

Analysis of Dr. Thomas Hardy Flow Studies PH 1 and PH 2 being utilized as the "best available science" for flows in the Klamath River to protect the threatened Southern Oregon Northern California Coast coho salmon.

Timeline (1 of 2)

1992 Drought Conditions in Upper Basin not seen since the 1930s

1994 March - William Trush with Institute for River Ecosystems, Fisheries Department, Humboldt State University publishes a paper focusing on the geomorphic perspective to anadromous fish restoration in the Klamath Basin. Received by the Yurok Tribe on 1 January 1995.

- 5 Principles (don't establish minimum flow requirements - use natural conditions)

1994 Drought Conditions in Upper Basin similar to the 1930s

1994 August - Donald Anglin publishes USFWS / BIA "Lower Klamath River Instream Flow Study" under interagency agreement AG1J5200003 at the behest of Yurok Tribe.

- Numerous shortfalls in data. No known relationship between flows and fish habitat issues

1994 Fall - Vogel Environmental Report

- Critical of flow demands by Yurok

1995 January - "Tribes are mad" - hand written note on Klamath River Flow Study Scoping Meeting

1995/1996 - DoJ establishes interagency agreement with BIA AG6K000029 to support claims for Yurok "potential legal proceedings which affect their fishery and associated water rights...with regard to the development and implementation of the Klamath Project Operations Plan...to assure that future use and development of tribal fishery."

1996, November 29 - Scott Bergstrom (Attorney for Division of Indian Affairs) provides a statement of work to Dr. Hardy's Watershed Systems Group, Inc to investigate, evaluate, and analyze [tribal] fishery needs. The investigation of the water supply is necessary for the purpose of determining the source, quantity, and variability of the water resource on the Indian Trust land related to the Klamath Project Operations Plan."

1996, December 31st - \$25,000 to Dr. Hardy for expert testimony for U.S. in Klamath Tribes vs U.S. No 96-381

1997, February 10 - Dr. Hardy review of the Klamath River Basin Fisheries is discussed in Task 1 "Develop Water Quantity Model Objectives", Task 2 "Water Quantity Study Design, Task 5 "Develop a Water Quantity Model for the Klamath River"

Timeline Continued

1997, February 12 - Allegations the Klamath River Flow Study was a tribal trust responsibility of USFWS

1997, April 23-24 - Klamath River Basin Fisheries Task Force meets with Hardy. [Initiates flow study for \\$50,000](#)

1997, May 6 Coho listed as threatened

1997, September - Hardy provided testimony for DOJ in Klamath Tribes vs US NO 96-381

1997, September - [\\$15,608 to Hardy](#) for Expert Testimony in Klamath Basin Adjudication for BIA 1997 -

Hardy preparing PH I report for Klamath River Basin Fisheries Task Force

1998, August 19 - [\\$79,997 to Hardy](#) for Klamath Basin Adjudication on behalf of BIA

1998, October 15 - Bob Anderson (DOI Solicitor) and Dr. Hardy provide interaction with BIA activity with Klamath River Basin Fisheries Task Force. Anderson communication with OWRD.

1999, February 3 - [\\$550,860 to Hardy](#) for Klamath Basin Adjudication on behalf of BIA

1999, August 5 - Hardy PH I Study Published for Klamath River Basin Fisheries Task Force

1999, September 13 - [\\$115,000 to Hardy](#) for Klamath Basin Adjudication on behalf of BIA

2000, February 3 - Scott Bergstrom (now DOI solicitor) requests payment to Hardy to continue BIA work

2000, February 18 - [\\$550,860 to Hardy](#) for Klamath Basin Adjudication on behalf of BIA

2000, October 1 - [Upper Klamath Lake above average lake level](#)

2000, October 29 - [\\$286,694 to Hardy](#) for Klamath Basin Adjudication on behalf of BIA

2000, October 29 - [\\$5,200 to Hardy to Expert Testimony to curtail Klamath Project Water for DOJ](#) 2001,

April - [Upper Klamath Lake at almost full pool \(no additional storage available\)](#)

2001, April - Klamath Project Curtailed (no water to farmers)

2001, October - Draft Hardy PH II circulated

2001-2011 - Sever Criticism of Hardy Flow Studies by National Academy of Sciences and others

2013 - ACFFOD Published

2013 May - Richard Whitman (Oregon State appointee under Kitzhaber) and Tom Paul (OWRD)

negotiate a MOU with the Yurok to not enforce the ACFFOD

2021/2022 - Yurok - Hardy Studies are the "best available science"

INTER-AGENCY AGREEMENT

BETWEEN

SPECIAL LITIGATION COUNSEL

UNITED STATES DEPARTMENT OF JUSTICE

AND

BUREAU OF INDIAN AFFAIRS

UNITED STATES DEPARTMENT OF THE INTERIOR

PARTIES:

United States Department of Justice, Special Litigation Counsel (Justice Department), 601 Pennsylvania Avenue N.W., Washington, D.C. 20004 and United States Department of the Interior, Bureau of Indian Affairs (BIA), Director, Trust Responsibilities, 1849 C Street, MS-4559-MIB, Washington, D.C. 20240

PURPOSE

The material and testimony developed under this Inter-Agency Agreement (Agreement) will be used to support United States claims for water on behalf of the Hoopa Valley, Klamath and Yurok Tribes (Tribes) in administrative and potential legal proceedings which affect their fishery and associated water rights in the Klamath Basin, California and/or Oregon with regard to the development and implementation of the Klamath Project Operations Plan (KPOP). In order to assure that future use and development of tribal fishery and associated water rights are possible, non-Indian irrigation practices, as well as other water uses in the Klamath Basin, must be examined.

RECITALS

This Agreement is being entered into under the authority of 31 USC Section 1535 to inventory and evaluate previously conducted technical studies and to recommend additional studies to support water rights claims for the above referenced Tribes. The Justice Department will select a contractor or contractors who will provide the services described in the Scope of Work.

The Justice Department, the Department of the Interior Solicitor's Office (Solicitor's Office) and the BIA Central Office will monitor the work of the contractor or contractors to assure that all material and work is technically and legally acceptable.

PART I - REQUEST FOR SERVICES

1. Name/Title of Requesting Official Fred Disheroon	1a. Signature 	2. Date 12/31/96	2a. DJ File Number 90-2-4-1819
3. Name of Person to be Contacted Fred Disheroon	4. Telephone No. (202) 616-9649	5. Case Name, Court and Court Docket Number KLAMATH TRIBES v. U.S.	
6. Division or District ENRD/GLS-SLU	7. Mailing Address Washington D.C.	8. Request (Circle one) <u>Original</u> Supplemental	IF SUPPLEMENTAL ENTER ORIGINAL YREGDOC
9. Specialty of Expert Witness, ADR Neutral, or Litigative Consultant Fisheries Biologist			
REASON FOR REQUEST (Check below and explain in Block 13)			
<input checked="" type="checkbox"/> a. Expert testimony required on behalf of U.S. <input type="checkbox"/> b. Medical Examination of Plaintiff/Witness/Defendant in Contemplation of Testimony on Behalf of U.S. <input type="checkbox"/> c. Examination Under 18 USC Sec. 4241, Mental Competency to stand Trial only <input type="checkbox"/> d. Dual Purpose Psychiatric Examination (Time of Offense & Competency to Stand Trial) on the motion of: _____; under Criminal Justice Act YES [] NO []			
<input type="checkbox"/> e. Disposition of other party's expert witness <input type="checkbox"/> f. Unusual Fact Witness Expense <input type="checkbox"/> g. Alternate Dispute Resolution (ADR) Neutral Expense <input type="checkbox"/> h. Alternate Dispute Resolution (ADR) Witness Expense <input type="checkbox"/> i. Litigative Consultant			
10. Name, Address, TIN/SSN, and Phone No. of Witness, ADR Neutral, or Litigative Consultant Dr. Thomas B. Hardy WATERSHED SYSTEMS GROUP, INC. 1656 University Drive Logan, UT 84341		11. Anticipated Start and Ending Dates of Service (enter MODA/YR) (in conjunction with Block 12) a. Examination of Case _____ b. Prep of Testimony _____ c. Court Testimony _____ d. Neutral/Lit. Consultant Services _____	
12. Expense Detail (Estimated Expenses)		(Other Expenses, Cont'd)	
a. Examination of Case: _____ hrs or _____ days x \$ _____ = \$ _____ b. Preparation of Testimony: _____ hrs or _____ days x \$ _____ = \$ _____ c. Court Testimony: _____ hrs or _____ days x \$ _____ = \$ _____ d. Neutral/Lit. Consultant Testimony: _____ hrs or _____ days x \$ _____ = \$ _____ e. Other Expenses: Per Diem - Check if included in Fee [] OR _____ Days x \$ _____ per Day = \$ _____		Transportation: Check if included in fee [] Common Carrier at Coach Class: (GTA Used [] Yes [] No) \$ _____ Taxi To/From Terminal: \$ _____ POV: _____ Miles @ \$0. _____ per Mile = \$ _____ * (This cost shall not exceed cost by common carrier) f. Miscellaneous Expenses (printing, exhibits, etc.) \$ _____ on actual cost basis (itemize on separate page) g. Total Estimated Cost: \$ 25,000.00 REMINDER: Expert Witnesses are not entitled to Advance Payments	
13. Explanation and Justification (Attach additional information if space is insufficient) (For Neutral, attach Preliminary Agreement)			
See attached Statement of Work. Money to be transferred from DC# 96-15039, contract with David DeBruyn. Dr. Hardy was once a sub-contractor to Mr. DeBruyn, but is now becoming a Primary Witness for DOJ. DOI/BIA/DC Debtor Code 6067			

