report is shared with the study team, other federal and state agencies, and tribes. The RSP should acknowledge the Kaibab Tribe’s right.

Study Plan 16: VISUAL RESOURCES

Section 16.3.2 Tribal Goals.

The RSP states that “[s]pecific tribal goals and objectives for visual resources have not been identified.” RSP at 186. This statement is incorrect. On page 32 of the Kaibab Tribe’s Opening Comments and on page 15 of the Tribe’s Second Comments, the Tribe specifically stated that “the significance criteria for impacts to visual resources which constitute TCPs [traditional cultural properties] should include any landscape modification which adversely affects the traditional use of the TCP.” Thus, the Tribe did identify specific goals and objectives for protecting visual resources that constitute TCPs. The RSP should be amended to correctly acknowledge that protection of visual resources that are TCPs is a tribal goal for avoiding adverse impacts to visual resources.

The Kaibab Tribe appreciates the provision in the RSP that the study team “will work in close consultation with the appropriate tribal governments in the Project area to identify sensitive cultural landscapes and assess potential visual impacts on those areas.” RSP at 186.

Study Plan 17: SURFACE WATER QUALITY

Section 17.2.1 Goals and Objectives.

The Kaibab Tribe reiterates its comment that the potential effects of leaking from the buried pipeline should be part of the surface water quality impacts analysis. See Tribe's Opening Comments at 33; Tribe's Second Comments at 16. The surface water quality study should take into account all impacts to water quality from the construction, operation and maintenance of the proposed pipeline, including impacts from leaking.

Section 17.6.2.5 Task 5 - Report Preparation.

On page 202, the RSP states that, "[f]ield investigation activities and methods will be described, and data evaluations and results will be presented. Results will be discussed with a focus on the study objectives. Mitigation measures will be documented in a mitigation plan incorporated as a section of the technical report. Conclusions, where warranted, will be provided, and will address prevention or mitigation of potential impacts to surface water quality." However, this language fails to incorporate the comments provided by the Kaibab Tribe on mitigation measures on page 34 of the Tribe's Opening Comments, and restated on page 16 of the Tribe's Second Comments. The RSP should be amended to incorporate the Tribe's comments regarding mitigation measures, specifically, the inclusion of the Kaibab Tribe in the development of all mitigation measures.

Study Plan 18: SURFACE WATER RESOURCES

Section 18.6.4 Task 3 -- Prepare a Technical Report.

On page 28 of the Tribe's Opening Comments and again on pages 16 and 17 of the Tribe's Second Comments, the Kaibab Tribe provided comments regarding mitigation measures that were set forth in the PAD. The RSP does not include the Tribe's comments. Moreover, the only language discussing mitigation measures states that the report "will summarize potential mitigation and monitoring methods for the proposed Project." RSP at 213. Merely describing mitigation and monitoring after-the-fact is inadequate. The Kaibab Tribe reiterates its comment that the RSP should specifically identify the mitigation measures that the State will undertake and should include the Tribe in all aspects of mitigation affecting tribal interests.

Study Plan 19: WATER SUPPLY AND CLIMATE CHANGE

Section 19.4.3 Issues and Data Needs.

On page 219, the RSP states that water supply and climate change analyses will include "[t]he effects of the long-term drought affecting the Colorado River water supply [that] will be assessed to determine the associated effects on the proposed LPP diversion." It appears that the water supply and climate change study is the only study proposed which will attempt to take into

consideration the potentially reduced flows in the Colorado River as a result of drought and other effects of climate change below Lake Powell. However, because of the critical cultural importance of the Colorado River to the Kaibab Tribe, all of the study plans that deal with water supply and tribal cultural issues should include the effects of drought-induced flow reductions in the Colorado River. The Kaibab Tribe reiterates the importance of environmental and cultural studies below Glen Canyon Dam in order to evaluate any possible impact as a result of the proposed Lake Powell Pipeline.

