United States General Accounting Office

GAO

Report to the Honorable
Thomas Daschle, U.S. Senate

January 1998

INDIAN ISSUES

Cheyenne River Sioux Tribe's Additional Compensation Claim for the Oahe Dam

GAO/RCED-98-39

GAO

United States
General Accounting Office
Washington, D.C. 20548

Resources, Community, and
Economic Development Division

B-278567

January 28, 1998

The Honorable Thomas Daschle
United States Senate

Dear Senator Daschle:

In 1948, the federal government began to construct the Oahe dam as a flood control project on the Missouri River. The reservoir created by the dam flooded over 100,000 acres of the Cheyenne River Reservation. In 1954, the Cheyenne River Sioux tribe requested about $23.5 million for damages (losses resulting from the government's taking of the Indians' land) and general rehabilitation (funds for improving the Indians' standard of living). Later that year, the Congress authorized the payment of about $10.6 million to the tribe for damages, rehabilitation, and administrative expenses related to the settlement. In March 1993, the Cheyenne River Sioux Tribal Council unanimously passed a resolution stating that the tribe had not received adequate compensation for the damages resulting from the flood control project. The tribe hired a consultant to prepare a new economic analysis of the damages, which was published in July 1994.[1]

Other tribes also lost land to flood control projects on the Missouri River and received compensation for damages from the federal government, primarily during the 1950s. In the 1980s, these tribes requested additional compensation on the grounds that the amounts they originally received were not adequate. The tribes at two reservations—Fort Berthold and Standing Rock—hired consultants to prepare economic analyses supporting their requests for additional compensation. We assessed the adequacy of these analyses in response to a congressional request and, in May 1991, reported that the analyses overstated the tribes' losses because they were based on assumptions that could not be supported by historical evidence.[2] As an alternative, we suggested that the Congress consider using the tribes' requests for compensation at the time of the taking as a starting point for calculating additional compensation. Specifically, we suggested that the Congress consider a range of additional compensation based on the present value of the difference between the amount requested for each reservation and the amount received. We did not consider whether additional compensation should be provided or evaluate

[1]Analysis of Economic Loss Resulting From Lands Taken From the Cheyenne River Sioux Tribe for the Oahe Dam, The Robert McLaughlin Company (Solen, N.Dak., July 1994).

[2]Indian Issues: Compensation Claims Analyses Overstate Economic Losses (GAO/RCED-91-77, May 21, 1991).

the adequacy of the compensation originally appropriated by the Congress. We did, however, note that the tribes may not have been willing sellers of their land at the amount of compensation authorized by the Congress.

In 1992, the Congress enacted legislation acknowledging, first, that the U.S. government did not justly compensate the tribes at Fort Berthold and Standing Rock when it acquired their lands and, second, that the tribes were entitled to additional financial compensation. Accordingly, the legislation provided development trust funds for these two reservations. A 1996 act provided a development fund for another reservation, Crow Creek, and a 1997 Senate bill proposed such a fund for a fourth reservation, Lower Brule. Anticipating the introduction of legislation proposing additional compensation for the Cheyenne River Sioux, you asked us to assess the new economic analysis prepared by the consultant for the tribe.

The consultant used two approaches to estimate the amount of additional compensation due to the Cheyenne River Sioux: The primary approach recalculates the value of the tribe's losses, while the secondary approach generally mirrors the alternative approach that we proposed in our 1991 report.[3] Our assessment of the two approaches follows, together with our suggestions for developing ranges of values under the second approach and for separating the values for damages from the values for rehabilitation.

Results in Brief

The consultant's primary approach, which produced an estimate of $300.7 million in additional compensation,[4] relies on questionable assumptions about the value of the tribe's losses in the 1950s. For example, the consultant assumed much higher timber harvest levels and wildlife values than the federal government assumed at the time of the taking. The consultant's secondary approach, which produced an estimate of $279.1 million, was used to support the primary approach. Like the approach we proposed in our 1991 report, it uses the tribe's 1954 request as a basis for calculating additional compensation. However, it provides a single figure for additional compensation, rather than a range such as we proposed in our 1991 report. In addition, it includes an amount for

[3]For both of these approaches, two factors need to be considered—(1) the value in 1954 of any additional compensation that may be deemed necessary and (2) the method that should be used to adjust this amount to its value in 1996, accounting for inflation and other factors.

[4]In 1996 dollars. All of the values in the "Results in Brief" reflect 1996 values.

rehabilitation as well as an amount for damages, while the primary approach provides only for damages. Neither of the consultant's approaches includes an amount for administrative expenses.[5]

The extent to which the tribe should receive additional compensation for damages—and whether the tribe should receive additional payments for rehabilitation and administrative expenses—is a policy question for the Congress to decide. To provide the Congress with information for such decision-making, we used our 1991 approach to calculate ranges for damages ($32.3 million to $120.1 million), rehabilitation ($45.8 million to $170.1 million), and administrative expenses ($0.1 million to $0.5 million). Specifically, for each of these factors, we subtracted the amounts that the tribe received from the amounts that it requested (or paid, in the case of administrative expenses) and multiplied the resulting differences by the inflation rate,[6] thereby obtaining the lower value for each range. Similarly, we multiplied these differences by the corporate bond rate[7] to obtain the upper value for each range. Through this approach, we calculated separate ranges for the Congress to consider in deciding on the type and amount of any additional payments.

Background

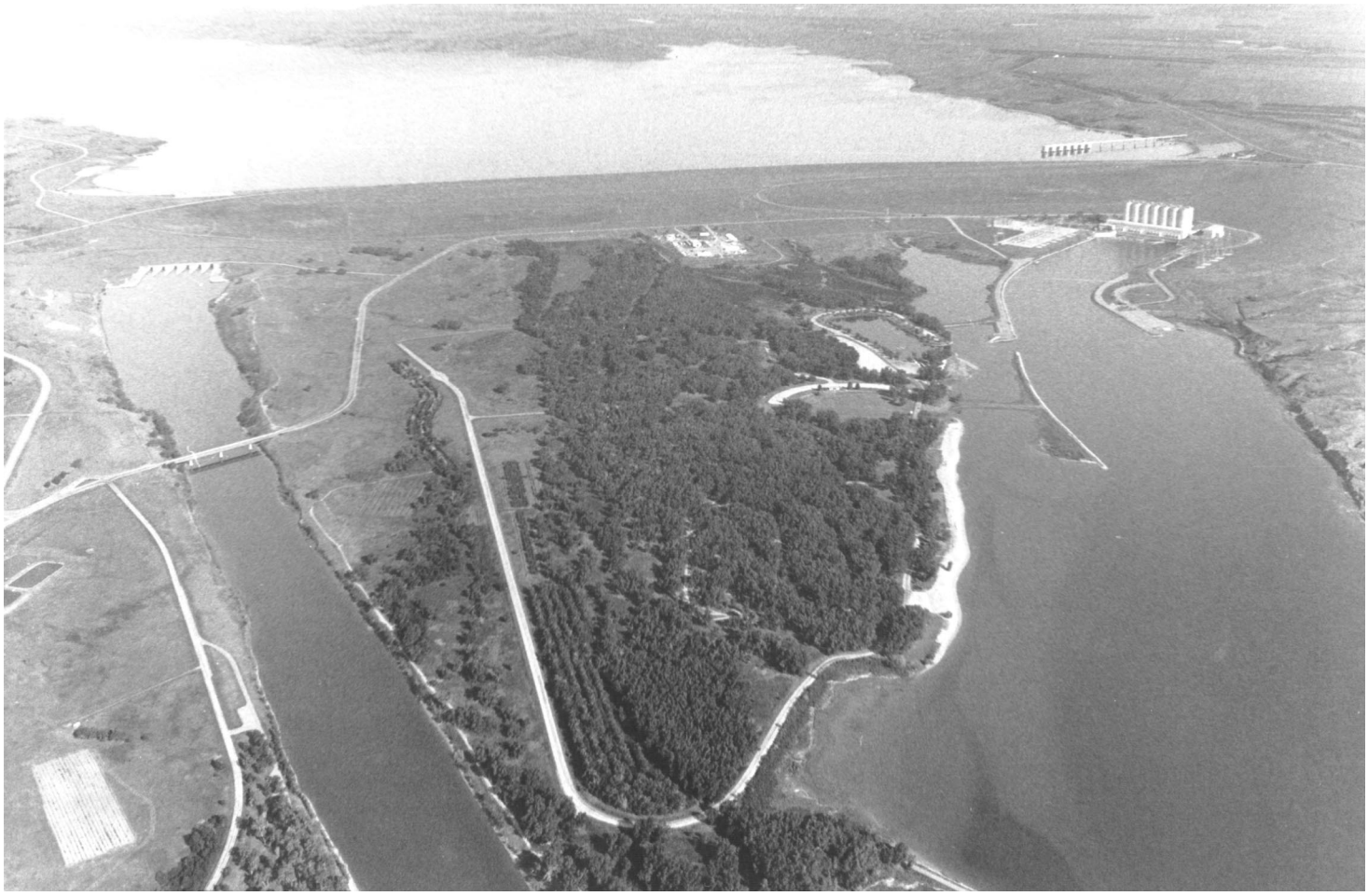
In implementing the Flood Control Act of 1944, the U.S. Army Corps of Engineers (Corps) constructed a number of dams on the Missouri River in North Dakota and South Dakota. The construction of the Oahe dam, located 6 miles northwest of Pierre, South Dakota, began on September 16, 1948. President Kennedy officially dedicated the dam on August 17, 1962. At the maximum water level of 205 feet, the reservoir behind the dam stretches 231 miles from just northwest of Pierre, South Dakota, to just south of Bismarck, North Dakota. See figure 1 for a picture of the dam and appendix I for a map of the dam and reservoir.

[5]Damages fall into two categories—direct and indirect. Direct damages primarily include values for the land and improvements in the taking area. Indirect damages include values for the loss of such things as timber, wildlife, and wild products (fruits, berries, and herbs) in the taking area. While compensation for damages was used to cover losses resulting from the taking, funds for rehabilitation were used to bring the Indians' standard of living closer to that of their non-Indian neighbors through loans and welfare payments. Administrative expenses include the costs incurred by the tribe in negotiating a settlement with the federal government.

[6]The annual inflation rate (consumer price index for all items) from 1955 through 1996.

[7]The annual average rate of interest earned on investments in Aaa corporate bonds from 1955 through 1996.

Figure 1: The Oahe Dam



Source: U.S. Army Corps of Engineers.

The Cheyenne River Sioux lost 104,420 acres to flooding when the Oahe reservoir was created. The Corps; the Department of the Interior, through the Missouri River Basin Investigations Unit (MRBI);[8] and the tribe each developed estimates of the damages caused by this project. The Corps' estimate provided only for direct damages; that is, it included values primarily for the land and improvements in the taking area. MRBI's and the tribe's estimates provided for both direct and indirect damages. The

[8]The Secretary of the Interior created this unit in 1945 to study the impact of the various Missouri River flood control projects.

indirect damages included values for the loss of such things as timber, wildlife, and wild products (fruits, berries, and herbs) in the taking area. (See app. II for more information on the Corps', MRBI's, and the tribe's damage estimates.)

In 1952, the tribe developed a damage estimate for an initial settlement proposal, which it revised upward in 1954. The 1952 proposal sought specific dollar amounts for direct damages, indirect damages, and rehabilitation, as well as unspecified amounts for the relocation and reestablishment of tribal members in the taking area and for tribal administrative expenses related to the settlement, among other things. The 1954 proposal requested $10,930,871 for direct and indirect damages and $12,599,432 for rehabilitation. Later that year, the Congress authorized a total payment of $10,644,014 to the Cheyenne River Sioux, including (1) $5,384,014 for the land, improvements, and all other claims related to the project (direct and indirect damages); (2) $5,160,000 for the rehabilitation of tribal members residing on the reservation and for the relocation and reestablishment of tribal members living in the taking area; and (3) $100,000 for tribal administrative expenses related to the settlement.[9]

Tribes at four other reservations affected by flood control projects along the Missouri River incurred losses ranging from about 16,000 acres to over 150,000 acres. Primarily during the 1950s, these tribes received some compensation for their losses. However, starting in the 1980s they began requesting additional amounts ranging from $27.5 million to $342.9 million. The Congress responded to their requests by authorizing or proposing the establishment of development trust funds for them. Specifically, in 1992, it authorized a $149.2 million fund for the Fort Berthold Reservation and a $90.6 million fund for the Standing Rock Reservation.[10] In 1996, it authorized a $27.5 million fund for the Crow Creek Reservation.[11] A legislative proposal would establish a $39.3 million fund for the Lower Brule Reservation.[12] (See app. III for a table summarizing information on these four reservations and Cheyenne River.)

[9]P.L. 83-776, 68 Stat. 1191 (Sept. 3, 1954).

[10]P.L. 102-575, title XXXV, 106 Stat. 4731 (Oct. 30, 1992).