ORIGINAL

PART II - WITNESS/ADR NEUTRAL/LITIGATIVE CONSULTANT AUTHORIZATION

1. Date 1/10/97	3. Cost Center 6B 1595
2. Approved/Disapproved	6. OBL Month 7. SOC 2599
3. Authorized Amount \$25,000.00	8. Remarks:
4. YREGDO 15116	Approved by

PART III - WITNESS/ADR NEUTRAL/LITIGATIVE CONSULTANT AGREEMENT

1. Description of Duties (Explain details of service to be performed) (Attach additional information if space is insufficient)			
2. Witness: Submit Invoice to: (Name/Address of Attorney or Admin/Fiscal Office) US DOJ/ENRD Expert Witness Unit P.O. Box 685, Ben Franklin Station Washington, D.C. 20044		5. Government Attorney: For payment, in accordance with internal procedures, send invoice and Original of this form to: (Check one) [] or [] DOJ/EDSS/EXPERT P.O. Box 30814 Washington, D.C. 20004-0814	
3. Signature (Government Attorney) 	6. Name/Title of Government Attorney Fred Disheroon		Date
4. Signature (Witness/ADR Neutral/Litigative Consultant) 	7. Name/Title of Witness/ADR Neutral/Litigative Consultant Dr. Thomas B. Hardy		Date 1-29-97
I agree to perform the above services and appear as a witness on behalf of the government		All payments relating to this agreement shall be in accordance with the Prompt Payment Act	

Final Klamath River Basin Fisheries Task Force Minutes

23-24 April 1997

Eureka, California

1. Convene, review agenda, opening remarks.

Bingham: Good Morning. (A quorum was present, Attachment 1). Tom Hardy will be our facilitator for this meeting and once I take care of some routine business, I will be turning over the conduct of this meeting to him.

The topic of this two day session will be to consider the whole issue of in-stream flow studies. This has been a troubling issue for the Task Force (TF); it's one we basically had before us from the very beginning of our restoration program. What I hope we'll be able to do over the next two days is set aside our own agendas. Our basic mission is to restore the anadromus fisheries of the Klamath River Basin. Let's try to collectively come to grips with that so we can move forward with the studies in such a way that people don't feel like any in particular element is aiming right at them. To set the stage for that it's appropriate to hear what it is that our Long Range Plan (LRP) says to this effect.

Fletcher: Objective 2.E.1.C. states that we need to evaluate the in-stream flow needs using state of the art methods of each salmon and steelhead run and life stage affected by flows released from Iron Gate Dam (IGD). 2.E.2.B. and C states that we need to identify and implement methods to rectify habitat problems identified in #1 above including the following: water quality above and below IGD, in-stream flow and habitat below IGD. It goes on at 2.E.7 to say we need to require water flows adequate to achieve optimal productivity of the basin. 2.E.8. says seek the establishment of law that mandates minimum stream flow standards.



2. Business

Bingham: Thank you. Does anyone have any additions to make to the agenda?

****Motion**** (Wilkinson) Approve the agenda.

****Second**** (Bulfinch)

****Motion carries****

Iverson: Mr. Chairman, those minutes [of the meeting of February 20-21, 1997] are drafted but I'm doing a little bit of editing [These minutes were mailed to the TF on May 6, 1997].

****Motion**** (Bulfinch) Mr. Chairman, I move that we defer the approval of the February 20-21, 1997 minutes June meeting.

****Second**** (Smith)

****Motion carries****

3. Brief review of last meeting actions/general correspondence

Hamilton: There's correspondence in the package but rather than drawing from your focus here, I suggest that everybody read them (Attachment 3, Informational Handouts) on their own. The handout that is going around contains all the motions that we're aware of that the TF has passed related to a flow study and should help you understand why we are where we are today with the flow study (Handout A). If anybody is aware of any we missed, let us know.

4. Introduction of Facilitator (Dr. Thomas Hardy, Utah State University)

Hardy: Good Morning. I'd like to take a few minutes to give you some background on who I am for those who don't know me, then deal with some issues about definitions and concepts that became evident from the list of questions that was attached to the announcement of the meeting. (Handout B) I hope to address many of those questions, and then once that's set up we'll begin to move forward I hope in a progressive manner.

I've been involved with in-stream flow research and application since 1977. I'm a fisheries biologist by training. I also have a degree in Environmental Engineering. Much of my efforts at Utah State University in my institute are on the development, testing and real world applications of multi-disciplinary assessment methods primarily working at the issue of what happens when you modify habitat or modify flows in a river. I'm very active internationally, I'm the president of the

INTER-AGENCY AGREEMENT**BETWEEN****INDIAN RESOURCES SECTION****UNITED STATES DEPARTMENT OF JUSTICE****AND****BUREAU OF INDIAN AFFAIRS****UNITED STATES DEPARTMENT OF THE INTERIOR****PARTIES**

United States Department of Justice, Environment and Natural Resources Division, Indian Resources Section (Justice Department), P.O. Box 44378, L'Enfant Plaza Station, Washington, D.C. 20026-4378 and United States Department of the Interior, Bureau of Indian Affairs (BIA), Director, Office of Trust Responsibilities, 1849 C Street, MS-4559-MIB, Washington, D.C. 20240.

PURPOSE

The material and testimony developed under this Inter-Agency Agreement (Agreement) will be used to support United States' claims for or positions concerning water on behalf of the Klamath Basin Tribes (including the Hoopa Valley, Klamath, and Yurok Tribes) (Tribes) in administrative, legal, and other proceedings which may affect their fishing rights and associated water rights, or other trust resources in the Klamath Basin, California and Oregon. In order to assure that future use and development of tribal fishing rights and associated water rights are possible, water-related habitat requirements of the tribal trust fish species and non-Indian irrigation practices, as well as other water uses or issues in the Klamath Basin, must be examined and, if necessary, contested in administrative, legal, or other proceedings. This Agreement, however, does not encompass efforts directed solely toward the Klamath River Basin general stream adjudication in Oregon.

RECITALS

This Agreement is being entered into under the authority of 31 USC Section 1535 to inventory and evaluate previously conducted technical studies, as needed, and to recommend and, upon approval by the parties to this Agreement, perform additional studies to support water rights claims for or positions to be taken on behalf of the Klamath Basin Tribes. The Justice Department, in consultation with the

BIA INTERAGENCY AGREEMENT

NO: AG6K000029 MOD #2

9-23-97

Reimburse

6067

Asst

Part I - Request for Services			
1. Name/Title of Requesting Official Steven E. Carroll Acting Chief, Indian Resources Section	3. Name of Person to be Contacted David Harder	4. Telephone No. (303)312-7328	5. Case Name, Court and Court Docket Number Klamath Basin Adjudication
6. Legal Division or USAO ENRD/IRS SLU	7. Mailing Address (Exec/Admin/Budget Officer) Denver, CO (EO/SEM)	8. Request (circle one) Original Supplemental	2a. DJ File Number 90-62-70 90-2-4-1819 IF SUPPLEMENTAL ENTER ORIGINAL YREGDOC 96-15116

9. Specialty of Expert Witness, ADR Neutral, or Litigative Consultant: Civil Engineer

REASON FOR REQUEST (Check below and explain in Block 13)

a. Expert testimony required on behalf of U.S.

b. Medical Examination of Plaintiff/Witness/Defendant in Contemplation of Testimony on Behalf of U.S.