In the Tribe's Second Comments, the Kaibab Tribe stated that the study plan should be amended to acknowledge the Tribe as a source of streamflow and river condition information, in light of the Tribe's special standing relative to the Colorado River. Tribe's Second Comments at 17. The Kaibab Tribe is a stakeholder member of the Federal Advisory Committee designated as the Glen Canyon Dam Adaptive Management Work Group ("AMWG"), along with the Havasupai Tribe, the Hualapai Tribe, the Hopi Tribe, the Navajo Nation, and the Pueblo of Zuni. As such, the Tribes have formally committed to providing advice and recommendations to the Secretary of the Interior relative to the operation of Glen Canyon Dam in accordance with the criteria and operating plans specified in Section 1804 of the Grand Canyon Protection Act of October 30, 1992, Pub. L. No. 102-575, and under other applicable authority, in order to protect and mitigate adverse impacts to Grand Canyon National Park and the Glen Canyon National Recreation Area. Consistent with the Kaibab Tribe's special standing relative to the Colorado River and its advisory role as a member of the AMWG, it is the Tribe's position that the analysis of water supply issues in the mainstream of the Colorado River should analyze any differences in water quality below Glen Canyon Dam that occur as a result of the structure withdrawing Lake Powell water, which will be in very close proximity to the dam, and which may cause downstream fluxes or permanent changes in water temperature and composition, with and without potential effects from climate change. Moreover, the study plan should specifically identify the Kaibab Tribe as having special information relative to the Colorado River and the Tribe should be included among information sources.

Study Plan 20: WETLANDS AND RIPARIAN RESOURCES

Section 20.4.3 Issues and Data Needs.

On page 35 of the Tribe's Opening Comments and again on page 17 of the Tribe's Second Comments, the Kaibab Tribe stated that to the extent the State intends to conduct data analysis, field surveys and any other reconnaissance on the Reservation, the State must obtain the permission of the Tribe prior to doing so. On page 231, the RSP states that "[h]igh resolution aerial photography that can be georegistered to the project footprint for GIS evaluation will be necessary for identifying and evaluating wetlands, riparian areas, and jurisdictional waters, particularly in areas not accessible for field surveys. Video coverage of portions of the study area filmed during recent helicopter surveys will assist in mapping of wetlands, riparian areas, and jurisdictional waters." Yet the RSP continues to fail to acknowledge the need for tribal permission prior to any aerial activity over the Reservation. The RSP should expressly

acknowledge the need to obtain tribal permission prior to conducting any data analysis, field surveys or any other aerial or ground reconnaissance on the Reservation.

Section 20.6.1 Introduction and Overall Approach.

On page 232, the PSP states that “consultation with federal and state resource management agencies will be performed.” The RSP should be amended to include the Tribe and its resource management agencies among those with whom the State will consult.

Section 20.6.2.3 Task 3 - Data Analyses.

On page 35 of the Tribe’s Opening Comments and again on pages 17 and 18 of the Tribe’s Second Comments, the Kaibab Tribe stated that an express provision be inserted: “Although riparian areas may not be regulated as wetlands and other jurisdictional waters, they are of interests because they provide important habitat for wildlife, including refute and forage areas. This is also the case for wetlands that might not be considered jurisdictional waters.” The RSP does not include such language, and should be amended to expressly include impacts on riparian areas and intermittent washes as part of the wetlands and riparian areas analyses.

On pages 35 and 36 of the Tribe’s Opening Comments and again on page 18 of the Tribe’s Second Comments, the Kaibab Tribe noted that limiting the analysis of riparian areas and wetlands to the test set forth in *Rapanos v. United States*, 547 U.S. 715, 732-33 (2006), may be too limited. The RSP states that a “final baseline GIS map will be produced that delineates jurisdictional wetlands and waterways and other non-jurisdictional wetlands and riparian areas within the Project area.” RSP at 233; *see* RSP at 227 (relying on June 2007 Guidance on *Rapanos* Decision). The RSP should clarify that it is not limiting its analysis to the *Rapanos* test.

Section 20.6.2.5 Task 5 – Mitigation Plan Preparation.

On page 37 of the Tribe’s Opening Comments and again on page 18 of the Tribe’s Second Comments, the Kaibab Tribe stated that tribal statutes and regulations must be included among those to which the State will adhere for mitigation purposes. The Tribe also commented that the Bureau of Indian Affairs must be among the federal agencies that work to develop mitigation options. Nevertheless, the RSP continues to omit the Tribe and the Bureau of Indian Affairs. Its language states: “The mitigation measures will be based on applicable state and Federal statutes and regulations, past experience and best professional judgment to either satisfy a legal requirement or to satisfy the public interest requirement. In some cases significant impacts may not be able to be mitigated. All reasonably foreseeable mitigation options will be developed in consultation with and evaluated by the Federal Energy Regulatory Commission, Bureau of Land Management, tribes, and other responsible federal or other resource agencies and factored into the respective decision documents.” RSP at 235. The RSP should be amended to expressly acknowledge the need to adhere to all tribal statutes and regulations, as well as the regulations of the Bureau of Indian Affairs.