[11]P.L. 104-223, 110 Stat. 3026 (Oct. 1, 1996).

[12]S. 156, introduced on Jan. 21, 1997.

Consultant's Primary Approach Is Based on Questionable Assumptions

Under his primary approach, the consultant recalculated the value of the tribe's losses for lost timber, wildlife, wild products, and agricultural production. He estimated that the total value of the losses, as of January 1, 1955, was $19.4 million. After subtracting the $5.4 million authorized as damage compensation for the tribe in 1954, the consultant applied the annual prime rate to adjust the unpaid damages of $14.0 million to 1996 values, arriving at a total claim for additional damage compensation of $300.7 million.[13] In calculating this estimate, the consultant made a number of questionable assumptions. Among the more important of these are the (1) choice of a discount rate for valuing the tribe's future losses, (2) estimate of timber harvest levels, (3) estimate of wildlife resource values, and (4) estimate of the tribe's consumer surplus—that is, the value to the tribe, above and beyond the market value, of the resources that were lost in the taking.

Consultant Used a Questionable Discount Rate

Historical information available on the damage estimates prepared in the 1950s raises questions about the discount rate used by the consultant. To value the future annual income lost to the tribe because of the taking, he selected the 1955 prime interest rate of 2.79 percent (net of inflation) as the discount rate. The discount rate is used to determine the present value of a stream of annual income. A key question in evaluating the consultant's selection of a discount rate is whether it accurately reflects the discount rate that the tribe would have used in the 1950s. Historical documents indicate that the tribe and MRBI used a 4-percent discount rate.[14] Moreover, the tribe requested that its settlement draw interest at 5 percent. This information suggests that the tribe's discount rate was higher than the prime rate assumed by the consultant.

As the discount rate increases, the value of future earnings decreases. For example, the consultant estimated the value of the tribe's lost annual agricultural production as of January 1955 at $193,194. Assuming that this annual loss would continue in perpetuity, the consultant used a 2.79-percent discount rate to calculate a present value of $6,924,516 for the

[13]The consultant used the annual prime rate to adjust the unpaid damages from 1955 through 1993. His report, issued in July 1994, projected additional compensation to 1996. For 1994 through 1996, he used the 6-percent prime rate from 1993. Using the actual annual prime rates for 1994 (7.15 percent), 1995 (8.83 percent), and 1996 (8.27 percent) would produce an estimate of $318.8 million in additional compensation.

[14]The context in which the 4-percent discount rate is used indicates that it is real—that is, net of inflation. For example, to calculate the value of timber products forgone, MRBI capitalized the annual use value of timber products at 4 percent. Implicit in this calculation is an assumption that the annual use value is constant over time (i.e., real). To ensure that the capitalization calculation is consistent, the discount rate must also be real.

tribe's total agricultural production losses. If the consultant had used a 4-percent discount rate, the same annual loss of $193,194 would have had a present value of $4,829,850—a reduction of $2,094,666, or about 30 percent. Similarly, if the consultant had applied the 4-percent discount rate to his entire analysis (losses for timber, wildlife, wild products, and agricultural production), he would have arrived at a total damage estimate of $13.5 million in 1955—a figure that is about 30 percent lower than his total damage estimate of $19.4 million.

Consultant Used Questionable Timber Harvest Levels

The consultant did not adequately justify the harvest levels for timber that he used in his damage calculations. His total damage estimate for timber exceeded both the tribe's and MRBI's estimates. Specifically, for different timber resources (e.g., logs, poles, posts, and cordwood), he used harvest levels that exceeded, by 12 to 199 percent, the sustainable levels calculated by MRBI.

The tribe developed two timber estimates—one in 1952 for $900,000 and the other in 1954 for $2,444,125. Because we were unable to find any detailed calculations showing how the tribe arrived at these estimates, we cannot compare the tribe's methodology with MRBI's or the consultant's.

MRBI based its timber damage estimate on sustainable harvest levels—that is, on the harvest levels that could be maintained in perpetuity, taking into account the growth rate for new trees. MRBI used sustainable levels rather than actual levels—which, on average, had significantly exceeded sustainable levels from 1942 through 1951—because it assumed that the same losses would occur every year in perpetuity. The Cheyenne River Reservation's timber resources could not have supported the use of higher harvest levels in perpetuity; if harvesting had continued at recent levels, the reservation would quickly have run out of trees. MRBI's total damage estimate for timber was $689,625.

In developing his damage estimate for timber, the consultant did not use MRBI's sustainable harvest levels. For example, in calculating the damage estimate for cordwood, he assumed that 400 households would each need 11.3 cords of wood annually, or a total of 4,520 cords per year, for heating and cooking. Since the tribe lost 90 percent of its timber as a result of the taking, he calculated an annual loss for cordwood of 4,068 cords. However, he did not present any evidence that the timber supply in the taking area could sustain this level of harvesting in perpetuity. Table 1

compares MRBI's sustainable harvest levels with the consultant's harvest levels. The consultant's total damage estimate for timber was $3,507,204.

Table 1: Timber Harvest Levels

Timber resources	MRBI's sustainable annual harvest levels	Consultant's annual harvest levels	Difference
Logs (#)	900	1,080	20%
Poles (#)	3,000	3,360	12%
Posts (#)	6,000	8,340	39%
Cordwood (cords)	1,359	4,068	199%

Source: U.S. Department of the Interior and the consultant's analysis.

Consultant Used Questionable Values for Wildlife

The consultant did not adequately justify the values for wildlife that he used in his calculations. His total damage estimate for wildlife exceeded both the tribe's and MRBI's estimates.

In both its 1952 and 1954 settlement proposals, the tribe presented a combined damage estimate for wildlife and wild product losses—$1,857,000 in 1952 and $1,857,500 in 1954. Because we were unable to find any detailed calculations showing how the tribe arrived at these estimates, we cannot compare the tribe's methodology with MRBI's or the consultant's. Nor can we separate the tribe's values for wildlife and wild products, as MRBI and the consultant separated theirs.

As a starting point for developing a damage estimate for wildlife in 1954, MRBI used a 1951 U.S. Fish and Wildlife Service (FWS) report, which derived values for wildlife from sportsmen's expenditures for hunting. Essentially, this report equated the values of various game animals with the average amounts spent by hunters (e.g., for lodging, transportation, and equipment) to acquire these animals. MRBI concluded as follows:

"The value of game to the Indian people undoubtedly is less than the amount sportsmen spend for hunting game. Reservation Indians probably are more skilled hunters than the average sportsmen, use less costly equipment, and no hotel bills or long distance travel are incident to their hunting activities. Sportsmen's expenditures therefor are not considered a sound basis for arriving at the value of game to Indians. The loss to Indians from the destruction of wildlife is taken to be the value to them of the annual wildlife harvest which they obtain. This value may be measured by the additional amounts which the Indians will

have to pay for food to replace that previously supplied by the destroyed wildlife resources."[15]

MRBI's values were about 50 percent lower than the FWS report's values for big game (deer) and about 70 percent lower for upland game (e.g., pheasants, rabbits, and squirrels). MRBI did not change the report's values for fur-bearing animals (e.g., mink, beaver, and muskrat). MRBI's total damage estimate for wildlife was $915,000; for both wildlife and wild products, it was $1,056,750.

The consultant also used the 1951 FWS report as a starting point for estimating wildlife damages. However, instead of developing alternative values, he assumed that the sportsmen's expenditures accurately reflected the losses to the tribe. After adjusting the report's values for inflation and other factors, he arrived at a damage estimate of $5,677,168 for wildlife as of January 1955. The consultant did not provide support for his assumption that the sportsmen's expenditures accurately reflected the value of wildlife to the tribe. For both wildlife and wild products, the consultant's total damage estimate of $8,941,433 is about five times higher than the tribe's final estimate ($1,857,500) and about nine times higher than MRBI's estimate ($1,056,750).

Consultant Used a Questionable Consumer Surplus Estimate

The consultant did not provide convincing evidence to support his assumption of a 40-percent consumer surplus for the tribe. Consumer surplus is a monetary measure of the benefits, in excess of the market value, that consumers derive from using a particular good. After determining annual damage estimates for timber, wildlife, and wild products, the consultant increased these estimates by 40 percent to account for consumer surplus. A key question in evaluating the consultant's adjustment for consumer surplus is whether it accurately reflects the tribe's consumer surplus in the 1950s. In his report, the consultant acknowledges that information is not available to determine the tribe's true consumer surplus in the 1950s. Therefore, to approximate it, he used information from a 1985 report on the consumer surplus associated with sportsmen's hunting and fishing trips in North Dakota.[16] However, the consultant presented no evidence that this estimate

[15]Damage to Indians of Five Reservations from Three Missouri River Reservoirs in North Dakota and South Dakota, U.S. Department of the Interior, Bureau of Indian Affairs, MRBI Report No. 138 (Billings, Mont., Apr. 1954), p. 77.

[16]Randall S. Anderson, Jay A. Leitch, and Cliff R. Fegert, Guidelines for Economic Evaluation of Public Sector Water Resource Projects, Department of Agricultural Economics, North Dakota State University, Agricultural Economics Report No. 201 (Fargo, N.Dak., May 1985), p. 28.

reasonably approximates the tribe's consumer surplus associated with timber, wildlife, and wild products in 1954.

Secondary Approach Relies on Tribe's 1954 Request

The consultant's secondary approach, which relies on the tribe's 1954 request for compensation, is generally consistent with the alternative approach we proposed in our 1991 report except that it provides a single figure rather than a range for additional compensation. In addition, it includes an amount for rehabilitation as well as for damages.

Consultant Developed a Single Estimate Rather Than a Range for Additional Compensation

In our 1991 report, we suggested that, for Fort Berthold and Standing Rock, the Congress consider a range of additional compensation based on the present value of the difference between the amount that each tribe requested and the amount that it received. In calculating the present value, we used two different interest rates—the inflation rate and the corporate bond rate—which produced a range of additional compensation. The consultant generally followed our 1991 approach in calculating his second estimate for the Cheyenne River Sioux tribe except that he developed a single figure, using the prime rate, rather than a range. Specifically, he subtracted the $10.5 million authorized in 1954 (excluding administrative expenses) from the tribe's $23.5 million settlement proposal and, using the prime rate, adjusted the $13.0 million difference to its 1996 value, thereby arriving at a second estimate of $279.1 million.[17]

Consultant's Estimate Included an Amount for Rehabilitation

In contrast to the consultant's primary approach, which calculates an amount only for damages, the secondary approach covers both damages and rehabilitation. Because the tribe's $23.5 million settlement proposal in 1954 included $10.9 million for damages and $12.6 million for rehabilitation, the secondary approach calculates additional compensation for both damages and rehabilitation. If the consultant's secondary approach were adjusted to exclude rehabilitation, his estimate, for damages only, would be $119.2 million (in 1996 dollars). With this adjustment, the secondary approach would include the same factors as the primary approach. However, the adjusted second estimate of $119.2 million would no longer support the first estimate of $300.7 million.

[17]The consultant used the same rates in his primary and secondary approaches to adjust his estimates to 1996 values—the annual prime rate from 1955 through 1993 and a flat 6 percent for 1994 through 1996. Using the annual prime rates for 1994 (7.15 percent), 1995 (8.83 percent), and 1996 (8.27 percent) would produce an estimate of $295.9 million in additional compensation.

Our Analysis Calculates Separate Ranges for Damages, Rehabilitation, and Administrative Expenses

To provide the Congress with more detailed information for deciding on an appropriate amount for additional payment, we calculated separate ranges for damages, rehabilitation, and administrative expenses, using the categories of payment authorized for the Cheyenne River Sioux tribe in 1954 (see table 2). According to both the tribe and the consultant, the payment that the tribe received for rehabilitation was not damage compensation for the taking of its land. Instead, it was provided more generally to raise the tribe's standard of living—that is, to establish the Indians economically on an equal footing with their non-Indian neighbors. For example, rehabilitation funds were used to provide business loans, educational loans, and welfare payments.

The additional payment ranges shown in table 2 reflect the present value, under alternative investment options, of the additional payment that the tribe might have received in 1954. The inflation rate, which produced the lower value, indicates how much the tribe would need today to equal the purchasing power of a payment received in 1954. The corporate bond rate, which produced the upper value, indicates how much the tribe might have earned by investing the same additional payment in bonds issued by the private sector.

Table 2: Additional Payment Ranges

Type of payment	Tribe's 1954 request	Payment received	Difference	Additional payment range (in 1996 dollars) Low end (inflation rate[a])	Additional payment range (in 1996 dollars) High end (corporate bond rate[b])
Damages	$10,930,871	$5,384,014	$5,546,857	$32,311,863	$120,117,856
Rehabilitation and relocation and reestablishment					
Rehabilitation	12,599,432	4,743,374[c]	7,856,058	45,763,550	170,123,882
Relocation and reestablishment	Unspecified[d]	416,626[c]	0[e]	0[e]	0[e]
Administrative expenses	119,802[f]	97,580[g]	22,222	129,449	481,220

[a]The annual inflation rate (consumer price index for all items) from 1955 through 1996.