c. Examination Under 18 USC Sec. 4241, Mental Competency to stand Trial only

d. Dual Purpose Psychiatric Examination (Time of Offense & Competency to Stand Trial) on the mo under Criminal Justice Act YES NO

e. Disposition of other party's expert witness

f. Unusual Fact Witness Expense

g. Alternate Dispute Resolution (ADR) Neutral Expense

h. Alternate Dispute Resolution (ADR) Witness Expense

i. Litigative Consultant TIN 87-0560247 Phone: (801)797-2932 Fax: (801)797-4185

ORIGINAL

10. Name, Address, TIN or SSN, and Phone Number of Witness, ADR Neutral, or Litigative Consultant <u>Dr. Thomas B. Hardy</u> Watershed Systems Group, Inc. P.O. Box 3352 Logan, UT 84323-3352	11. Anticipated Start and Ending Dates of Service (enter MO/DA/YR) (in conjunction with Block 12) a. Examination of Case _____ b. Prep of Testimony _____ c. Court Testimony _____ d. Neutral/ Lit. Consultant Services _____
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12. Expense Detail (Estimated Expenses)	(Other Expenses, Cont'd)
a. Examination of Case: _____ hrs or _____ days x \$ _____ = \$ _____	Transportation: Check if included in fee <input type="checkbox"/>
b. Preparation of Testimony: _____ hrs or _____ days x \$ _____ = \$ _____	Common Carrier at Coach Class: (GTA Used <input type="checkbox"/> Yes <input type="checkbox"/> No) \$ _____
c. Court Testimony: _____ hrs or _____ days x \$ _____ = \$ _____	Taxi To/From Terminal: \$ _____
d. Neutral / Lit. Consultant Services: _____ hrs or _____ days x \$ _____ = \$ _____	POV: _____ Miles @ \$0. _____ per Mile = \$ _____
e. Other Expenses: Per Diem - Check if included in fee <input type="checkbox"/>	*(This cost shall not exceed cost by common carrier)
OR _____ days x \$ _____ per day = \$ _____	f. Miscellaneous Expenses (printing, exhibits, etc.) \$ _____
	g. Total Estimated Cost: \$ <u>15,608.77</u>

REMINDER: Expert Witnesses are not entitled to Advance Payments

13. Explanation and Justification (Attach additional information if space is insufficient)(For Neutral, attach Preliminary Agreement)

Please see attached Scope of work

DOI/BIA (Wash. DC)

Part II - Witness/ADR Neutral/Litigative Consultant Authorization			
1. Date <u>9/25/97</u>	5. Cost Center <u>6B1595</u>	6. OBL Month _____	7. SOC <u>2599</u>
2. Approved/Disapproved _____	8. Remarks: _____	Approved by <u>[Signature]</u>	
3. Authorized Amount \$ <u>15,608.77</u>			
4. YREGDOC <u>15116 A</u>			

Part III - Witness/ADR Neutral/Litigative Consultant Agreement		
1. Description of Duties (Explain details of service to be performed)(Attach additional information if space is insufficient)		
2. Witness/Neutral/Litigative Consultant: Submit invoice to: (Non DOJ ENRD/Expert Witness Unit) P.O. Box 685, Ben Franklin Station Washington, D.C. 20044	5. Government Attorney: Forward invoice and Original of this form to the appropriate person within your office for processing	
3. Signature (Government Official) <u>David W. Harder</u>	6. Name/Title of Government Official (Print or Type) David Harder	Date 9/16/97
4. Signature (Witness/ADR Neutral/Litigative Consultant) <u>Dr. Thomas B. Hardy</u>	7. Name/Title of Witness/ADR Neutral/Lit. Consultant Dr. Thomas B. Hardy	Date
I agree to perform the above services and appear as a witness on behalf of the government, act as an ADR Neutral, or Litigative Consultant.		
All payments relating to this agreement shall be in accordance with the Prompt Payment Act.		



United States Department of the Interior

U.S. GEOLOGICAL SURVEY
Midcontinent Ecological Science Center
4512 McMurry Avenue
Fort Collins, CO 80525-3400

GB566
K56A15
1997
BIDS

In Reply Refer To:
BRD/MESC/82020

November 10, 1997

File:516.07c

Memorandum

To: Technical Work Group Members of the Klamath River Fishery Task Force and Water Quantity Model Partners

From: Dr. Marshall Flug, Hydrologist and Leader, Western Riverine Ecosystems Research Team

Subject: Task 11: Final Completion Report on Water Quantity Model Development

The attached subject report, Task 11, is provided in accordance with contract requirements of the FY '97 Interagency Agreement for the Development of a Water Quantity Model. This report is revised from the Draft Task 10 report, which was distributed on August 8, 1997, and comments on that Draft were due back to the USGS by September 12, 1997.

This Task 11 report contains an extensive Appendix of printed data files, as well as a computer disk that contains the data files for eight runs using the MODSIM Water Quantity Model. These runs include the Calibration and Validation runs, and six other alternative water management simulations which were provided by the Technical Work Group.

If you have any questions or feedback, please do not hesitate to contact Marshall Flug at (970)226-9391 Voice; (970)226-9230 FAX; or EMAIL: Marshall_Flug@usgs.gov.

Attachment

8049

K

Part I - Request for Services

1. Signature <i>David Harder</i>		2. Date 8/13/98	2a. DJ File Number 80-6-2-70
4. Telephone No. (303) 312-7328		5. Case Name, Court and Court Docket Number Klamath Basin Adjudication	
3. Mailing Address (Exec/Admin/Budget Officer) Denver, CO		8. Request (circle one) <input checked="" type="radio"/> Original <input type="radio"/> Supplementa	
9. Witness, ADR Neutral, or Litigative Expert: Civil Engineer			
10. REQUEST (Check below and explain in Block 13) Examination of Plaintiff/Witness/Defendant in Contemplation of Testimony on Behalf of Examination Under 18 USC § 4241, Mental Competency to Stand Trial only Purpose Psychiatric Examination (Time of Offense & Competency to Stand Trial) on the of under Criminal Justice Act YES [] NO [] Deposition of other party's expert witness f. Unusual Fact Witness Expense g. Alternate Dispute Resolution (ADR) Neutral Expense h. Alternate Dispute Resolution (ADR) Witness Expense i. Litigative Expert			
10. Name, Address, TIN or SSN and Phone Number of Witness, ADR Neutral, or Litigative Expert Dr. Thomas B. Hardy P.O. Box 3352 Logan, UT 84323-3352		11. Anticipated start and ending Dates of Service (enter MO/DA/YR) (in conjunction with Block 12) a. Examination of Case b. Prep of Testimony c. Court Testimony d. Neutral/Lit. Expert Services	
12. Expense Detail (Estimated Expenses) a. Examination of Case: hrs or days x \$ = \$ b. Preparation of: hrs or days x \$ = \$ c. Court: hrs or days x \$ = \$ d. Neutral / Lit. Expert Services: hrs or days x \$ = \$ e. Other Expenses: Per Diem - Check if included in fee [] OR days x \$ per day = \$		(Other Expenses, Cont'd) Transportation: Check if included in fee [] Common Carrier at Coach Class: (GTA Used) Yes [] No [] \$ Taxi To/From Terminal: \$ POV: Miles @ \$0. per Mile = \$ *(This cost shall not exceed cost by common carrier) f. Miscellaneous Expenses (printing, exhibits, etc.) on actual cost basis: (Itemize on separate page) \$ g. Total Estimated Cost \$79,997	
13. Explanation and Justification (Attach additional information if space is insufficient) (For Neutral, attach Preliminary Agreement) Interagency Agreement #AG6K0000029 Bureau of Indian Affairs/Washington, DC Modification #3 Debtor Code #8049			

ORIGINAL

Part II - Witness/ADR Neutral/Litigative Expert Authorization

1. Date 8/18	5. Cost Center 881595
2. Approved/Disapproved	6. OBL Month 9808
3. Authorized Amount \$ 79,997	7. SOC 2599
4. YREGDOC 18048	8. Remarks:
Approved by <i>David Harder</i>	

Part III - Witness/ADR Neutral/Litigative Expert Agreement

1. Description of Duties (Explain details of service to be performed) (Attach additional information if space is insufficient)		
2. Witness/Neutral/Litigative Expert: Submit Invoice to: (Name/Address of Attorney or Admin/Fiscal Office) US DOJ/ENRD/EXPERT WITNESS UNIT P.O. BOX 685/BEN FRANKLIN STATION WASHINGTON, DC 20044-0685		5. Government Attorney: Forward invoice and Original of this form to the appropriate person within your office for processing.
3. Signature (Government Official) <i>David Harder</i>	6. Name/Title of Government Official (Print or Type) David Harder, Trial Attorney	Date: 8/14/98
4. Signature (Witness/ADR Neutral/Litigative Expert) <i>Thomas Hardy</i>	7. Name/Title of Witness/ADR Neutral/Lit. Expert Dr. Thomas B. Hardy, Civil Engineer	Date:
I agree to perform the above services and appear as a witness on behalf of the Government, act as an ADR Neutral, or Litigative Expert.		All payments relating to this agreement shall be in accordance with the Prompt Payment Act.

Bits: I have a letter to pass out (Handout G). [Reads letter] This is from Jimmy Smith one of the prime movers on restoration in Humboldt County, if not the north coast. If I could add a comment on the status of the fishery, whenever the projected population of Klamath chinook is enough to get us off the floor (where we are not managing for the 35k escapement as the objective for that year), the ocean share is about a 20 percent harvest of the age four Klamath Fish. More years than not we get to manage for about 9%, meaning we are about half way. Despite the best efforts of this program and others there are not many Klamath Fish making it to the ocean. The situation is not improving.