Study Plan 21: WILDLIFE RESOURCES

Section 21.4.3 Issues and Data Needs.

On page 37 of the Tribe's Opening Comments and again on page 18 of the Tribe's Second Comments, the Kaibab Tribe stated that it was providing a list of wildlife species of significance to the Tribe. On pages 238 and 238, the RSP lists various data sources, but fails to either acknowledge the Tribe's list or incorporate it.

The RSP discusses the conduct of "aerial videography of the Project south alignment," and "[a]erial orthophotography of the Project south and alternative alignments." RSP at 238-39. On page 38 of the Tribe's Opening Comments and again on page 18 of the Tribe's Second Comments, the Kaibab Tribe noted that it is not clear why aerial videography would be conducted only of the south alignment, and not of the alternative alignment. The RSP should explain why aerial orthophotography will occur for both the south and alternative alignments, yet aerial videography will occur only for the south alignment.

Section 21.6.2.4 Task 4 - Report Preparation.

On page 241, the RSP contains minimal mitigation language: "The study report will include mitigation measures to address significant impacts resulting from the Project. The study report will incorporate a mitigation plan to document mitigation measures identified to avoid, minimize or reduce impacts on wildlife resources. The conclusions may include recommendations that could affect Project design. Variances from the study plan will be summarized and documented in the study report." This mitigation language is slightly more extensive than the language included in on page 187 of the PSP. The Kaibab Tribe offered more extensive mitigation language on page 38 of the Tribe's Opening Comments, and to the extent the expanded mitigation language in the RSP is intended to include the Tribe's mitigation recommendation, the RSP should acknowledge that it is responding to the comments provided in the Tribe's Opening Comments. Otherwise, the RSP should be amended to include the mitigation language offered by the Tribe in the Tribe's Opening Comments.

Study Plan 22: ALTERNATIVES DEVELOPMENT

The RSP states that the goal of the development of alternatives to the proposed project is to "describe possible combinations of water supply components that could be used to develop alternatives to meet water demands for the Project participants." RSP at 244. From that analysis, the State will "[d]evelop a No Action Alternative and one Action Alternative in addition to the Proposed Act." RSP at 244. This stated goal fails to acknowledge the Kaibab Tribe's comment that "the analysis of reasonable and prudent alternatives should include a potential pipeline route that would entirely follow the Navajo-McCullough Transmission Line even as it crosses the southeast corner of the Kaibab Indian Reservation, as opposed to the route proposed in the PAD which deviates from the Navajo-McCullough Transmission Line in order to

entirely avoid the Reservation.” Tribe’s Opening Comments at 2. Whether adherence to the Navajo-McCullough Transmission Line in its entirety is a variation of the preferred alternative, or is analyzed as a separate alternative, the RSP should study it as part of the alternatives analysis. The Tribe’s additional comments bear repeating here:

The selection of the appropriate route for the proposed pipeline can only occur after the conduct of various studies mandated by the Commission’s licensing regulations, as well as the National Environmental Policy Act, 42 U.S.C. §§ 4321-70a (“NEPA”) and its implementing regulations. Chief among the requirements of NEPA, is the analysis and study of all reasonable and prudent alternatives. 42 U.S.C. § 4332(2)(C)(iii); 40 C.F.R. § 1502.14(a). Other routes will likely be studied as reasonable and prudent alternatives to the southern route, and, therefore, the PAD’s identification of a single pipeline route should not be viewed as identifying the only possible way by which the State may transport water from Lake Powell to St. George and Cedar City. Indeed, the PAD plainly states that the utility corridor along Utah State Highway 89 in the Grand Staircase-Escalante National Monument “may be a possible route for the Lake Powell Pipeline, subject to NEPA analysis.” PAD at 6-4. The same NEPA analysis should apply to a possible route for the proposed pipeline along Arizona State Highway 389 as it crosses the Kaibab Indian Reservation. Similarly, the analysis of reasonable and prudent alternatives should include a potential pipeline route that would entirely follow the Navajo-McCullough Transmission Line even as it crosses the southeast corner of the Kaibab Indian Reservation, as opposed to the route proposed in the PAD which deviates from the Navajo-McCullough Transmission Line in order to entirely avoid the Reservation.