[b]The annual average rate of interest earned on investments in Aaa corporate bonds from 1955 through 1996.

[c]The compensation law (P.L. 83-776) authorized a consolidated payment of $5,160,000 for the rehabilitation of all tribal members residing on the reservation and the relocation and reestablishment of tribal members living in the taking area. The breakout shown in the table is based on an MRBI report (No. 166, part III) that details how the tribe spent the $5,160,000 payment.

[d]During the negotiations, the tribe requested an unspecified amount to cover the cost of relocating and reestablishing tribal members living in the taking area.

[e]The tribe received a consolidated payment of $5,160,000 for the rehabilitation of all tribal members residing on the reservation and the relocation and reestablishment of tribal members living in the taking area. Since the tribe was free to spend as much money as necessary to relocate and reestablish tribal members living in the taking area, we assumed that the difference between what it requested and what it received was zero.

[f]During the negotiations, the tribe requested an unspecified amount to cover its administrative expenses. After the negotiations were concluded, the tribe submitted a claim for $119,802 in administrative expenses.

[g]P.L. 83-776 authorized up to $100,000 for the tribe's administrative expenses, including attorneys' fees, which were limited to $50,000. The tribe submitted a claim for $119,802 in administrative expenses—$47,580 in expenses and $72,222 in attorneys' fees. Because attorneys' fees were limited to $50,000, the tribe received a total of $97,580 for its administrative expenses under P.L. 85-274, 71 Stat. 598-599 (Sept. 2, 1957).

Source: National Archives and GAO.

The need for and amount of any additional payment to the tribe for any of the items shown in table 2 is a policy question for the Congress to decide. It is important to note, however, that the amounts presented in this report for the Cheyenne River Sioux tribe cannot readily be compared with the amounts previously paid to the other tribes. First, the damage to each reservation was unique, depending on the acreage lost, the number of

tribal members living in the taking area, and the value of the resources located in the taking area. Second, the additional amounts for Fort Berthold and Standing Rock were based on 1990 values.

Consultant's Comments and Our Evaluation

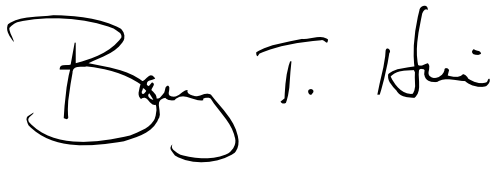
We provided a draft copy of this report to the consultant for his review and comment. He responded that he had found nothing in the draft report that would cause him to change his damage estimate for the Cheyenne River Sioux tribe. In commenting on our review of his primary approach, the consultant generally reiterated the information contained in his 1994 report. He had no comments on our review of his secondary approach. Since the consultant provided no new information in response to the questions raised in our draft report about his two approaches, we continue to believe that these questions are valid, and we made no changes to the report. The consultant's comments and our specific responses appear in appendix IV.

We conducted our review from April 1997 through November 1997 in accordance with generally accepted government auditing standards. A detailed discussion of our scope and methodology is contained in appendix V.

We are sending copies of this report to the appropriate congressional committees, the Secretary of the Interior, and other interested parties. We will also make copies available to others upon request.

Please call me at (202) 512-3841 if you or your staff have any questions about this report. Major contributors to this report are listed in appendix VI.

Sincerely yours,



Barry T. Hill
Associate Director, Energy,
Resources, and Science Issues

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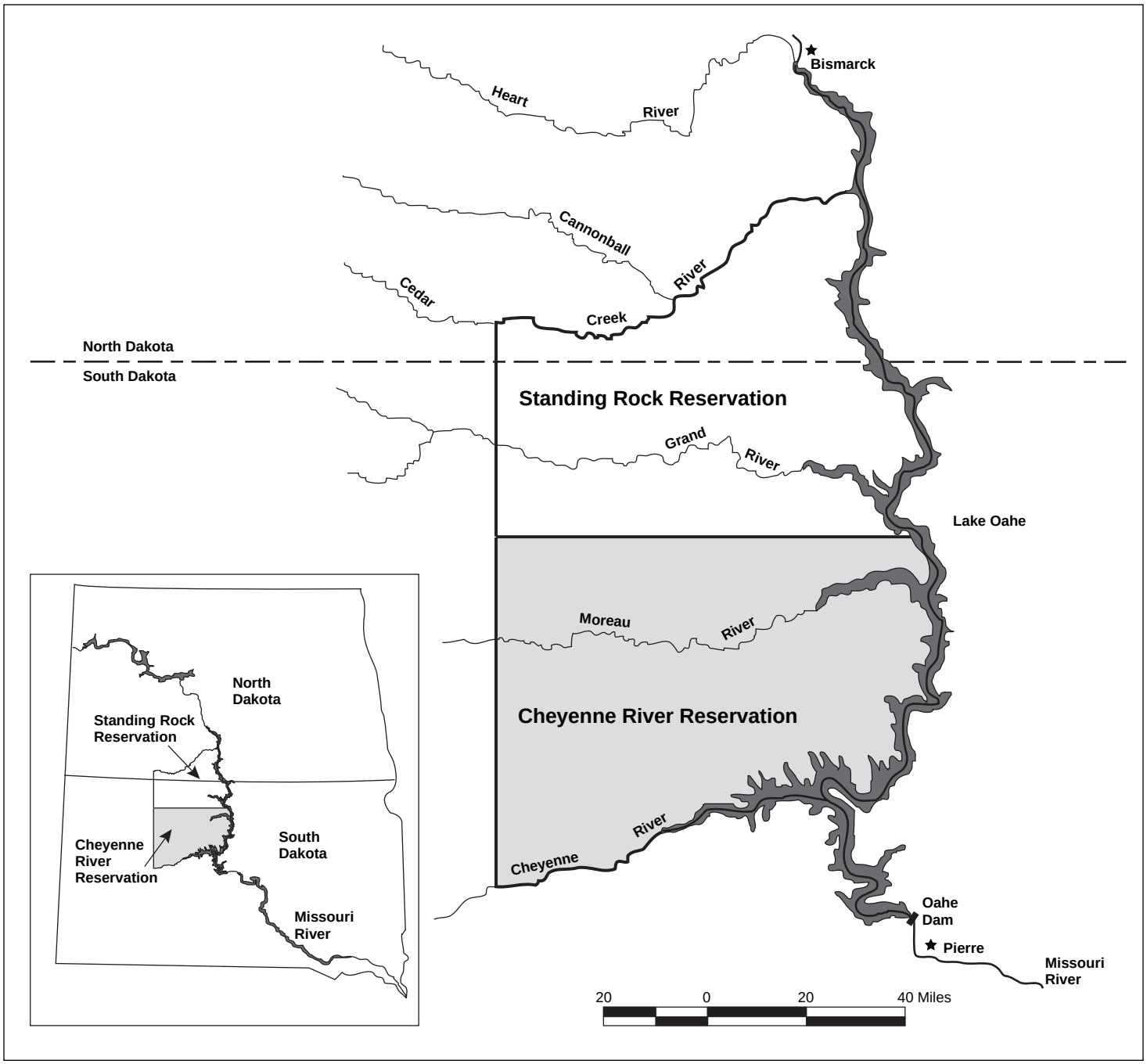
Abbreviations

FWS	U.S. Fish and Wildlife Service
MRBI	Missouri River Basin Investigations Unit

Map of the Oahe Dam and Reservoir



Source: GAO's adaptation of map provided by the Corps of Engineers.

Settlement Negotiations for Cheyenne River

In 1950, the Congress laid out a framework for the negotiation and ratification of a settlement agreement with the Cheyenne River Sioux tribe for the land taken from its reservation for the Oahe reservoir.[1] As part of the negotiations, the U.S. Army Corps of Engineers (Corps); the Department of the Interior, through the Missouri River Basin Investigations Unit (MRBI); and the tribe each developed estimates of the damages to be caused by the loss of 104,420 acres of the Cheyenne River Reservation. However, in 1952, the Corps, MRBI, and the tribe could not reach a settlement agreement. As provided in section 5 of the negotiation framework, in the event that a settlement agreement could not be reached, the various positions were to be presented to the Congress for final determination. In 1954, the Congress authorized the payment of about $10.6 million to the tribe for damages, rehabilitation, and administrative expenses related to the settlement.

No Settlement Was Negotiated in 1952

Shortly after the Congress enacted the negotiation framework, the Corps contracted with Gerald T. Hart and Associates of Denver, Colorado, for an appraisal of direct damages (for the land, improvements, severance damages, and standing timber in the taking area). This appraisal, commonly referred to as the Hart appraisal, was presented to the Cheyenne River Sioux Tribal Council on or about November 15, 1951. The tribe's negotiating committee immediately found a number of errors in the appraisal. These problems were the main topic of discussion during the negotiation conferences held in January, May, and August 1952.

The tribe and MRBI each developed an initial estimate of direct damages for the August 1952 negotiation conference. Both of these initial estimates were revised for the final negotiation conference in November 1952. At the final negotiation conference, the direct damage estimates were as follows: $1,605,410 under the Hart appraisal; $2,053,117 under MRBI's estimate; and $2,614,779 under the tribe's estimate. The parties did not settle on an amount for direct damages. The final offer from the Corps was $2 million, and the final offer from the tribe was $2.5 million. Since no agreement was reached on an amount for direct damages, the negotiations ended without any discussion of other settlement issues, such as the appropriate amounts for indirect damages and for the relocation and reestablishment of tribal members living in the taking area.

During the negotiations in November 1952, the tribe presented its first complete settlement proposal, which sought payments for direct damages

[1]P.L. 81-870, 64 Stat. 1093 (Sept. 30, 1950).

($2,614,779), indirect damages ($6,771,467), and rehabilitation ($12,289,432).[2]

The Congress Authorized Payments for Damages, Rehabilitation, and Administrative Expenses

After the negotiations broke down in November 1952, identical bills were introduced in the House (H.R. 2233) and Senate (S. 695) to provide a settlement for the Cheyenne River Sioux tribe. The payments proposed in the two bills, as they were originally introduced on January 29, 1953, were identical to the payments requested by the tribe in its November 1952 settlement proposal. (See table II.2.)

In May 1954, the House and Senate held joint hearings on the settlement legislation. Just before the hearings, MRBI issued its complete damage estimate[3] and the tribe issued its revised settlement proposal.[4] Tables II.1 and II.2 provide a breakdown of MRBI's and the tribe's estimates.

Table II.1: MRBI's Damage Estimate, April 1954

Type of damages	Estimate
Direct damages	$2,053,117
Indirect damages	
Relocation and reestablishment	1,531,051
Timber (net)	608,137
Wildlife	915,000
Wild products	141,750
Increase for irrigable land	19,370
Other damages, mostly intangibles	1,753,235
Total damages	**$7,021,660**

Source: U.S. Department of the Interior.

[2]The tribe also requested further appropriations of unspecified amounts for (1) the relocation and reestablishment of Indian cemeteries, tribal monuments, and shrines within the taking area; (2) the relocation and reconstruction of infrastructure within the taking area including, but not limited to, facilities of the Bureau of Indian Affairs, such as the Cheyenne River Agency, schools, hospitals, service building, employees' quarters, roads, and bridges; (3) the relocation and reestablishment of tribal members living within the area to be flooded; and (4) the tribe's administrative expenses related to the settlement.

[3]Damage to Indians of Five Reservations from Three Missouri River Reservoirs in North Dakota and South Dakota, U.S. Department of the Interior, Bureau of Indian Affairs, MRBI Report No. 138 (Billings, Mont., Apr. 1954).

[4]Memorial to the 83rd Congress in Regard to Oahe Project South Dakota S. 695 and H.R. 2233, Negotiating Committee of the Cheyenne River Sioux Tribal Council (Spring 1954).

Table II.2: Cheyenne River Sioux Tribe's Settlement Proposals

Type of payment requested	Tribe's original settlement proposal, Nov. 1952	Tribe's revised settlement proposal, Spring 1954
Direct damages	$2,614,779	$2,614,779
Indirect damages		
Grazing revenue	4,014,467	4,014,467
Timber	900,000	2,444,125
Wildlife and wild products	1,857,000	1,857,500
Subtotal	**$9,386,246**	**$10,930,871**
Rehabilitation	12,289,432	12,599,432
Total	**$21,675,678**	**$23,530,303**

Source: Files at the National Archives for the Bureau of Indian Affairs' Cheyenne River Agency and S. 695.

On July 23, 1954, the House Committee on Interior and Insular Affairs reported H.R. 2233 to the full House with the reduced payments shown in table II.3. The House approved H.R. 2233 on August 3, 1954.