Fletcher: It is important to look back to the intent of the Act. Not only are fall chinook populations low, but coho, steelhead, spring chinook, sturgeon populations are also low. They may go extinct but not due to sport, tribal, or commercial harvest. It is important that we look at habitat issues hard.

Wilkinson: Oregon put a supplementation proposal on the table in terms of fall chinook harvest several years ago; that proposal has never even been responded to. It is interesting to me to see the letters from the Klamath Guides association and Jimmy Smith's letter suggesting some specific steps that might be taken. We really have not followed up on the intent of the Act. I can't help but wonder had we embarked on any of these efforts offered then, where would we be now? Hopefully no worse.

Barry: What action you want to entertain or is it mostly for information?

Bits: It is mostly for information. There are some specific suggestions in the last part of the letter that could in the short term increase populations of fish for harvest. I would also direct your attention to the language about lethal water conditions becoming a recurrent problem. Dissolved oxygen in the summer at night is a serious problem. If the Klamath River is killing its children, then whatever else is being done won't matter; we won't get results.

Smith: There has been exponential growth in the number of marine mammals at the mouth of the river; that's an issue that we have not addressed.

Orcutt: There has been discussion on having a joint KC/TF meeting. On agenda should be the question of "What are the management objectives for fall chinook in the Klamath?" There are a lot of misconceptions. The fish managers and habitat people each have their own perceptions. It would be good to air this question; it would speak to some issues including supplementation. Klamath stocks are managed for the wild fish component. They are managed for some harvest rate to see what the productivity is. There are overlaps between the KC and TF missions.

Bulfinch: California Department of Fish and Game (CDFG) is forbidden to run a supplementation hatchery and Pacific Power will only pay for mitigation for the loss of habitat due to the dam under the Federal Energy Regulatory Commission (FERC) license. Supplementation needs to be done which is closer to the ocean so that wildstocks are not impacted by straying. We might need to give thought to two separate objectives: sustainability of present fisheries and restoration in the future.

Barry: How is this addressed in LRP?

Bulfinch: Very vaguely.

14. Status of DOI's flow study report and recommendations (Robert Anderson, Counselor to Secretary, DOI and Dr. Thom Hardy, Utah State University)

Barry: I would like to introduce Counsel to the Secretary of the DOI, Bob Anderson, and we will hear from Dr. Thom Hardy.

Bob Anderson: Thanks Cindy and TF members. I want to put into perspective what I am doing on the Klamath Adjudication and the associated alternative dispute resolution (ADR). Its a project that is very important to the Secretary's Office and to the DOI as a whole. Generally when we are involved in is state water adjudications, like the Oregon case, we have a policy (that Secretary Babbitt has carried forward from Secretary Lujan in the Bush Administration) to try to settle these disputes rather than litigating them. We have about 19 of these cases going on throughout the west and there is a procedure in setting up Federal negotiating teams to try and facilitate settlements rather than litigating the issues. Typically, what comes out of these settlements is a definition of relative water rights of the parties that are involved: Indian Tribes, non-Indian irrigation districts, private water users that are not associated with irrigation districts, and any other water right claimants involved in the

adjudication which by law has to have every affected user included in these adjudications. That's what we are facing up in Oregon. The case has been in litigation for about 15 or 16 years. Now we are finally down to the point where claims have been filed by the United States and by all the private interests involved in the case. There are several types of claims. Claims that the United States has are made on behalf of Tribes are two different types: one, instream flow claims that are largely above Upper Klamath Lake (UKL) to maintain fisheries habitat in Sprague, Williamson and other rivers.

Secondly, claims have been made to waters and certain lake levels in UKL in order to preserve habitat for the fish that are also listed under the Endangered Species Act. There is also a biological opinion by the FWS that addresses the minimum lake level for Klamath lake.

Thirdly, the United States filed claims on behalf of the Klamath Project the irrigation district claiming water for irrigation purposes. There are other claimants that are not associated with the irrigation district. They are also before the court and they are also part of this alternative dispute resolution process that Martha Pagel and the State of Oregon are spearheading. That process is set up by the State and has a three year time frame. They are very firm in terms of adhering to this three year time frame. Its parallel to the actual litigation and adjudication time frame that's being conducted before the Oregon Department of Water Resources. The litigation is ongoing, but most of the energy is being devoted to the actual negotiation in an attempt to resolve the issue by consensus. The problem we face is that one year from now the State of Oregon is obligated to report to an administrative judge here as to what its views are with respect to water rights claimed by the United States, the Tribes, and every other claimant involved in the adjudication. As part of the process, we are hopeful we'll have a settlement proposal to offer to the administrative law judge, in lieu of litigating the claims. Such a proposal would lay out first what the stream flows are that can be agreed on in the rivers above UKL. Then secondly, on the lake level and how the irrigation district would be dealt with as well as the other water users. In order to do that, we are going to need to study and obtain funding for water supply augmentation projects. There is a study group considering those alternatives. We have picked seven to eight of those out of that process and are trying to move those along on an accelerated basis.

There is a pretty good consensus between the irrigators and the Tribes of the United States and other affected users in the State of Oregon that certain projects such as raising UKL merit a hard look sooner rather than later. We are trying to get the BOR to study those projects. The problem is that the State of Oregon and the water users want to know that if we reach a settlement on the Oregon side of the border there are assurances that someone is not going to come back in six months, in a year, or in five years and say that more water is needed for tribal claims or require more water under the Endangered Species Act (ESA) for species proposed for listing. That is a reasonable question raised by the Oregon side. My response is to talk with folks within the DOI and get Thom Hardy on board to look at ideas that are already circulating as a result of your work and as a result of work done by the Tribes to provide an initial estimate of what Oregon's contribution to the mainstem should be. I would like to be in a position in about a year to propose a figure that could provide some level of certainty. We are not going to be able to write that in stone in one year, but I would like to be able to move a settlement forward on the Oregon side in two years and say what we expect your contribution to be and have a number based on Thom's work with you.

The Tribes have ideas about habitat improvement along the Sprague and Williamson rivers that will improve water quality flowing into Klamath Lake which will reduce the need to have a higher lake level. The FWS is interested in filling out the boundaries of the wildlife refuges particularly upstream of Klamath Lake. If we can acquire those properties, as anticipated, that will have a beneficial effect on water quality flowing into Klamath Lake as well. With all these water rights settlements that have gone before (there has been about 12 or 13 of them since the early 80's involving Indian water rights, BOR projects, and other interests) there is always an off-ramp. If we get to a point where some unforeseen circumstances arise and we need more water from Oregon, we are going to have to build in a mechanism that all bets are off and go back to court to adjudicate. In order to compensate for the lack of absolute certainty, we are going to have to build some flexibility into the number and the assurances so that Thom can get us a figure in two years, then as the work is going on, we can refine and make adjustments. If the State of Oregon comes back, or the private water users, or the Tribes say that is not enough and they want absolute certainty, then it will have to be resolved through litigation. In contrast to litigation, settlement possibilities will move along water augmentation and this would result in money to accomplish the projects.

Dr. Thomas Hardy (Utah State University): There is some confusion why the Department of Justice (DOJ) is involved. I was already under contract with DOJ, they used an existing contract. But I work for Mr. Anderson and the Bureau of Indian Affairs (BIA). The work needs to occur in two phases. Phase I is in the next few months. We are going to look at the historical context of flow in the basin. We can then make some flow recommendations that can be used within this year for water planning and give it to Mr. Anderson. First, we need to do a study to meet Mr. Anderson's needs under Oregon Alternative Dispute

Resolution (ADR) process. Secondly, we need to meet the ongoing annual needs relative to KPOP. Third, we need to be compatible with the efforts of the TF, U.S. Geological Survey (USGS), and Tribal programs. There is no secret conspiracy.

In Phase II, we need to get in the mainstem, the Scott, and Shasta Rivers to know what flows out of Oregon need to be to ensure runs. I cannot do it without the information on the tributaries. We'll begin with the federal family, BOR and TWG to find out how we can do it in two years and also meet the strategic objective of the TF. The data collection would meet the needs of BOR, KPOP, Tribal programs, and USGS in light of what they have brought to the TF regarding salmon and IFIM. I have talked on the phone with CDFG and Gary Smith on the Habitat Suitability Curves (HSC).

Smith: I have the minutes from the TF meeting in June 97 where the TF approved the \$50,000 for the mainstem. At that time, there was no knowledge of another study. I understand it now to include Shasta and Scott. When did the TF get piggy backed into working in the Tributaries? Where do the other funds come from? Have you expanded the study? Who owns the data?

Hardy: A little foundation on this. Over one year ago at a TWG meeting, we were asked to give technical opinions. This was the first time we discussed airborne remote sensing. Those discussions went before the TF. Some time later the study expanded and the National Marine Fisheries Service (NMFS) and BIA felt that would be an opportunity to do more. They both provided pots of money to be used to fund the Tributary work.