Tribe’s Opening Comments at 2-3. A full and complete understanding of the land use and environmental impacts of the proposed pipeline can only be achieved if all reasonable and prudent alternatives are analyzed. *See* RSP at 246. The Kaibab Tribe can only make an informed decision regarding the route it prefers for the proposed pipeline if the full panoply of information regarding each of the potential pipeline routes is before it. The RSP gives no reason for abandoning the Navajo-McCullough Transmission Line, and it should not be abandoned. The RSP should be amended accordingly.

Study Plan 23: ETHNOGRAPHIC RESOURCES

This is a new section of the RSP that has been segregated from the cultural resources study plan contained in the PSP. As stated above regarding the archaeological and historic-era resources study plan, the Kaibab Tribe believes that treating archaeology and ethnography

separately is appropriate. *See* Tribe's Second Comments at 3. However, it is not clear that the ethnographic resources study plan has been adequately developed, and, as with the archaeological and historic-era resources study plan, the Kaibab Tribe requests another opportunity to comment on the ethnographic resources study plan.

Section 23.2 Study Description and Objectives and Information to be Obtained (§5.11(d)(1)).

The RSP lists various federal and state statutes which will apply to the conduct of the ethnographic resources study. RSP at 251-52. Missing from the list are Executive Order No. 13007, 61 FR 26771 (1996), and all applicable statutes and regulations of the Kaibab Tribe. The RSP should be amended to expressly include these applicable authorities.

Section 23.3 Existing Information.

While the RSP acknowledges that Dr. Richard Stoffle is a key ethnographer who has conducted and continues to conduct studies regarding Southern Paiute peoples, RSP at 252, the RSP fails to refer to Dr. Stoffle's published articles dealing with modern Southern Paiute uses of the area to be affected by the proposed pipeline. Nor does the RSP mention certain federal agency reports, which the Kaibab Tribe brought to the State's attention on pages 16 and 17 of the Tribe's Opening Comments (citing *Principles and Guidelines for Social Impact Assessment in the USA*, 21 Impact Assessment and Project Appraisal 231-50 (Sept. 2003)). The RSP should be amended to expressly identify relevant reports published by Dr. Stoffle and to include all applicable federal agency reports in the identification of existing information.

Section 23.5.1 Introduction and Overall Approach.

This section of the RSP discusses the criteria for data relevancy to a TCP nomination. RSP at 253. The RSP should also refer to Executive Order No. 13007 which defines "sacred site" to mean "any specific, discrete, narrowly delineated location on Federal land that is identified by an Indian tribe, or Indian individual determined to be an appropriately authoritative representative of an Indian religion, as sacred by virtue of its established religious significance to, or ceremonial use by, an Indian religion; provided that the tribe or appropriately authoritative representative of an Indian religion has informed the agency of the existence of such a site." 61 Fed. Reg. 26771. In this way, the RSP will not unduly limit the identification of TCPs in the proposed project area, and will include the Kaibab Tribe, and all other affected Indian tribes, in the process for identifying TCPs.

Section 23.5.3 Tribal Consultation and Identification of Resources.

The RSP lists many tribes as having TCPs in the vicinity of the proposed pipeline. RSP at 254. Yet, it is not clear how the State developed this list, and certainly it is arguable that various of the listed tribes are not culturally affiliated with the study area. Certainly, the RSP should not set up a process which will foster conflict among various tribes as to cultural

affiliation within the proposed project area. Rather, the RSP should look to the definition of the aboriginal lands of the Southern Paiute Nation as determined by the Indian Claims Commission in *Southern Paiute Nation v. United States*, 14 Indian Cl. Comm'n 618, 619 (1965), in order to determine which Indian tribes have ties to the area potentially affected by the proposed pipeline.

The RSP should also distinguish between the terms “culturally affiliated” which involves aboriginal tribal claims and interests in a particular area, and “traditionally associated” which refers to Indian tribes with historic associations to an area.

Section 23.5.4.1 National Register of Historic Places Evaluation.

The RSP includes analysis of the eligibility of TCPs for listing on the National Register of Historic Places. RSP at 255. While the Kaibab Tribe does not object to the consultation with the Tribe and its members regarding such eligibility, this section is probably more appropriately included in the archaeology and historic-era resources study plan.