Table II.3: Terms of the Final Compensation Bill Compared With MRBI's and the Tribe's Estimates

Type of payment requested/ authorized	MRBI's damage estimate, April 1954	Tribe's revised settlement proposal, Spring 1954	H.R. 2233, passed Aug. 1954[a]	P.L. 83-776, enacted Sept. 1954[a]
Direct damages	$2,053,117[b]	$2,614,779	$2,614,779	$2,250,000[b]
Indirect damages	3,437,492	8,316,092	3,973,076	3,134,014[b]
Subtotal	**$5,490,609**	**$10,930,871**	**$6,587,855**	**$5,384,014**
Rehabilitation/ relocation and reestablishment[c]	1,531,051[d]	12,599,432	6,044,500	5,160,000
Total	**$7,021,660**	**$23,530,303**	**$12,632,355**	**$10,544,014**

[a]H.R. 2233, as passed by the House and as enacted, authorized further appropriations of unspecified amounts for (1) the relocation and reestablishment of Indian cemeteries, tribal monuments, and shrines and (2) the relocation and reconstruction of infrastructure within the taking area. The funding for the relocation and reestablishment of tribal members living in the taking area was combined with the funding for rehabilitation. Both versions of the bill also authorized the appropriation of up to $100,000 for tribal administrative expenses. This amount is not included in the table.

[b]MRBI's damage estimate was based on 1951 land values. The payment amount authorized by the Congress was based on an adjusted MRBI value. Specifically, MRBI's estimate was adjusted to account for a 4-percent increase in land values since 1951, $100,000 was added for any possible errors or omissions, and the resulting figure was rounded to $2,250,000. Coincidentally, the final payment authorized for direct damages was exactly between the tribe's final offer of $2.5 million and the Corps' final offer of $2 million, both made in November 1952. The public law does not specifically identify amounts for "direct" and "indirect damages" but does specify that the $2,250,000 was to be distributed by the Cheyenne River Sioux Tribal Council "in accordance with the revised appraisal" of MRBI. The figure for indirect damages is obtained by subtracting this amount from the total of $5,384,014, which the law states was to be "in final and complete settlement of all claims, rights, and demands" of the Cheyenne River Sioux tribe arising out of the construction of the Oahe project.

[c]The amounts for tribal rehabilitation and for the relocation and reestablishment of tribal members living in the taking area were handled differently in the various estimates. MRBI's damage estimate included an amount for the relocation and reestablishment of tribal members living in the taking area but not for rehabilitation. The tribe's estimate included an amount for rehabilitation but not for the relocation and reestablishment of tribal member living in the taking area. (The tribe asked the U.S. government to pay for the relocation and reestablishment of tribal members living in the taking area but did not estimate the cost.) H.R. 2233, as passed by the House and as enacted, provided one lump sum payment to cover both tribal rehabilitation and the relocation and reestablishment of tribal members living in the taking area.

[d]In MRBI's estimate, this amount was included under indirect damages. This table shows the amount for relocation and reestablishment separately because it was grouped together with an amount for rehabilitation in the compensation bill. MRBI did not estimate an amount for rehabilitation because its estimate covered only damages caused by the taking.

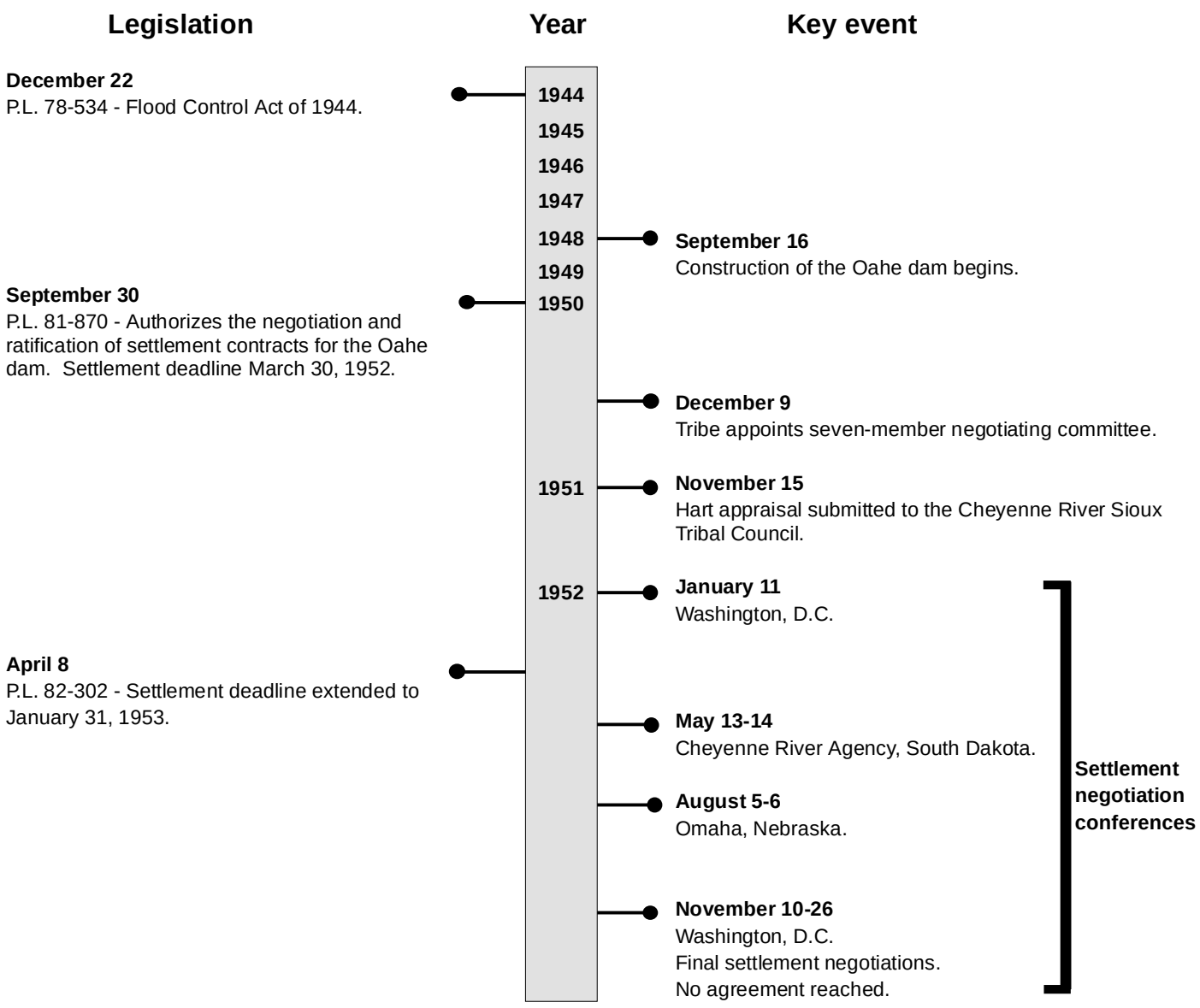
Source: U.S. Department of the Interior and congressional files at the National Archives for H.R. 2233 and S. 695.

The version of the bill reported by the Senate Committee on Interior and Insular Affairs reduced the nonadministrative payments even further, to

$10,544,014, which was also the amount enacted into law, as shown in table II.3. The tribe had supported the House's version of the bill largely because it provided 100 percent of the amount that the tribe had requested for direct damages. The tribe did not support the final version of the bill and asked President Eisenhower to veto it. The President signed the bill on September 3, 1954.

To become effective, the agreements contained in the law had to be ratified by at least three-quarters of the adult members of the Cheyenne River Sioux tribe. The tribe ratified the bill in early 1955. The bill became effective on April 6, 1955, by a proclamation of the Secretary of the Interior based on the tribe's ratification. Figure II.1 presents some of the key steps in the legislation and in the Cheyenne River settlement negotiations between 1944 and 1962. Figure II.2 depicts the dismantled town of Cheyenne River in 1960, before it was flooded by the Oahe reservoir.

Figure II.1: Key Steps in the Legislation and Settlement Negotiations



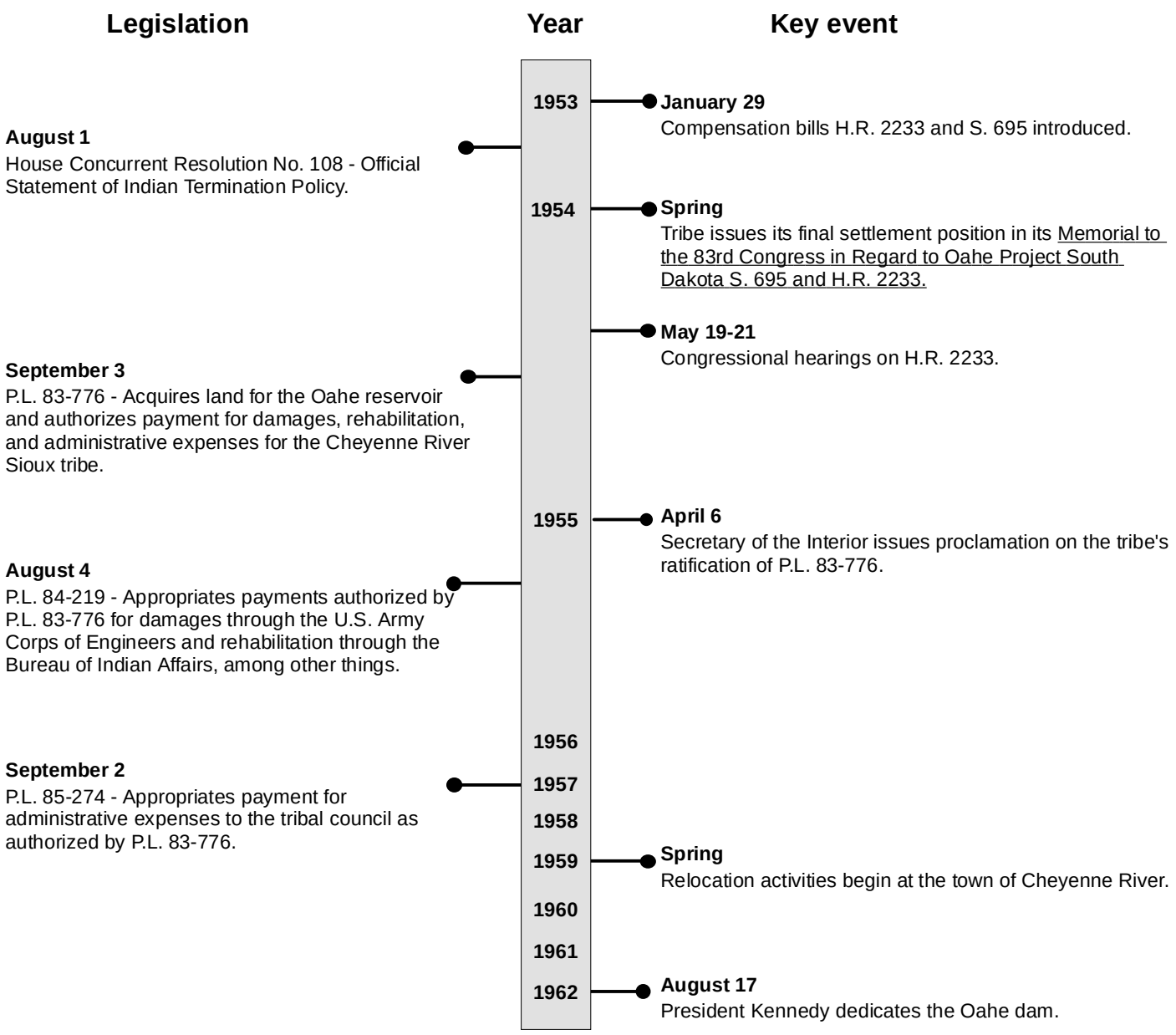

Legislation
Year
Key event
1953
January 29
Compensation bills H.R. 2233 and S. 695 introduced.
August 1
House Concurrent Resolution No. 108 - Official Statement of Indian Termination Policy.
1954
Spring
Tribe issues its final settlement position in its Memorial to the 83rd Congress in Regard to Oahe Project South Dakota S. 695 and H.R. 2233.
May 19-21
Congressional hearings on H.R. 2233.
September 3
P.L. 83-776 - Acquires land for the Oahe reservoir and authorizes payment for damages, rehabilitation, and administrative expenses for the Cheyenne River Sioux tribe.
1955
April 6
Secretary of the Interior issues proclamation on the tribe's ratification of P.L. 83-776.
August 4
P.L. 84-219 - Appropriates payments authorized by P.L. 83-776 for damages through the U.S. Army Corps of Engineers and rehabilitation through the Bureau of Indian Affairs, among other things.
1956
September 2
P.L. 85-274 - Appropriates payment for administrative expenses to the tribal council as authorized by P.L. 83-776.
1957
1958
1959
Spring
Relocation activities begin at the town of Cheyenne River.
1960
1961
1962
August 17
President Kennedy dedicates the Oahe dam.