Smith: The first time I met you was in Eureka. We discussed a flow study in the Klamath. Part of the problem is that we only agreed to Iron Gate Dam (IGD) to the mouth. The people of Siskiyou County thought the study was from the IGD to the mouth. It has gotten away from this. You know how critical this is. These are critical issues to me. I have worked hard and long to develop trust with landowners. How can I trust what you are saying now? I want to know if this is part of a lawsuit on behalf of the Tribes.

Anderson: There is no reason why this information is not made available to everyone in this room. This data was to be use to facilitate a settlement; we will make it available to you and vice versa. We are not contemplating a lawsuit again anyone in California. The data are for the ADR. If they can be used to accomplish longer term goals, that will be another effort.

Barry: Is the issue that the \$50,000 was used in way TF did not intend?

Smith: I want it in writing that what we decided here will not come back to bite us. I do not want to hurt people that I represent. You make me real nervous.

Anderson: Oregon started a lawsuit and dragged us in. As far as I am concerned the information should be available to TF, citizens, you, the constituents, and irrigation districts. However, if someone takes the information and uses it for lawsuit, I cannot control that. I represent the DOI. I am here for two more years. **We have support from the Tribes and Kitzhaber.**

Smith: What does that have to do with tributaries in the Scott and Shasta?

(Anderson to Hardy). Hardy: FWS says that we need that information. Folks in Oregon say we should not be taking the hit for all of California ourselves.

Smith: There is one more issue. At the ground truthing workshop where CRMPs were called in, they were led to believe that this is a TF project. This has been misrepresented to local volunteer groups.

Hardy: I will take responsibility for any misrepresentation. The only part of digital imagery being paid for by the TF is the mainstem. Decisions on spending TF money elsewhere will come back to the TF. But we also have an opportunity on the tributaries. We are not trying to do anything to destroy trust. My understanding is that the TF approved USGS plan. I have been trying to get the information that achieves the strategic plan of USGS.

Fletcher: We never decided to limit the study to the mainstem. This body has known that and will address issues related to fish basin wide. Our position is that we are charged with restoration of anadromous fish.

Russell: For Hardy, you mentioned that you would review data on historic flows, how far back and on what tributaries?

EXPEDITE REIMB

0028

Part I - Request for Services

1. Title of Requesting Official CLEAR RESOURCES SECTION		1a. Signature <i>[Signature]</i>	2. Date 2/3/99	2a. DJ File Number 90-6-2-70
3. Name of Person to be Contacted DAVID HARDER		4. Telephone No. (303) 312-7328	5. Case Name, Court and Court Docket Number KLAMATH BASIN ADJUDICATION	

6. Legal Division or USAO ENRD/IRS	7. Mailing Address (Exec/Admin/Budget Officer) DENVER, CO	8. Request (circle one) <u>Original</u> Supplemental	IF SUPPLEMENTAL, ENTER ORIGINAL YREGDOC
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9. Speciality of Expert Witness, ADR Neutral, or Litigative Expert: CIVIL ENGINEER

REASON FOR REQUEST (Check below and explain in Block 13)

- a. Expert testimony required on behalf of U.S.
- b. Medical Examination of Plaintiff/Witness/Defendant in Contemplation of Testimony on Behalf of U.S.
- c. Examination Under 18 USC§4241, Mental Competency to Stand Trial only
- d. Dual Purpose Psychiatric Examination (Time of Offense & Competency to Stand Trial) on the motion of _____ under Criminal Justice Act YES [] NO []
- e. Deposition of other party's expert witness
- f. Unusual Fact Witness Expense
- g. Alternate Dispute Resolution (ADR) Neutral Expense
- h. Alternate Dispute Resolution (ADR) Witness Expense
- i. Litigative Expert

TIN: 87-6000528
PHONE: (435) 797-3127
FAX: (435) 797-3102

10. Name, Address, TIN or SSN and Phone Number of Witness, ADR Neutral, or Litigative Expert Dr. Thomas Hardy, Utah State University, Contracts and Grants 1415 Old Main Hill Logan, UT 84322-1415	11. Anticipated start and ending Dates of Service (enter MO/DA/YR) (in conjunction with Block 12) a. Examination of Case _____ b. Prep of Testimony _____ c. Court Testimony _____ d. Neutral/Lit. Expert Services _____
---	--

12. Expense Detail (Estimated Expenses)	(Other Expenses, Cont'd)
a. Examination of Case: _____ hrs or _____ days x \$ _____ = \$ _____	Transportation: Check if included in fee []
b. Preparation of _____ hrs or _____ days x \$82.12 = \$ _____	Common Carrier at Coach Class: (GTA Used [] Yes [] No) \$ _____
c. Testimony _____ hrs or _____ days x \$ _____ = \$ _____	Taxi To/From Terminal: \$ _____
d. Neutral / Lit Expert Services: _____ hrs or _____ days x \$ _____ = \$ _____	POV: _____ Miles @ \$0. _____ per Mile = \$ _____
e. Other Expenses: Per Diem - Check if included in fee []	*(This cost shall not exceed cost by common carrier)
OR _____ days x \$ _____ per day = \$ _____	f. Miscellaneous Expenses (printing, exhibits, etc.) \$ _____
	on actual cost basis: (Itemize on separate page)
	g. Total Estimated Cost \$550,086

REMINDER: Witnesses are not entitled to Advance Payments

13. Explanation and Justification (Attach additional information if space is insufficient) (For Neutral, attach Preliminary Agreement)
INTERAGENCY AGREEMENT #AG6K0000029
BUREAU OF INDIAN AFFAIRS
PORTLAND, OR



United States Department of the Interior

OFFICE OF THE SOLICITOR
Division of Indian Affairs
1849 C Street N.W., Mail Stop 6456
Washington, D.C. 20240

Phone 202 208-6967
Fax 202 208-3490
Internet Scott_Bergstrom@ios.doi.gov

February 3, 2000

NOTE

To: Jim Clear, DOJ Indian Resources
Bob Bruffy (or DOJ Executive Officer)

From: Scott Bergstrom, DOI Solicitor's Office

Re: Klamath Interagency Agreement Modification

Please find enclosed five (5) original modifications to the existing Interagency Agreement between the Bureau of Indian Affairs and DOJ for Klamath River instream flow work. The modification adds funding to the existing Agreement. Jim - I understand from David Harder that you should have his okay via fax this morning (if not already).

Please expedite - the contractor has stopped work vitally needed to address scientific issues in the coming months pending completion of this Agreement, and David and I have Bob Anderson and other DOI types hounding us to get this through asap. If at all possible, please call myself or our secretaries for pick-up, today hopefully, after signing all five originals. Once the BIA contracting officer signs (which he insists must be after DOJ "accepts" the IA), I'll return an original to each of you (or, Jim, to David Harder). Please call my direct line - 208 5928 - if any questions. Thank you!

Part 1 Request

Title of Recommending Official James Clear		1a. Signature Electronically signed by Beverly Schutte for James Clear		2. Date 02/18/2000	
3. Person to be contacted a. Name : David Harder b. Telephone : (303) 312-7328		4. Case Name : Klamath River Basin Adjudication 5. DJ File Number : 90-6-2-70 6. District : Oregon 7. Docket Number :			
8. Section IRS	9. Attorney Location Denver, CO	10. Contract Type Original			
11. Reason for Request Expert Testimony required on behalf of U.S.		12. Funding Source Reimbursable		Debtor Code : 0028 City : Washington, DC	
13. Expert Name Thomas B. Hardy		14. Expertise Hydrology Engineer		15. Rates Per Hour \$60.00	16a. Preparation
				16b. Testimony	
17. Mailing Address Dr. Thomas B. Hardy Utah State University Contracts and Grants 2400 Old Main Hall Logan, UT 84322-2400			18. Tax Information Tax Identification Number : 87-6000528 19. Phone : (435) 797-3127 20. Fax : 1-435-797-3102		
21. Anticipated Trial Date			22. Total Estimated S.O.W. Cost : \$550,086.00 Full Funding Reminder : Expert Witnesses are not entitled to advance payments		

23. Additional Information / Comments (Statement of Work attached, includes expense detail)

The discontinued form OBD-47 with original attorney and recommending official authorizing signatures is maintained in the DOJ official contract file.
Agreement No. AG6K0000029; Modification No. 6

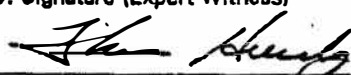
X-Ref FY99-19065

ORIGINAL

Part II - Witness Authorization

1. Date : 02/18/2000	6. OBL Month : 0002
2. Authorized Amount : \$ 550,086.00	7. SOC : 2599
3. YREGDOC : 2000 - 01 - 30018	8. Approved by : Electronically signed by Frits Geurtsen
4. Cost Center : OB1595 5. FY : 2000	9. Approved on: 02/18/2000

Part III - Witness Agreement

1. Witness Submit invoice to : USDOJ/ENRD Expert Witness Unit P.O. Box 685, Ben Franklin Station Washington, DC 20044		2. Auditors : (to be completed by Expert) a) None : b) Govt : c) Other (Name, City, State) :	
3. Signature (Government Attorney) Electronically signed by Beverly Schutte for David Harder	4. Name/Title of Government Attorney David Harder, Field Office Attorney	Date 02/18/2000	
5. Signature (Expert Witness) 	6. Name/Title of Expert Witness Thomas B. Hardy	Date MARCH 7, 2000	

The Expert Witness(es) agree(s) to perform the described services and appear as a witness/witnesses on behalf of the Government

All payments relating to this agreement shall be in accordance with the Prompt Payment Act.