Section 23.5.4.2 Consistency with Generally Accepted Scientific Practice.

The RSP states that the methods discussed in the ethnographic study plan “have been accepted by the participating Native American Tribes, agencies, and other interested parties associated with these projects.” RSP at 256. This sentence appears to have been reproduced from some other source. The Kaibab Tribe has not accepted the study methods identified in the ethnographic resources study plan, as stated herein, especially given that the study plan is not yet final and should be considered a work in progress. The RSP should be amended to delete this sentence.

Section 23.5.5 Products.

The RSP states the “[l]ocations of potential TCPs, including plant-gathering locations, will be provided in a second confidential appendix.” RSP at 256. The statement should in no way be understood to limit TCPs to plant gathering locations, nor should it limit the methodology for identifying and protecting culturally significant sites in any way. The RSP should be amended to clarify that TCPs and plant-gathering locations are two types of culturally significant sites that must be protected vis-a-vis the construction, operation and maintenance of the proposed pipeline.

CONCLUSION

On behalf of the Kaibab Band of Paiute Indians, we express our appreciation for the opportunity to provide comments on the RSP. We look forward to continuing to work with the Commission and the State on this significant endeavor.

Dated: January 7, 2009

Respectfully submitted,

/s/ Alice E. Walker

By: _____

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CERTIFICATE OF SERVICE

I hereby certify that pursuant to the eService requirements of FERC, I have forwarded the Acceptance for Filing email from the eFiling service via e-mail to all persons on the Service List for P-12966 for the foregoing *Comments of the Kaibab Band of Paiute Indians Regarding the Revised Study Plan Filed by Utah Board of Water Resources, for Lake Powell Hydroelectric Project No. 12966*, and further that I have placed true copy in the U.S. Mail, first-class postage prepaid thereon, on this 7th day of January, 2009 to the following:

John Weisheit
Conservation Director
Living Rivers
P.O. Box 466
Moab, UT 84532

/s/ D.A. Vitale

Submission ID 174548 1/8/09

Submission Description Notice of Firm Name Change on behalf of KAIBAB BAND OF PAIUTE INDIANS under P-12966-001, et. al..

Submission Date 1/8/2009 5:33:15 PM

Filed Date 1/9/2009 8:30:00 AM

Current Status Pending

Dockets

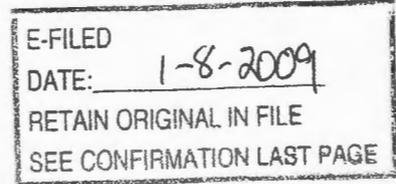
Docket	Description
P-12966-001	Notice of Intent an Application for Original License and Request for Designation as Non-Federal Representative and the Pre-Application Document for the Lake Powell Project.
P-12966-000	Application for a Preliminary Permit for the Lake Powell Pipeline Project. RM

Files

Security Level	Filename	Description
Public	Notice of Change of Firm Name.pdf	

Filing Party/Contacts

Filing Party	Signer (Representative)	Other Contacts (Principal)
KAIBAB BAND OF PAIUTE INDIANS	awalker@mmwclaw.com	



UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Utah Board of Water Resources

Project No. P-i 2966-000

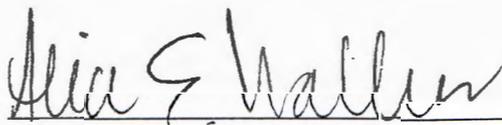
NOTICE OF FIRM NAME CHANGE

Notice is hereby given that the name of the firm representing the Kaibab Band of Paiute Indians in this matter has changed from Greene, Meyer & McElroy, P.C. to McElroy, Meyer, Walker & Condon, P.C. effective January 1, 2009. The firm of McElroy, Meyer, Walker & Condon, P.C. requests that the service list be updated to reflect this change of firm name and further requests that all pleadings and documents addressed to the Kaibab Band of Paiute Indians in this action be addressed as follows:

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Dated: 1-8-09

Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that pursuant to the eService requirements of FERC, I have forwarded the Acceptance for Filing email from the eFiling service via e-mail to all persons on the Service List for P-12966 for the foregoing *Notice of Firm Name Change*, and further that I have placed true copy in the U.S. Mail, first-class postage prepaid thereon, on this 8th day of January, 2009 to the following:

John Weisheit
Conservation Director
Living Rivers
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