Figure II.2: Dismantled Town of Cheyenne River

Source: U.S. Army Corps of Engineers.

Five Reservations Affected by Missouri River Flood Control Projects

Reservation	Dam(s)	Acreage lost	Original payment authorized (year(s) authorized)	Additional compensation[a] (year authorized)
Fort Berthold	Garrison	152,360	$12,605,625[b] (1947 and 1949)	$149.2 million[c] (1992)
Cheyenne River	Oahe	104,420	10,644,014[d] (1954)	[e]
Standing Rock	Oahe	55,994	12,346,553[f] (1958)	90.6 million[g] (1992)
Lower Brule	Fort Randall and Big Bend	22,296[h]	4,345,988[i] (1958 and 1962)	39.3 million[j] (Proposed in 1997)
Crow Creek	Fort Randall and Big Bend	15,597[k]	5,937,614[l] (1958 and 1962)	27.5 million[m] (1996)

Note: The dollar amounts shown in the table are not comparable. The original payments authorized and the additional compensation authorized are not comparable across the five reservations or with each other. First, the damage to each reservation was unique, depending on the acreage lost, the number of tribal members living in the taking area, and the value of the resources located in the taking area. Second, the dollar amounts shown in the table cover a 50-year period, from 1947 to 1997, and they have not been converted to constant-year dollars. Finally, the payments include amounts for different factors. For example, the original payment to Fort Berthold includes an amount for the relocation and reestablishment of Indian cemeteries, tribal monuments, and shrines. The other reservations did not receive direct monetary compensation for this purpose; instead, the expenses to relocate cemeteries, tribal monuments, and shrines were paid directly by the U.S. government. The payment to Fort Berthold does not include an amount for rehabilitation, as do the payments to the other four reservations.

[a]The Congress has provided additional compensation in the form of development trust funds. The amounts shown in the table represent the size of the trust funds. The tribes are prohibited from spending any of the principal in the trust funds; they can spend only the interest earned.

[b]P.L. 80-296, 61 Stat. 686 (July 31, 1947), authorized $5,105,625 for the payment of direct damages and the relocation and reestablishment of tribal members living in the taking area. This act was modified by P.L. 81-437, 63 Stat. 1026 (Oct. 29, 1949), which provided that the relocation and reestablishment of Indian cemeteries, tribal monuments, and shrines would also be paid out of the $5,105,625. P.L. 81-437 also provided an additional $7,500,000 for all other claims. No amount for rehabilitation was included in the Fort Berthold settlement.

[c]P.L. 102-575, title XXXV, 106 Stat. 4731 (Oct. 30, 1992).

[d]P.L. 83-776, 68 Stat. 1191 (Sept. 3, 1954), authorized the following payments:

$2,250,000 for direct damages,

$3,134,014 for indirect damages,

$5,160,000 for rehabilitation and relocation and reestablishment, and

$100,000 for tribal administrative expenses related to the settlement.

The public law does not specifically identify amounts for "direct" and "indirect damages" but does specify that the $2,250,000 was to be distributed by the Cheyenne River Sioux Tribal Council "in accordance with the revised appraisal" of MRBI. The figure for indirect damages is obtained by subtracting this amount from the total of $5,384,014, which the law states was to be "in final and complete settlement of all claims, rights, and demands" of the Cheyenne River Sioux tribe arising out of the construction of the Oahe project.

[e]Additional compensation for the Cheyenne River Sioux tribe is the topic of this report. On the basis of the consultant's analysis, the tribe is requesting about $300 million in additional compensation.

[f]P.L. 85-915, 72 Stat. 1762 (Sept. 2, 1958), authorized the following payments:

$1,952,040 for direct damages,

$3,299,513 for all other claims,

$6,960,000 for rehabilitation and relocation and reestablishment, and

$135,000 for tribal administrative expenses related to the settlement.

[g]P.L. 102-575, title XXXV, 106 Stat. 4731 (Oct. 30, 1992).

[h]Fort Randall - 7,997 acres, Big Bend - 14,299 acres.

[i]P.L. 85-923, 72 Stat. 1773 (Sept. 2, 1958), authorized the payment of up to $976,523 for land acquired for the Fort Randall Dam and of $100,000 for tribal administrative expenses. P.L. 87-734, 76 Stat. 698 (Oct. 3, 1962), authorized the following payments related to the Big Bend Dam:

up to $825,000 for direct damages;

up to $400,715 for all other claims, including relocation expenses not to exceed $247,325;

$1,968,750 for rehabilitation; and

$75,000 for tribal administrative expenses related to the settlement.

[j]Proposed in S. 156, introduced Jan. 21, 1997.

[k]Fort Randall - 9,418 acres, Big Bend - 6,179 acres.

[l]P.L. 85-916, 72 Stat. 1766 (Sept. 2, 1958), authorized the payment of up to $1,395,811.94 for land acquired for the Fort Randall Dam and of $100,000 for tribal administrative expenses. P.L. 87-735, 76 Stat. 704 (Oct. 3, 1962), authorized the following payments related to the Big Bend Dam:

up to $355,000 for direct damages;

up to $209,302 for all other claims, including relocation expenses not to exceed $77,550;

$3,802,500 for rehabilitation; and

$75,000 for tribal administrative expenses related to the settlement.

[m]P.L. 104-223, 110 Stat. 3026 (Oct. 1, 1996).

Comments From the Cheyenne River Consultant

Note: GAO comments supplementing those in the report text appear at the end of this appendix.

Robert McLaughlin Consulting

POST OFFICE BOX 68
SOLEN, NORTH DAKOTA 58570

PHONE: (701) 445-3427
FAX: (701) 445-3355

December 29, 1997

Mr. Barry T. Hill
Associate Director, Energy
Resources, and Science Issues
United States General Accounting Office
Washington, D.C. 20548

Dear Mr. Hill:

Thank you for providing Robert McLaughlin Consulting (RMC) with the opportunity to review and comment on your draft report titled: Indian Issues: Cheyenne River Sioux Additional Compensation Claim for the Oahe Dam, (GAO/RCED-98-39). I have reviewed it and offer the following response to the report.

In early 1993, the Robert McLaughlin Company (RMC)[1] was retained by the Cheyenne River Sioux Tribe (Tribe) to provide an analysis of the economic loss incurred by the Tribe by reason of the impoundment of the Oahe Reservoir. The analysis was completed in July 1994 with the report: Analysis of Economic Loss Resulting from Lands Taken from the Cheyenne River Sioux Tribe for the Oahe Dam, (this report will be henceforth referred to as the ELR).

GAO reviewed the ELR and its conclusion that the United States significantly underpaid the Tribe for its economic losses resulting from the destruction of its homelands adjacent to the Missouri River.

The Tribe, between 1947 and 1955, opposed the taking of its valuable homelands; had offered a settlement to the government -- under duress -- and was refused; and finally implored President Eisenhower not to sign a taking bill, that substantially undervalued the Tribe's assets, into law on August 23, 1954.

But during the long and exhausting tribal opposition to the government's Oahe project, the United States initiated construction of the project without first having obtained legal right to do so; valued tribal homelands far from adequately; and threatened the Tribe with immediate condemnation proceedings while using its new policy of "termination" as a threat to bring tribal leaders around to the government's position - thereby

[1] RMC is now Robert McLaughlin Consulting (RMC).

forcing the Tribe into a corner on just compensation.

By the end of the decade, the Tribe would be facing the forced removal of 200 Indian families from four river settlements and their surrounding river bottomlands; would be forced to give up its valuable riparian cottonwood forest plant and wildlife habitat bordering the Missouri; see the ruination of its cattle raising industry; suffer the loss forever of bottomland hunting and fishing for indigenous species found there; permanently lose the use of bottomland plant products for cultural and spiritual purposes; and, finally, see its homes destroyed along with churches, schools and its tribal social life. It would see the residue of their remaining lands fall to a value only "a small fraction of their present value."

The above was not an account of the government's taking put forward by the Tribe but the government's own account from House Report No. 2484 (83rd Congress) on the project's probable impact on the Cheyenne River Sioux.

Tribal member Mary Arpan looked back to the time she was a young girl growing-up at Cheyenne Agency during the period of the taking:

> I was born and raised in Cheyenne until I was thirteen years old. Our family, relatives and friends were absolutely devastated by the Oahe Dam project and even today, there is much bitterness for the destruction and havoc wrecked by the project. Those that ended up profiting from the misery of our people were non-Indians across the State of South Dakota. We were bussed 108 miles round trip a day to attend school at Eagle Butte while our town was being destroyed. My father decided that he didn't want us traveling that road in the harsh winter months and placed us in the boarding school. Every weekend he would come and pick us up and return us to Cheyenne. We spent many painful hours walking among the ruins of our beloved town, it resembled a war zone, there were gaping holes where homes had been destroyed or moved. We spent as much time near the river on these weekends, knowing that we would no longer have the opportunity to walk along the river, splash and swim in the river that we grew up along side. We would not be able to hunt or fish or pick berries along the banks of the river. In retrospect, it appeared to be cruel when we walked among the destruction, but it did provide us with an opportunity to mourn. It had been decreed that we did not count.
>
> I recall the way I felt as I watched them dig up the

graves of our people and disturb the remains of those who loved the land where they were buried.

It was an incredibly sad period in my life and it continues to affect me. We were forced to move to a flat, dry, windy place. There were few trees. The people of Eagle Butte didn't want us there, we didn't want to be there. The first year in high school was terrible, there was blatant discrimination against the people of Cheyenne. During that period of time I saw many people destroyed as they sought solace in alcohol.

The specter of alcoholism still remains strong and continues to haunt our people. I saw desolation in the faces of the elders, bitterness in the faces of the young. During my high school years I watched as counselors discouraged the Indians from attending college and instead channeled them toward careers in which "they could use their hands," .... I went on and eventually moved to Minneapolis. While here I served in a number of positions and I currently hold the position of Coordinator of the Home Improvement Finance Programs for the City of Minneapolis. If I had believed what the guidance counselors had told me, I would not have tried to excel in the positions that I was fortunate to obtain. ...

There is no way that the government can compensate for the destruction and rape of our tribe (November 1994).

THE GAO DRAFT REPORT

RMC has studied the GAO's draft report and found it to have, in the main, summarized historical events accurately although generally limited to details supportive of the government's position circa 1954. I think the appendix background information useful for future reference. The primary questions concerning the ELR occur in the draft report between pages 1 through 11.

Now on pp. 1-12.

As explained in the 1994 ELR document, RMC has serious concerns on the government's analysis to determine value as represented in its Missouri River Basin Investigation Project (MRBI) Report Number 138: Damage to Five Reservations from Three Missouri River Reservoirs in North and South Dakota, U.S. Department of the Interior, Bureau of Indian Affairs, April 1954; concerns of conflict-of-interest regarding timber assessments; a violation of the 1868 Treaty between the Tribe and the United States; and the questionable application of cost-benefit principals on the part of the government between 1951 - 1954. These concerns will be addressed in the following response to the draft GAO report. But

first, in order to establish RMC's foundation for establishing values for non-market goods and consumer surplus, a very brief description of the Tribe's historic economic condition is first described.

When government officials first encountered the Sioux in their traditional homelands along the Missouri in August 1804 where the Platte River meets the Missouri, they found a strong and viable Tribe that was already trading with various Great Plains tribes and the French. The Missouri River provided a virtual "Garden of Eden" of game and plants according to Stephen E. Ambrose in his account of the U.S.'s **Corps of Discovery** along the Missouri in Indian country (Undaunted Courage, 1996).

President Thomas Jefferson sent out Meriwether Lewis to not only find a land passage to the Pacific, but open-up trading relationships with Plain's tribes, especially the Sioux. He aspired to open commerce and trade with the tribes and secure them as allies to the young United States.

Lewis and his expedition found abundant herds of elk along the bottomlands of the Missouri; deer were plentiful as birds; bison, beaver, wild turkeys, bears, pronghorn antelope, rabbits, squirrels were seen in great numbers according to the Ambrose account.

The Sioux utilized this natural resource base efficiently to create export products for trade needed for goods to develop their economy: weapons; ammunition; and fabricated goods with the French and farming products with nearby agricultural producing tribes like the Arikaras. In today's economic terms, Sioux pelts, meat and fur products comprised an economic base whereby the Sioux could carry on trade both domestically and internationally. When Lewis met the Sioux at the Platte River they were already carrying shotguns obtain through trade with the French.

In 1851 and 1868 the United States signed major treaties of peace with the Sioux at Fort Laramie, Wyoming establishing the homeland territories of the Great Sioux Nation. The eastern boundary of the Great Sioux Nation was established as the east bank of the Missouri River by treaty.

Over the years between 1868 and the early twentieth century, the United States uniformly and consistently violated these treaties as white settlement and encroachment on Indian lands forced the Sioux into smaller enclave territories in the Dakotas. The most recent event in this process is the taking of the Tribe's homelands for the Oahe project which also violated a provision of the 1868 Treaty by not allowing three-fourths of the adult males of the Tribe to ratify the 1954 takings Act.