Part 1 Request

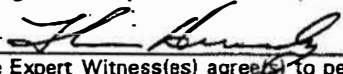
1. Name/Title of Recommending Official James Clear		1a. Signature Electronically signed by Kevin Kidwell for James Clear		2. Date 10/29/2000	
3. Person to be contacted a. Name : Judith Rabinowitz b. Telephone : (415) 744-6486		4. Case Name : Matter -- Yurok Water Rights Adjudication System 5. DJ File Number : 90-6-2-00815 6. District : Oregon 7. Docket Number :			
8. Section IRS	9. Attorney Location San Francisco, CA		10. Contract Type Original		
11. Reason for Request Expert Testimony required on behalf of U.S.		12. Funding Source Reimbursable		Debtor Code : 0028 City : Washington, DC	
13. Expert Name Thomas B. Hardy	14. Expertise Hydrology Engineer	15. Rates Per Hour	16a. Preparation \$44.79	16b. Testimony	
17. Mailing Address Dr. Thomas B. Hardy Utah State University 4110 Old Main Hill Logan, UT 84322-4110		18. Tax Information Tax Identification Number : 87-6000528 19. Phone : (435) 797-3127 20. Fax : 8-435-797-3102			
21. Anticipated Trial Date		22. Total Estimated S.O.W. Cost : \$286,694.37 Full Funding Reminder : Expert Witnesses are not entitled to advance payments			
23. Additional Information / Comments (Statement of Work attached, includes expense detail) The authorized funded amount shown in Part II, Item 2, shall NOT be exceeded without authorization and written modification of the Contract by the Government. Per attorney DJ# changed from 90-6-2-70 to 90-6-2-00815. Funds moved from FY00-30018. IAG #AG6K000029, Mod.06 Contract contact: Utah State--Doug Ringle, (435)797-1065 Dr.Hardy's office--Tammy Peterson					

ORIGINAL

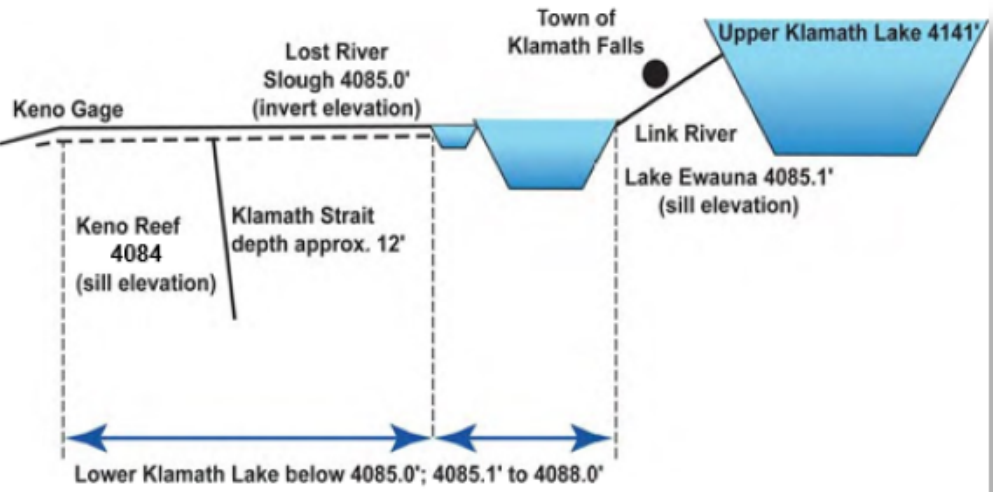
Part II - Witness Authorization

1. Date : 09/29/2000		6. OBL Month : 0009	
2. Authorized Amount : \$ 286,694.37		7. SOC : 2599	
3. YREGDOC : 2000 - 01 - 30132		8. Approved by : Electronically signed by Debra Richardson	
4. Cost Center : 0B1595	5. FY : 2000	9. Approved on: 09/29/2000	

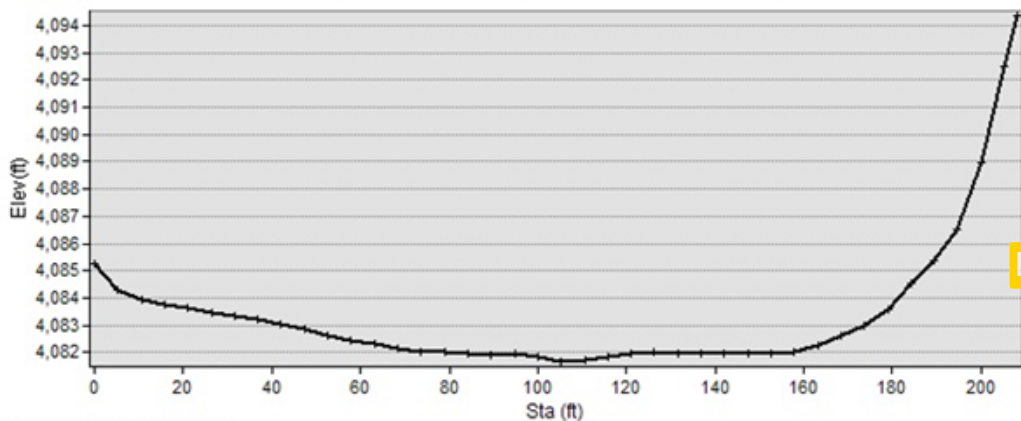
Part III - Witness Agreement

1. Witness Submit invoice to : USDOJ/ENRD Expert Witness Unit P.O. Box 685, Ben Franklin Station Washington, DC 20044		2. Auditors : (to be completed by Expert) a) None : b) Govt : c) Other (Name, City, State) :	
3. Signature (Government Attorney) Electronically signed by Kevin Kidwell for Judith Rabinowitz		4. Name/Title of Government Attorney Judith Rabinowitz, Attorney	Date 10/29/2000
5. Signature (Expert Witness) 		6. Name/Title of Expert Witness Thomas B. Hardy	Date
The Expert Witness(es) agree(s) to perform the described services and appear as a witness/witnesses on behalf of the Government		All payments relating to this agreement shall be in accordance with the Prompt Payment Act.	

Doug Ringle 12/19/00

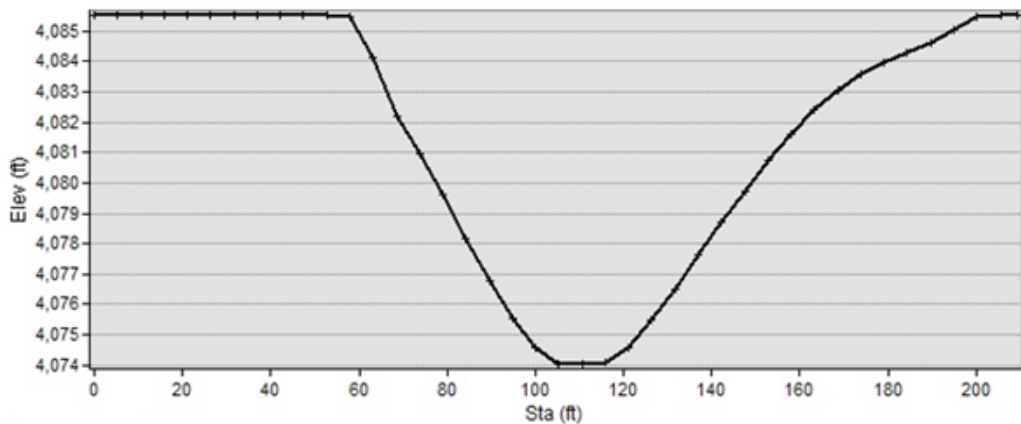


Historical bathymetry/topography at original Keno Reef



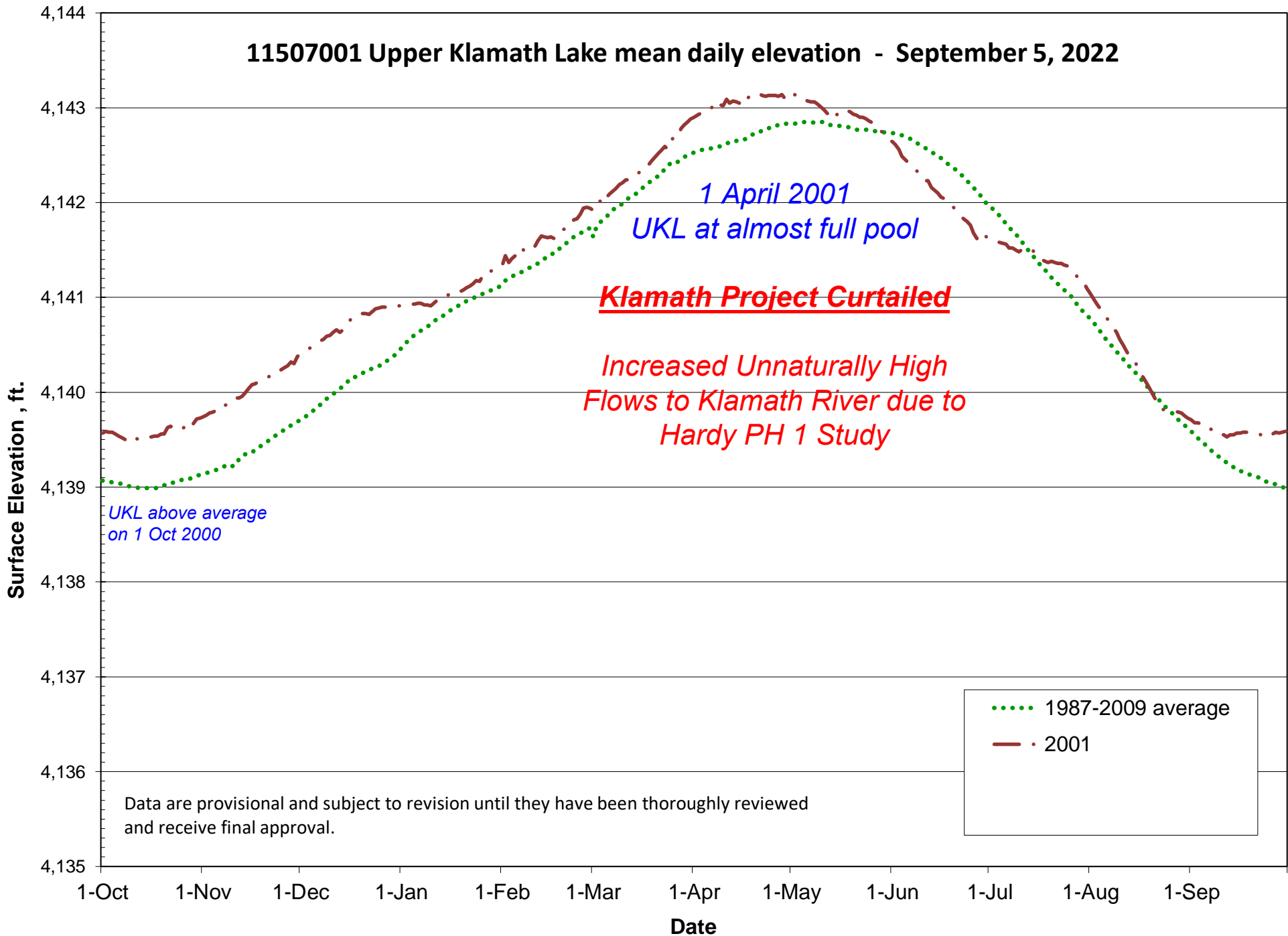
Source: *kenohisttopo* grid

Current bathymetry at original Keno Reef



Source: *keno_bath* grid

11507001 Upper Klamath Lake mean daily elevation - September 5, 2022



Surplus (+)/Shortage (-) Relative to Conservation Levels

(TAF)

	OCT	NOV	DEC	JAN	FEB	MAR	JUN	JUN	JUL	AUG	SEP
	15	30	31	31	28	31	15	30	15	15	15
	(TAF)	(TAF)	(TAF)	(TAF)	(TAF)	(TAF)	(TAF)	(TAF)	(TAF)	(TAF)	(TAF)
1981	-9.32	-96.15	-56.28	18.94	8.98	-35.39	-86.78	-31.35	-12.35	24.44	66.85
1982	61.36	45.51	85.51	97.18	49.62	-14.55	-18.18	37.88	88.87	109.73	152.35
1983	157.65	92.77	97.18	97.18	8.98	0.00	0.00	70.49	112.42	152.88	234.67
1984	241.00	138.44	97.18	97.18	8.98	0.00	0.00	71.40	97.90	139.35	223.83
1985	256.36	138.44	97.18	97.18	8.98	-92.17	-37.19	3.58	13.31	57.60	135.71
1986	158.53	93.66	97.18	97.18	36.98	-2.73	-51.66	-12.56	-2.65	24.44	66.06
1987	106.65	23.60	59.53	97.18	8.08	-63.40	-70.62	9.88	41.08	134.84	195.97
1988	194.17	102.58	97.18	97.18	8.98	-42.61	-37.19	39.69	56.34	80.40	122.73
1989	113.40	68.07	88.20	97.18	8.98	0.00	-39.90	-13.46	-5.29	2.39	40.47
1990	49.68	-38.94	-25.92	62.21	8.98	-0.91	0.00	70.49	96.99	145.66	214.81
1991	208.52	126.78	97.18	97.18	8.98	-5.46	-8.18	55.96	88.87	134.84	193.27
1992	174.49	105.26	97.18	97.18	8.98	-51.66	-100.23	-41.13	0.00	50.67	98.31
1993	77.17	10.45	25.93	89.99	8.98	0.00	0.00	51.43	59.04	73.34	120.19
1994	105.80	-7.14	7.68	63.99	8.98	-52.56	-49.85	11.68	32.99	70.70	117.64
1995	96.65	30.28	37.36	97.18	8.98	-0.91	-38.09	27.03	45.55	65.44	86.82
1996	64.49	-25.91	33.83	97.18	15.29	-15.45	-17.27	19.80	36.59	58.47	99.97
1997	94.19	33.65	84.62	97.18	8.98	-107.39	-115.42	-84.80	-71.10	-38.18	16.29
1998	24.55	-38.18	-6.77	97.18	8.98	-0.91	0.00	66.85	92.47	112.42	147.07
1999	139.19	128.57	97.18	97.18	8.98	0.00	0.00	68.67	93.37	138.44	211.21
2000	212.11	136.64	97.18	97.18	8.98	-67.01	-35.39	6.27	22.24	54.99	117.64
2001	131.36	51.54	75.64	97.18	8.98	-47.14	-70.62	-8.97	25.82	75.98	121.88
2002	117.64	51.54	81.92	97.18	8.98	-117.20	-188.93	-140.56	-119.95	-79.29	-31.60
2003	-41.27	-112.11	-99.11	3.40	8.98	-37.19	-53.47	-17.04	-3.53	27.77	80.35
2004	63.71	-18.15	18.07	95.37	8.98	-64.30	-99.34	-39.36	-7.06	40.42	98.31
2005	86.01	2.39	16.33	72.95	8.08	-85.88	-11.82	37.88	56.34	80.40	107.49
2006	97.47	65.44	97.18	97.18	8.98	-93.06	-23.62	13.48	37.48	54.99	88.45
2007	77.17	11.26	43.54	97.18	8.98	-2.73	-34.49	21.61	50.93	111.53	175.38
2008	178.06	99.01	97.18	97.18	8.98	-39.90	-0.91	54.15	77.11	120.50	164.71
2009	157.65	85.69	91.78	97.18	8.98	-40.80	-40.80	20.70	39.28	80.40	126.18
2010	106.65	26.10	28.56	97.18	8.98	-114.53	-168.75	-112.47	-91.16	-54.83	-9.32
2011	-21.87	-101.02	-40.47	71.16	7.18	-12.73	-2.73	51.43	78.92	103.47	128.77
2012	115.09	31.96	40.01	97.18	8.98	0.00	-25.44	19.80	48.24	84.81	124.46
2013	99.14	21.10	60.42	97.18	8.98	-96.65	-121.65	-71.87	-40.14	12.08	75.57
2014	72.39	-48.80	-61.75	-18.50	-16.15	-20.90	-28.16	33.36	68.07	130.36	190.58
2015	174.49	100.79	97.18	97.18	8.08	-29.97	-71.52	-37.58	-13.23	30.28	73.18
2016	48.91	-49.56	-11.83	77.43	8.98	-1.82	-98.44	-56.13	-40.99	-13.45	24.55
2017	7.34	-78.56	-58.63	21.55	8.98	0.00	-50.75	-12.56	-9.71	13.71	63.71
2018	50.46	-25.91	-16.00	44.42	5.37	-13.64	-26.34	26.12	49.14	101.69	156.77
2019	140.93	37.87	55.07	97.18	8.98	-93.96	-52.56	-24.20	-6.18	30.28	77.96

Part 1 Request

1. Name/Title of Recommending Official James Clear		1a. Signature Electronically signed by Kevin Kidwell for James Clear		2. Date 10/29/2000	
3. Person to be contacted a. Name : Judith Rabinowitz b. Telephone : (415) 744-6486		4. Case Name : Matter -- Klamath Project Curtailment of Water			
		5. DJ File Number : 90-1-2-10086/1		7. Docket Number :	
6. District : Oregon					
8. Section IRS		9. Attorney Location San Francisco, CA		10. Contract Type Original	
11. Reason for Request Expert Testimony required on behalf of U.S.		12. Funding Source FEW			
13. Expert Name Thomas Hardy		14. Expertise Hydrology		15. Rates Per Hour	
		16a. Preparation \$130.00		16b. Testimony	
17. Mailing Address Dr. Thomas Hardy Watershed Systems Group, Inc. 1656 University Drive Logan, UT 84341		18. Tax Information Tax Identification Number : 87-0560247			
		19. Phone : (435) 797-3127		20. Fax : 8-435-797-1185	
21. Anticipated Trial Date		22. Total Estimated S.O.W. Cost : \$5,200.00			
		Full Funding			
Reminder : Expert Witnesses are not entitled to advance payments					

23. Additional Information / Comments (Statement of Work attached, includes expense detail)

The discontinued form OBD-47 with original attorney and recommending official authorizing signatures is maintained in the DOJ official contract file.