See comment 1.

It was a nineteenth century national policy to destroy the Tribe's economic base, reliant on wildlife products, with the objective of undermining its capacity to resist homeland encroachment. The result: buffalo, elk, bear and wolves were destroyed and removed from Indian country.

Throughout this long and painful encroachment, where possible, the tribes settled along their river based Winter Camps, where wildlife and natural plant products were still relatively intact. Thus, a partial retaining of the Tribe's traditional way of life and culture could be kept as the Tribe adjusted to modern economic pursuits such as cattle ranching. This was the economic condition of the Cheyenne River Sioux Tribe at the time of the Oahe taking.

ESTABLISHING VALUES

Economists have developed methods for estimating non-market valuation by establishing contingent valuation methods (CVM) or the amount of compensation which would be required to be paid, "willingness to accept" that will restore the utility level to individual(s) who experience a decremental loss of a good.[2] Following this, the government has established principles and standards to be used by federal agencies in formulating plans for the implementation of water development projects. The willingness to pay - willingness to accept criteria are utilized where non-market values need to be established where CVM can be applied.

Well known to the planners of the Oahe Dam project was the fact that the Tribe would not give up its Missouri River bottomlands without resistance and unless coerced to do so. After years of encroachment, the utility value of the Tribe's Missouri riparian forested bottomlands and its natural habitat used for economic, cultural and religious purposes was mostly beyond any monetary value the U.S. could offer the Tribe.

To convince the Tribe that they had no alternative but to accept the project on terms the government was offering, it started construction of the project before obtaining legal right from the owners of the land to do so, leaving no question in the minds of tribal leaders that their bottomlands would be destroyed. The Army Corps of Engineers also made it clear to the Tribe that their position was hopeless and they would be forced to give up their land if they refused to agree to conditions:

---

[2] A. Randall, Resource Economics, (New York: John Wiley & Son, 1987).

> Neither your Constitution nor your treaty rights can stop the taking of your lands according to law under the right of eminent domain. The United States is a sovereign power and if the Tribe could stop the taking of the land then it would be the supreme power even over the United States government and this cannot be (Statement of Army Corps Representative, Tribal Council Minutes, October 8, 1947).

By the use of fait accompli, threats and coercion, the government forced the Tribe into a no-win negotiating position from the Tribe's viewpoint. Throughout recent history, Indian tribes have shown they have a very low time preference rate when it comes to natural resource endowments. RMC knows of no tribe which has willingly sold land resources for any price except under threat of seizure or forced taking on the part of the United States. Resource economist and Chairman of the Department of Economics at the University of New Mexico, Ronald G. Cummings, who analyzed the economic losses incurred by the Fort Berthold Tribe for the Garrison Dam states: "there is compelling (in my view) evidence that Indian tribes have substantively lower time preference rates than those established in markets, particularly when resource endowments are at issue. For example, tribes on the Wind River and Flathead reservations use tribal funds to re-acquire tribal lands at prices which imply zero or negative rates of return" (Letter to GAO, February 25, 1991).

See comment 2.

Imperative to the correct application of economic analysis here is that a utility value is utilized that represents each of the Tribe's non-market good's compensation adequately and that time preference with regard to its resource endowments be correctly estimated.

Following is RMC's response to each of the GAO's findings on the ELR. Details of the GAO's findings are found on pages 5 - 10 of their draft report, December 4, 1997.

Now on pp. 6-10.

THE DISCOUNT RATE

The GAO draft report states that the Tribe put forward in November 1952, at a meeting held in Washington, D.C., a 4% rate to capitalize the annual value of its losses. Several problems surround the use of this rate as representative of the Tribe's time preference rate to determine the capitalized value for lost resources. Where did this rate come from? The historical record of tribal debate does not show there was any discussion of it. However, as the GAO states, it was employed by the government as their proposed capitalization rate by its MRBI, **hardly representative** of tribal time preference. It appears, in this

See comment 3.

See comment 4.

instance, that it was put forward at a Washington meeting by the Tribe's Washington attorney, Ralph Case.

The more serious concern RMC has with the use of this rate is that it was put forward under duress. As pointed out above, the Tribe was being given no free will choice in the matter as a willing seller to make themselves whole, but was put into a corner by the government on a sell-or-else basis. Time preference rates are not established under such circumstances for the determination of just compensation. Finally, the historical record, all throughout Indian country and at Cheyenne River, indicates that the capitalization rate for land resource based assets is very small indeed.

For this reason, to establish the proper capitalization rate for its analysis, RMC asked the **Economics Resource Group, Inc.** (ERG), Cambridge, Massachusetts, to provide input to RMC on the proper rate to be applied to foregone losses at Cheyenne River resulting from the taking as of January 1955. ERG's findings were:

> We propose that RMC use a real rate of interest for capitalizing the costs of the taking. The structure of RMC's analysis yields annual losses from foregone hunting, food and fuel gathering, and the like. Since these annual loss figures are expressed in 1955 dollars and implicitly presumed to extend in perpetuity, the appropriate interest rate to use is the real rate of interest. The annual loss values do not account for inflation and neither should the interest rate. A nominal interest rate, such as the FFR, implicitly contains an offset for inflation.[3] Operationally, this means that RMC can use a capitalization rate numerically similar to the one it used (FFR rate) yet with a better economic justification for doing so.
>
> We found that the real **riskless** rate of interest from 1925 to 1991 was on the order of 0.54%. In the 1950s, 60s, and 70s, common belief was that the real interest rate was on the order of 1 to 2 percent. The low rate of interest is not appropriate for the RMC analysis, however, because it does not account for the risk characteristics of the values lost in the Oahe taking. The Tribe's lost resources (food, fuel, etc.) are characterized by price and supply volatility which is likely greater than the market average, regardless of whether the goods are traded in a traditional economy or in the mainstream economy. To be compensated for

[3] Note: At one point RMC proposed utilizing the Federal Funds Rate, FFR, as the interest rate.

the added risk of investment in these commodities, investors demand higher returns, and thus, the rate of interest for discounting a stream of returns (harvests, cuttings, hunts, etc.) must be higher than the riskless rate as well.

Ideally, one would take a weighted average of the market rates and social time preferences for discounting (see Chapter 12 of Jenkins and Harberger).[4] Since the Tribe's lost resources are generally non-market goods, a social time preference for the Tribe may be more suitable than a market-based interest rate. However, the difficulties of choosing a rate which accurately captures Cheyenne River Sioux social time preferences in the mid-1950s preclude using this ideal measure. Employing a market rate such as the real prime rate or the yield on AAA bonds adjusted for inflation as a proxy might accomplish the same goal without jeopardizing the quality of the analysis. Ibbottson Associates reports that the rate of inflation in 1955 was 0.37%[5] and DRI-McGraw Hill's on-line information service reports that the 1955 prime rate was 3.16%. Thus, the real prime rate **ex post** for 1955 was 2.79%.

Using the **real** prime rate to bring the adjustment of the 1955 losses to 1994 would be inappropriate because the calculation would not account for inflation nor would it reflect the best use to which the Tribe could have put the payments, had they all been made in 1955. The nominal prime rate reflects the real rate of interest and the rate of inflation, and it is a conservative proxy for the available yield on the Tribe's investment of the funds that should have been awarded in the compensation. Furthermore, the volatility of the prices of the bulk of the lost commodities (fuel, food, and agricultural products) requires a higher rate, and thus, using the prime rate to bring the values of the uncompensated losses to the present could be characterized as being conservative.

Normally in a cost-benefit analysis it is proper to use

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[4] Jenkins, Glenn P. and Arnold C. Harberger, Program on Investment Appraisal and Management, Manual: Cost-Benefit Analysis of Investment Decisions, (Cambridge: Harvard Institute for International Development, 1992).

[5] Ibbotson Associates, Stocks, Bonds, Bills and Inflation: 1992 Yearbook, Market Results for 1926-1991, (Chicago: Ibbotson Associates, 1992), p. 34.

only one interest rate to convert dollars in different times. However, there may be cases in which it is legitimate to use two different rates. In the case where a financial award for damages that should have been made in the past is assessed in the present, it may be legitimate to use a nominal market rate of interest to bring forward the monetary compensation due in the past, even if it does not directly conform with risk characteristics of the losses. In this case, the Tribe's lands should have been converted into (more) dollars in 1955 which could then have been invested in securities or projects of diverse risk profiles including mutual funds in the stock market. The use of their compensation funds did not necessarily have to be the purchase of assets with identical risk characteristics to those which had been lost. Under the compensation fund interpretation, it would be appropriate to use market rates of return to bring the 1955 damages to the present. The prime rate is a reasonable but conservative measure of the return available for funds invested in 1955.[6]

Following ERG's recommendation, RMC applied the 1955 real prime rate of 2.79 percent to capitalize economic losses incurred by the Tribe in 1955 for each product/net product category. To bring the Tribe's shortfall in compensation forward to the present from 1955, the nominal prime rate was utilized each year since the taking. RMC sees its capitalization rate as very conservative given the historical propensity of the Tribe to not sell its land resource assets under any circumstances short of seizure.

Now on p. 12.

On the rate employed to bring forward compensation, GAO purports to show the present value of an additional 1954 payment under "alternative investment options" (GAO draft, page 11). On the "low end" the GAO reports amounts adjusted for inflation. On the "high end," the GAO reports amounts that grow over time at the annual average corporate Aaa bond rate.

This asserted "range" of damage estimates does not help Congress assess where reasonable compensation might fall for a number of reasons. First, it is an apples-to-oranges "range." The low estimate offers a purchasing power equivalent (i.e., it ignores interest), and the high estimate takes into account the time

[6] Memorandum from The Economic Resource Group, Inc., to the Robert McLaughlin Company from Joseph P. Kalt, Kenneth Grant and Jonathan Taylor, ERG, on the subject of: "A Review of the Oahe Dam Economic Loss Report written by Robert McLaughlin Company for the Cheyenne River Sioux Tribe, June 6, 1994.

See comment 5.

value of money -- i.e., interest -- though at a modest level (it is obvious to even the casual observer that many investment vehicles exceeded the average corporate Aaa bond rate over the period in question). Second, purchasing power equivalence is not an alternate investment option at all - it simply answers the question: What is the proposed 1954 settlement worth in today's dollars? While the answer may be of academic interest to some, it is not a useful guide for policy. To give the Tribe a settlement based on the purchasing power option is to say the Tribe's best alternative disposition of funds was an inflation-proof mattress. In the public policy regimes of damage compensation it is not generally-accepted practice to give compensation in purchasing power equivalence without adjusting for the time value of money. Thus, because the annual average corporate Aaa bond rate is similar to the rate employed by RMC (i.e., the prime rate), the GAO has not meaningfully contributed to Congress' understanding of whether the interest rate used to bring forward losses is outside the range of reasonableness.

CONSUMERS SURPLUS

History has shown that in the Oahe taking the government overestimated many project benefits while underestimating project costs, in particular the costs (value) of Indian homelands. Project benefits from irrigation and navigation never materialized while Indian and other project lands were completely destroyed and their productive values lost forever.

Exceptions to this were the production of hydropower -- a highly profitable project benefit -- and to a lesser degree, downstream flood protection. It is noted that the Army Corps of Engineers, the government's project developers, still maintains operating control over the profitable power production operations. Money revenue benefits, of course, were built, in large part, on the total destruction of Indian country's valuable bottomlands.

In establishing just compensation for the loss of Indian lands to the project, cost-benefit criteria are employed. The government has established principles and standards for federal agencies to be utilized for water related projects. Like criteria were in place during the development of the Oahe project and were utilized by the government's MRBI. As explained above, the time preference of the Tribe for its land resource base was very low. That is the Tribe was not willing to sell its resource based assets for even very high price bids and would purchase like non-trust assets at even negative rates of return (R. Cummings). Likewise, the compensation variation (CV) required as the sum of money which would make the Tribe, after the taking, no better or worse off than before, is clearly high. Why is this so?

The value of tribal homelands, especially the natural product and wildlife rich riparian cottonwood habitat along the Missouri, represented the last natural habitats the Tribe could utilize for its traditional economic and cultural pursuits remaining after a century and one-half of constant encroachment on tribal homeland resources by the government.

The taking and its disruption of the tribe's economic, cultural and religious systems caused extensive resentment, distrust and the belief that once again the people were being unjustly exploited by the government for the benefit of non-Indians.

The Tribe's existing, resource based, livelihood and cultural (in part recreational) pursuits would be destroyed. Given the limitations of economic opportunity at Cheyenne River, once bottomland resources were destroyed, it would be unlikely that the economic benefits derived from these lands would be replaced with wage incomes. This has been borne out today as, even forty years after the impoundment, unemployment rates at Cheyenne River hover around the seventy to eighty percent rate according to Bureau of Indian Affairs' (BIA) statistics.