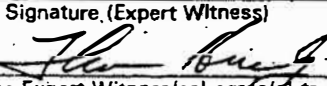
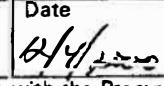
The authorized funded amount shown in Part II, Item 2, shall NOT be exceeded without authorization and written modification of the Contract by the Government.

ORIGINAL

Part II - Witness Authorization

1. Date : 09/29/2000		6. OBL Month : 0009	
2. Authorized Amount : \$ 5,200.00		7. SOC : 1157	
3. YREGDOC : 2000 - 01 - 40218		8. Approved by : Electronically signed by Terri Cahill	
4. Cost Center : 0361960413		9. Approved on: 09/29/2000	
5. FY : 2000			

Part III - Witness Agreement

1. Witness Submit invoice to: USDOJ/ENRD Expert Witness Unit P.O. Box 685, Ben Franklin Station Washington, DC 20044		2. Auditors : (to be completed by Expert) a) None : b) Govt : c) Other (Name, City, State) :	
3. Signature (Government Attorney) Electronically signed by Kevin Kidwell for Judith Rabinowitz		4. Name/Title of Government Attorney Judith Rabinowitz, Attorney	Date 10/29/2000
5. Signature (Expert Witness) 		6. Name/Title of Expert Witness Thomas Hardy	Date 
The Expert Witness(es) agree(s) to perform the described services and appear as a witness/witnesses on behalf of the Government		All payments relating to this agreement shall be in accordance with the Prompt Payment Act.	

Water Year	Hardy et al (2006) Estimated Annual Flow Changes to the Klamath River due to Klamath Irrigation Project operations predicted by KPOPSIM (Table 3) in 1,000/af¹	Actual Historical Klamath Irrigation Project Diversion² (Includes Lost River diversions which are not natural to the Klamath River) in 1,000/af	Lost River Diversion Channel Additions to Klamath River and Klamath Irrigation Project³ in 1,000/af	Estimated Annual Klamath Irrigation Project Returns to Klamath River from Klamath Straights Drain⁴ in 1,000/af	Estimated Annual Evaporation from Lower Klamath Lake Historically Lost to Klamath River below Keno and added to Klamath River Availability⁵ in 1,000/af	Hardy Model Over Estimation Error in 1,000/af
1981	-323.2	-392	+38	+79	+100	72
1982	-555.5	-343	+127	+149	+79	313
1983	-399.2	-346	+143	+138	+82	130
1984	-363.5	-373	+142	+151	+99	98
1985	-344.4	-408	+84	+110	+98	60
1986	-430.7	-405	+89	+125	+97	158
1987	-395.5	-424	+46	+100	+99	124
1988	-426.2	-429	+42	+100	+99	154
1989	-504.1	-385	+67	+110	+97	259
1990	-380.5	-422	+46	+100	+96	108
1991	-450.9	-422	+22	+79	+97	182
1992	-417.1	-380	+11	+2	+96	124
1993	-533.4	-350	+56	+83	+95	305
1994	-311.2	-419	+19	+49	+100	22
1995	-534.3	-354	+66	+75	+100	289
1996	-393.3	-395	+107	+127	+95	113
1997	-522.6	-417	+91	+100	+99	213
Average	-398.3	-392	+70	+99	+96	130

¹ Hardy, Thomas B, R. Craig Addley, and Ekaterina Saraeva. 31 July 2006. Evaluation of Instream Flow Needs in the Lower Klamath River. Phase II. Final Report. Prepared for the U.S. Department of the Interior. P. 32

² KBPM Simulation Viewer 071421 provided by MBK Engineering.

³ Data extracted from <https://www.usbr.gov/pn-bin/daily.pl?station=lr&format=html&year=1980&month=10&day=1&year=1997&month=9&day=30&pcode=qd&pcode=qj>

⁴ Davids Engineering Inc. October 1998. Klamath Project Historical Water Use Analysis. Briefing Chart #27. Klamath County, Oregon and Siskiyou County, California.

⁵ Davids Engineering Inc. October 1998. Klamath Project Historical Water Use Analysis. Briefing Chart #33. Klamath County, Oregon and Siskiyou County, California.

From: Tom Paul
Sent: Sunday, June 16, 2013 8:31 PM
To: WHITMAN Richard M * GOV
Cc: RATCLIFFE Jesse D; [WARD Phillip C](#); [PAUL Thomas J](#)
Subject: Re: Dispute Resolution - Yurok

Richard, the document looks fine to me. Phil, Jesse and I will need to discuss WRD's requirements under #2. The flows will only change when the BOR notifies the Watermaster that their releases from Link River dam change.

Tom

Sent from my iPhone

On Jun 16, 2013, at 6:12 PM, "WHITMAN Richard M * GOV" <richard.m.whitman@state.or.us> wrote:

Please take a quick look and let me know if this looks ok. I'd like to send it to Troy on Monday morning.

Richard Whitman
Governor Kitzhaber's Natural Resources Advisor
(503)881-7093 (cell)
richard.m.whitman@state.or.us

Begin forwarded message:

From: Richard Whitman <rmwpdx@msn.com>
Date: June 16, 2013, 6:02:06 PM PDT
To: Work <richard.m.whitman@state.or.us>

<Yurok Dispute Resolution Notice 6-15-2013.docx>

DISPUTE RESOLUTION NOTICE – DRAFT Background

Pursuant to Section 6.5.1 of the Klamath Basin Restoration Agreement (“KBRA”), on May 14, 2013, the Yurok Tribe provided a Dispute Initiation Notice to the Oregon Water Resources Department (“OWRD”) (collectively, the “Parties”). In the KBRA, a Dispute Initiation Notice provides an opportunity for KBRA parties to collaboratively resolve issues that may arise in the course of the implementation of the KBRA. The Parties have followed the dispute resolution procedures set forth in the KBRA and successfully resolved the issues raised in the Dispute Initiation Notice. Pursuant to KBRA Section 6.5.5, this Dispute Resolution Notice: (i) restates the disputed matter as described in the Dispute Resolution Notice, (ii) describes the terms of the resolution of the dispute, and (iii) describes any alternatives considered for resolution.

Summary of Dispute Resolution Notice

The Dispute Initiation Notice states that OWRD does not recognize flows that the U.S. Bureau of Reclamation (“BOR”) is required to release downstream in the Klamath River under applicable federal law as an authorized use of water, and that OWRD will require the BOR to cease releasing these flows under certain circumstances. The Dispute Initiation Notice also asserts that OWRD has insufficiently engaged the Yurok Tribe in addressing Klamath River flows.

Terms of Resolution

To resolve the dispute described above, OWRD makes and the Yurok Tribe acknowledges the following statements. These statements do not require a final agency action by OWRD, and do not constitute such an action.

1. OWRD has recognized and continues to recognize that the BOR must comply with its obligations under federal law concerning flows in the Klamath River. OWRD is not interfering with BOR's obligations under the Biological Opinion for the Klamath Irrigation Project, and does not intend do so, unless otherwise directed to do so by order of a court with proper jurisdiction. Finally, OWRD acknowledges that various parties may have differences of opinion concerning a range of legal issues pertaining to BOR's release of water in order to comply with the Biological Opinion for the Klamath Irrigation Project. This paragraph reflects OWRD's position only.

2. OWRD confirms its intent to communicate with the Yurok Tribe on issues pertaining to flows in the Klamath River as they relate to implementation of the KBRA. OWRD and the Yurok Tribe will notify each other of substantive communications with other KBRA parties regarding Klamath River flows as they relate to implementation of the KBRA. OWRD and the Yurok Tribe acknowledge that a range of factors may bear on the precise timing and nature of these communications.

Alternatives Considered

By relying on the dispute resolution procedures set forth in the KBRA, the Parties swiftly and successfully resolved the issues raised by the Yurok Tribe, consistent with terms of the KBRA and applicable law. The Parties did not find it necessary to present or consider alternatives to the Terms of Resolution set forth above.