Negative external spillover effects, not calculated, in economic losses, were incurred by the Tribe from the taking and are truly profound. Resultant reliance on USDA commodity foods -- rather than lean wild meats and healthful natural products -- which were laced with salt, sugar and fat, have no doubt led to the high incidence of disease -- like diabetes -- now seen in high rates among tribal members. The rise in the rates of alcoholism amongst tribal members, and early deaths, over the sense of loss and its resulting dislocations is always attributed to the Oahe taking by tribal members. The value of the destroyed natural habitat environment -- its amenity value -- can never be brought back. The grief and psychological disruption from the loss of community, social structures and religious places has been permanently damaging to tribal members.

See comment 6.

Does GAO argue that there exists no consumer's surplus for the Tribe's wildlife, timber and natural products before the taking? If consumer's surplus would be established by the values the Tribe placed on these products beyond estimates made by various federal agencies in the early fifties, then the value representing consumer's surplus for these products was clearly substantial.

Because prices were not established in any market for these products, the MRBI employed substitute price estimates to determine loss values, usually by comparison with what they considered the closest alternative non-traditional good. This was a truly limited method for attaching values to traditional Indian products, one which tends to seriously undervalue Indian products.

The utilization of forest products for housing, protective winter shelter for livestock, for outside summer shade, for winter fuelwood and for religious ceremonies played a significant role in the traditional Indian economy. The harvesting of wild game provided a significant and wholesome food for the Sioux diet. The use of processed game skins, fur products and other wildlife products played an important role in dress products utilized during traditional singing and dancing contests and for natural craft production. Other products were utilized for religious purposes. The processing of wild fruits was important to maintaining the Sioux diet. The use of other natural woodland products for medicinal purposes was fundamentally important to Sioux traditional culture and medicine.

The destruction of these irreplaceable and valuable products was not even recognized or valued by the government as a loss. It is indisputable that these products carried a high consumer's surplus loss with their destruction because of the high value the Indian people placed on them. It is also indisputable that the Tribe's **willingness to accept** monetary compensation in lieu of these traditional economic base resources and products was also very high.

Such economic pursuits by Sioux families have long been recognized by authorities familiar with traditional Indian economies. Mid-way through the twentieth century, such traditional economic behavior and activity was still significantly employed by the Cheyenne River Sioux along the Missouri River. It was this traditional Indian economic activity that was almost entirely destroyed by the Oahe Dam.

MRBI valued Indian traditional products as the total value of the annual harvest. RMC similarly valued, with the consumer's surplus loss exception, the total annual product as the annual value, following the government in this instance. MRBI reasoned that "most of the harvesting of these products is done by Indian labor using relatively inexpensive equipment. Much of the work of harvesting is performed by labor having little or no opportunity for other productive employment. Where harvesting costs are negligible the net value of harvested natural products approaches their gross value."[7]

Estimated consumer's surplus values were attached to all of the traditional natural product values which were, for all practical purposes, completely destroyed by the impoundment, where no alternative modern good could serve as a substitute, where the good had high value to the Sioux people and where most of the goods were product value inelastic.

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[7] MRBI, Report Number 138, p.13.

In a willingness to pay study conducted to establish values for North Dakota hunting and fishing activities, consumer's surplus was found to be, conservatively, 40 percent of the total daily expenditure.[8] It is recognized that willingness to pay is an acceptable contingent valuation[9] method utilized to estimate non-market values. Furthermore, it is recognized as a more conservative valuation approach than willingness to accept. Because of the lack of data available to estimate contemporaneous consumer's surplus losses for traditional products at Cheyenne River, RMC incorporated a 40 percent consumer's surplus loss valuation floor for all traditional Indian product categories - accepting the willingness to pay for hunting and fishing as the lower limit of consumer's surplus losses at Cheyenne River.

To not estimate, conservatively, obvious minimal values for consumer's surplus losses would be, as E. J. Mishen has said, to stand cost-benefit theory on its head. If consumer's surplus does not exist in this instance, where irreplaceable, highly valued goods are completely removed from society, then it does not exist at all.

VALUES: WILDLIFE

The GAO questions the values utilized by RMC to establish wildlife values even though these values were those developed, at the behest of the Army Corps of Engineers to determine the specific losses the Tribe would occur at Cheyenne River because of the Oahe project. The report, A Report on Fish and Wildlife Resources in Relation to the Water Development Plan for the Oahe Reservoir (F & W Report), January 1951, prepared by the U.S. Department of the Interior's Fish and Wildlife Service, Washington, D.C., notified the Corps of the losses in value the Tribe would incur from the destruction of its big game, upland game and fur animals resulting from the Oahe project.

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[8] Anderson, et.al., Guidelines, p. 28. Another willingness to pay contingent valuation study reported on by Peter H. Pearse in Land Economics (2-68) evaluated the consumer's surplus of big game hunting in East Kootenay, British Columbia in 1964, and determined that the average consumer's surplus value for these hunters for the big game resource was 72 percent of their expenditure.

[9] Note: Contingent valuation studies value items that are not traded in markets and where individuals are asked to place values on non-market items contingent on a hypothetical market in which to trade them.

See comment 7.

In its original report, MRBI Report Number 117 (page 43), June 1951, on resource losses the Tribe would sustain from the destruction of its "valuable wildlife resources and recreational areas", the MRBI utilized the 1951 F & W Report to establish values for wildlife losses at Cheyenne River. There is little wrong with the application of the F & W Report at Cheyenne River except that it too probably underestimates the real product values for these goods -- it is MRBI Report Number 138, utilized by Congress during final negotiations and referenced by GAO, which is deficient here.[10]

Following the destruction of tribal woodlands was the destruction of its wild game resources. The F & W Report indicated that white tail deer, bank-denning beaver, raccoons, fox, mink, river otter, red fox, badger, rabbits, pheasants, squirrels, porcupines, muskrats, weasels, and turkeys would be lost. Today, the Army Corps reports that a complete contemporary listing of mammals found along the Missouri River areas that still retain riparian forest conditions would number in excess of 75 species.

The alternatives to make the Tribe whole here are not fat ladened commodity canned or super market chickens, assuming the members had wage incomes sufficient to purchase such items, after the taking but their real replacement values. The government, recognizing it could not make the Tribe whole with like replacement lands or lieu lands (too expensive and politically not feasible), offered low cash settlements and drove down the Tribe's estimates with its MRBI Report Number 138.

Now on pp. 8-9.

MRBI Report Number 138 stated (quoted in the GAO draft, page 8) the value of game to the Indian people was less because they were more skillful hunters, used cheaper equipment, and needed no long distance travel for hunting. It valued wild game employing grocery store food alternatives, as replacement values, for the Tribe's lost wildlife resources. This argument is seriously deficient and would not have been put forward except that the government was at the height of its termination policy and was sure that such arguments would not even be defended against by knowing government officials. The pre-termination era MRBI Report 117 did not even mention such an argument.

The true alternative to the tribal member is what it would cost to replace these valuable wildlife products -- not with processed chicken or commodity canned meats, as actually occurred,

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[10] See ELR, page 117, for a discussion on problems surrounding MRBI Report 138. For example, at one point the report's authors created $1,753,235 in indirect damage values for Cheyenne River "out of thin air" so they could match with an artificial ratio of 1 to 3.42, direct damages to indirect damages, established with the earlier Fort Berthold settlement.

resulting in serious negative spillover effects already discussed above.

The actual costs after the taking, for example to hunt deer, certainly parallels the costs non-Indian sportsmen incur in their hunting trips. The value of the bottomlands to Indian hunters before the Dam was that it afforded a method of hunting that made it easier to hunt and obtain kills; required less travel because of abundance and location; and only required the utilization of less powerful rifles because of close-in ranges. This is one of the reasons why Indian people originally utilized the bottomland Winter Camps in the first instance -- to take advantage of this surplus and value: Meriwether Lewis's "Garden of Eden."

With the destruction of the bottomlands, the alternative to obtain the same game now becomes much costlier: the Indian hunter (post Dam), as he does today, now must travel long distances and spend much time at the hunt across the Plains; must use expensive high powered 30-06 or similar rifles to hunt deer, with 180 grain bullets, equipped with expensive high powered scopes for utilization in the High Plains country; and are no more or no less skilled as hunters than the average non-Indian hunter devoted to the kill under these circumstances.

Alternatives could not be found to replace the values of many wild products which were highly valued by the Tribe. The destruction of these precious goods have been lost permanently to the Tribe.

It is interesting to note that markets for wildlife products and plants that the Sioux historically utilized are now beginning to emerge as some food markets now began to demand the healthful foods utilized by tribal members during the fifties. Prices established thus far are uniformly significantly greater than those values RMC utilized in its 1994 analysis.

The wildlife resources of the Tribe were valuable not only as food products but as valuable product inputs (tanned hides, quills, and fur products) necessary for producing items of clothing and for arts and crafts production. MRBI did not place any value on losses for these purposes. It is also interesting that the "new" Army Corps, only twenty years after the destruction of the Indian riparian woodland areas, now designates the few remaining upper basin riparian forested areas, utilized exclusively now by non-Indians, as "irreplaceable riparian forest and wildlife habitat" areas. The Corps now asks Congress for funding to protect any further loss of these irreplaceable riparian environments for projects such as streambank erosion

control and places great value on riparian resources.[11]

To value the loss of this important traditional food and wildlife product stock, MRBI Report Number 138 compared it to the price of super market chicken as an alternative good. Such egregious MRBI valuations for irreplaceable Indian wildlife product were only made acceptable by the fact that the government itself, utilizing the F & W Report, placed a more appropriate initial value on the taking area loss of these precious Cheyenne River Sioux resources. RMC, to establish value here, utilized this original estimation of annual wildlife product loss. Again, because the expense in harvesting and processing of wildlife products was primarily Indian labor incurred directly in terms of labor expended, with a zero opportunity costs for labor, the product value became the net product value.

The F & W Report estimation of annual product losses caused by the impoundment, adjusted to 1955 prices, at Cheyenne River were: big game: $46,595; upland game: $48,727; and fur bearing animals: $17,816. RMC placed a consumer's surplus loss on big game, upland game and fur bearing animals at 40 percent. Almost all of the fur bearing animals were destroyed by the impoundment, causing a permanent loss for these wildlife resources. Jay A. Leitch, a North Dakota State University Resource Economist, found that a conservative estimate of the level of consumer's surplus for sportsman was 40 percent of their total expenditure value in North Dakota, assuming a normal demand curve.[12] Applying this rate of consumer's surplus loss to the above categories of losses resulted in annual loss values for 1) big game of $65,233; 2) upland game of $68,218; and fur bearing animals of $24,942.

The capitalized values for the above economic losses were: 1) big game: $2,338,100; 2) upland game: $2,445,090; and 3) fur bearing animals: $893,978.

TIMBER HARVEST

GAO questions timber harvest levels RMC utilized in its 1994 ELR. RMC does not agree with GAO's findings.

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[11] U.S. Army Corps of Engineers, Final Environmental Statement, Missouri River, South Dakota, Nebraska, North Dakota, Montana: Streambank Erosion Control, (Omaha: Corps of Engineers, June 16, 1978), pp. 66-79.

[12] Anderson et. al., Guidelines for Economic Evaluation, p. 28. It is noted that the East Kootenay study by Pearse evaluated the average consumer's surplus for big game at 72%.

The river bottomlands along the Missouri that were taken for the Oahe Reservoir contained 10,700 acres of riparian natural woodlands lands resulting in a loss of 90 percent of the Cheyenne River Sioux Tribe's timber resources.[13] Timber resources were directly utilized by residents of Cheyenne River in several ways: logs were used to construct homes, barns, garages, granaries, chicken houses and log sheds. Poles and posts were used for building corrals and rangeland fences. The earlier 1951 MRBI Report 117 found fuelwood provided energy for cooking and heating for 400 families as their principle source of fuel.

Timberlands provided shelter for communities, families and livestock from extremes of the South Dakota winters and summers, thus reducing winter fuel requirements. The bottomlands also provided cover and habitat for wild game and wild natural products contributing significantly to a healthful Indian diet and culture. Plants and trees were utilized for religious ceremonies. Wildlife products along the woodlands, providing a significant source of food for 400 Indian families would be lost to the impoundment.

A prominent Washington D.C attorney, Marvin J. Sonosky, working with the Standing Rock Sioux during the period of the Oahe takings, told Congress the loss to the Indians for their timber would be profound:

> Destruction of the timbered area means loss of the game - their habitat is gone. It means loss of the products of nature primarily found in the timberlands. And, of course, it means loss of the timber itself. These losses are irreparable. There is no realistic remedy. The people will stay on the Reservation but their timber and game lands cannot be duplicated. They will be forced to live on the treeless prairie. There are no lands on or even near the Reservation comparable to those within the taking line. No matter what Congress orders paid these people, a substantial part of their way of life and environment will never be the same after this land is submerged.[14]

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[13] Note: MRBI Report Number 138, in various places, estimates the percentage of timberland to be taken as 63 percent. According to the Army Corps final audit, 10,700 acres of timberland were taken out of the Tribe's entire 11,940 woodland acres in 1955. This percentage is 0.896.

[14] Sonosky, Marvin J., Statement of Marvin J. Sonosky: Before the Subcommittee on Indian Affairs, Committee on Interior and Insular Affairs, United States House of Representatives,

In 1951 the Department of the Interior carried out a timber reconnaissance utilizing a 20 percent timber cruise. Personnel conducting the cruise were from the Department of Interior and Army Corps. Saw log and cordwood timber was measured utilizing the Biltmore stick technique to estimate volumes of standing timber in board feet. Cruise tally sheets were tabulated and converted product units were summarized.[15]

See comment 8.

RMC saw several problems with the government's cruise:

1. Use of Biltmore stick as the measurement instrument.- RMC questions the government's choice of the Biltmore stick to carry out the 20 percent cruise for Cheyenne River Sioux timber lands. This device is convenient to use but is not an accurate instrument according to forestry authorities. It must be employed very carefully to get acceptable readings because it is difficult to control in the field.[16] The timber cruise at Cheyenne River was not the average Monday morning forest measurement tally.

The government should have taken great care here in selecting its measurement tools. Essentially, the cruise would be the final measurement tally before the complete and permanent destruction of the Tribe's great riparian forested areas. Other, more accurate, instruments were available at the time but the government chose not to employ them.

2. Use of Army Corps personnel for the cruise.- Use of Army Corps personnel for the Cheyenne River cruise violates fundamental principles of valuation integrity and therefore is not credible. The Army Corps, representing the government and as the project's developer, was directly involved in an attempt to hammer down values the government was willing to pay for tribal assets for the taking. To have Omaha Corps

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March 24, 1958.

[15] MRBI, Report Number 131, The Timber Resources of the Cheyenne River and Standing Rock Reservations Within the Taking Area of the Oahe Reservoir in North Dakota and South Dakota, (Billings: Missouri River Basin Investigations Project, DOI, BIA, September, 1952), pp. 1-7.

[16] Collins, B. McManus and White, Fred M., Elementary Forestry (Reston: Reston Publishing Co., 1981, pp. 115-127.

personnel involved in the cruise violated every principle of independent appraisal standards. This is like assigning the fox to guard the chicken house. Non-government, independent foresters, should have been employed to provide equitable estimates for tribal timber resources.

3. Aerial photographs.- In MRBI Report Number 131, the timber resources report, it was disclosed that aerial photographs used during a timber cruise made in 1938, during a drought period, showed more timber, especially along the Moreau River, than was found in 1951.[17] It appears, even in the minds of the authors of the MRBI timber report, there existed underestimation problems with the Cheyenne River timber cruise embodied in cruise results or volume calculations.

4. Skewed MRBI sustained yield estimates for Cheyenne River timber resources.- During the present analysis, it appeared over and over again that timber resource products were underestimated at Cheyenne River when compared to the use rates of tribal members and when compared with other reservation Pick-Sloan takings in South Dakota. Unfortunately, there exists only seriously questionable timber cruise results to evaluate the Tribe's total resources here.

The above review of the timber cruise places sufficient doubt on the reliability of the government's timber and sustained yield estimate numbers so that the MRBI's potential annual harvest estimates for Cheyenne River should be set aside. In lieu of other, more reliable contemporaneous data, RMC's analysis utilized either revised tribal annual net harvest quantities for timber products or existing MRBI quantities where they, after review, appeared reliable.

1. Logs. Logs were utilized extensively at Cheyenne River as a traditional form of house construction and, with today's improved techniques, could well have been extensively utilized except that the supply has been removed by the taking.

MRBI Report Number 117, although questioning BIA permit figures for poles, posts and fuelwood, did not question the 36 Mbf figure for annual average reservation log

[17] MRBI, Report Number 131, p. 3.

utilization.[18] RMC accepted the 36 Mbf quantity and, utilizing MRBI's 30 board foot average volume per log conversion rate, arrived at the same annual utilization rate of 1,200 logs per year for the reservation. Reducing this figure by 10 percent to allow for the 90 percent taking area loss, the utilization rate was found to be 1,080 logs from the taking area.

2. Poles. Poles were utilized for livestock corrals, summer coolers and fencing. MRBI Report Number 117 points out the real use rate for poles, at least at Cheyenne River, (MRBI Report Number 138 utilized the same data set) would materially have increased the 2,800 BIA reported number because of unreported use by tribal members harvesting the timber in the taking areas directly without first having secured BIA permits. It is possible that such unreported use could have exceeded permitted use in the bottomlands. However, RMC estimated, conservatively, an increase use factor of 20 percent for analysis purposes.[19] This results in an estimate of 3,360 poles harvested annually from the taking area. The 90 percent factor does not apply here as MRBI Report 138 utilized taking area lands only in its calculations.

3. Posts. Posts were utilized primarily for new range fencing or annual fence maintenance needs as well as for use at homesites of Indian livestock owners. The Indian cattle industry was in a transitional phase where most of the Indian cattle owners still operated using low mechanization and horse drawn equipment. Indian cattle owners typically did not need to utilize the BIA's permit system to gain access to posts for their use purposes as reported in MRBI's Report Number 117. RMC, to estimate more properly the demand for posts at Cheyenne River, given the abnormally low number utilized in Report 138 relative to Standing Rock, which had only one-half the Indian cattle of Cheyenne River, estimated annual utilization for posts at Cheyenne River to

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[18] MRBI, Report Number 117, p. 41.

[19] Ibid., p. 41. Note: MRBI Report 117 indicated the unreported use of poles above their 2,800 number was substantial: "It is known that many Indians also helped themselves to fuel, posts and poles from the tribal timber reserves without authorization by the Agency. This unreported take of timber products would materially increase the figures given above." RMC views **materially** here as much more than 20 percent. Tribal members in 1954 viewed these resources as their own and would not be bothered with having to first obtain a "BIA" permit to utilize their own resources.

be 20 percent higher than the reported use in MRBI Report 138 at 6,950 posts annually. Given the unreported use of posts by tribal members without permits reported in MRBI Report 117 as materially higher than the BIA permit numbers, an increase in the estimated use of posts of 20 percent is not unreasonable. The revised annual use estimated for post use at Cheyenne River in 1955 was 8,340.

4. Fuelwood/Cordwood. Here again, MRBI estimates for cordwood utilization are low. Average fuelwood heating requirements for a small woodframe or log house per year are 10.3 cords of dry mixed woods found along the bottomlands. This is for a heating season from October through the end of March. Calculations are from a small four room house located along the Missouri River bottomlands which has utilized exclusively firewood from a riparian area over the last ten years. According to the government's own MRBI Report Number 117 detailed survey results, over 400 Indian households of this type relied on fuelwood heating as their primary source of fuel in 1950, not including those households who purchased firewood.[20]

The total annual cord requirement of 10.3 cords per winter per household for heating is established above. Allowing for a 10 percent cooking requirement, the combine total annual fuelwood requirement per family was established at 11.3 cords per year for 400 households. After allowing for the 90 percent taking area loss, the requirement was 4,068 cords per year. The MRBI annual estimate for harvested cordwood at Cheyenne River from the reservation taking area came to 3,384 cords annual use (See: MRBI Report 138, p. 74). It is noted that the GAO used the MRBI Report Number 138 sustained yield estimates of 1,359 cords by the MRBI, instead of the actual annual use figures of 3,384. Also noted is that cordwood is desirable as a deadwood product that is made up of fallen dead trees and standing dead trees because it is used for firewood and is of a higher quality as a dry product, thus impacting sustained harvest yields less severely.

Almost forty years after the destruction of the Tribe's timber resources, tribal log cutters are still harvesting dead trees for fuelwood from the taking area, all of this without any new live growth there. The MRBI's live sustained yield estimates were based on a fifty year cycle.

SECONDARY APPROACH

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[20] Ibid., p. 19.

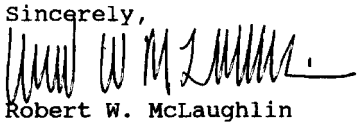
Finally, RMC in its ELR put forward on the report's last page (page 138) a two paragraph "Alternative Valuation." This statement was not thought of by RMC at the time as a fully developed second valuation approach by RMC but rather a simple statement on what the valuation would be if the GAO applied its previous valuation technique (Fort Berthold and Standing Rock compensation ranges, from its GAO Report, May 1991), utilizing the nominal prime rate, to the Cheyenne River taking without additional comment by RMC. Following the original statement, RMC has no comment on GAO's draft response here.

FINAL COMMENT

RMC finds nothing in the GAO draft report which would cause it to change its original estimate findings in its 1994 Economic Loss Report for the taking at Cheyenne River.

I wish to thank you for the courtesy in extending RMC the opportunity to respond to the draft report by written comment and of my appreciation that Jeffery Malcolm took the time to visit the Oahe Dam, Cheyenne River Sioux homelands and to meet firsthand with tribal officials and myself at Bismarck, North Dakota on important compensation issues. My respect for GAO's professionalism in these matters is complete.

Sincerely,



Robert W. McLaughlin

The following are our comments on the Cheyenne River consultant's letter dated December 29, 1997.

GAO Comments

1. Section 1 of the settlement act (P.L. 83-776) stipulated that to become effective, the agreements contained in the law had to be ratified by at least three-quarters of the adult members of the Cheyenne River Sioux tribe. The voting was not limited to male tribal members. According to the voting results certified by the tribe and the Bureau of Indian Affairs, as of February 4, 1955, over three-quarters of the adult tribal members (1,847 out of 2,375, or 77.8 percent) had voted to approve the settlement act. Only 152 members voted to disapprove the settlement, and the remaining 376 ballots were incomplete or were not returned.

2. In response to this comment on our 1991 report by the consultant for Fort Berthold, we stated the following.

". . . concerning the use of a zero or negative rate of discount by tribes on the Wind River and Flathead reservations, we note that, in deriving an estimate of the value of their land, the Fort Berthold tribes used a 4-percent capitalization rate.[1] Thus, the possibility that the tribes would have used a capitalization rate of zero or less is questionable."[2]

3. The earliest instance we found of the tribe's using a 4-percent discount rate was in November 1952, when the tribe used that rate in calculating the damage estimate used in the settlement contract it proposed at the final negotiation conference in Washington, D.C. The tribe's entire seven-member negotiating committee was present, as was the tribe's attorney, Mr. Case. According to the tribe's minutes of the conference, after presenting a breakdown of the tribe's damage estimate, the Chairman for the Cheyenne River Sioux tribe requested that Mr. Case discuss how the damage estimate was calculated. After Mr. Case had finished, the Chairman also explained how the tribal negotiators had arrived at their damage estimate. The earliest instance we found of MRBI's use of a 4-percent discount rate was in April 1954, when MRBI calculated damages for the Cheyenne River Reservation, almost a year and a half after the tribe used this rate.

[1]Hearings Before the Subcommittee on Indian Affairs of the Committee on Public Lands, House of Representatives, Eighty-First Congress, First Session, on H.J. Res. 33 (Apr. 29 and 30, May 2 and 3, 1949), p. 47.

[2]Indian Issues: Compensation Claims Analyses Overstate Economic Losses (GAO/RCED-91-77, May 21, 1991), p. 26.

4. We recognize that the tribe was under duress to reach a final settlement, but in developing its damage estimates, the tribe appears to have been free to ask for as much money as it believed it was entitled to. The tribe increased its damage estimate between 1952 and 1954.

5. Using the inflation rate to calculate the low end of the additional payment range does provide the Congress with meaningful information to consider in determining possible payments for the tribe. How dollar values are adjusted from 1954 to 1996 depends on what assumption is made about how the tribe would have used the additional funds if it had received them in 1954. The low-end calculation, using the inflation rate, is based on the assumption that the tribe would have spent the money instead of investing it. Therefore, information on the payment that the tribe would need today to maintain its 1954 purchasing power is relevant.

According to MRBI, the tribe spent nearly all of its original $10.5 million payment in less than 5 years. MRBI reported that as of June 30, 1960, the tribe had $1.06 million of its settlement funds remaining on deposit in the U.S. Treasury. The settlement funds were not appropriated until late 1955, and through June 30, 1960, they had earned $859,062 in interest.

6. We believe that taking into account the tribe's consumer surplus can be an important component of this type of economic analysis. However, as we point out and as the consultant acknowledged in his report, the lack of historical information makes it impossible to determine the tribe's consumer surplus for timber products, wildlife, and wild products in the 1950s. Therefore, assigning a value for these losses using contemporary information is arbitrary. Because of the difficulties in trying to recalculate the tribe's losses after more than 40 years, we believe that the estimates prepared in the 1950s provide a better basis for addressing the issue of additional compensation than contemporary estimates based on insupportable assumptions.

7. MRBI Report No. 117, dated June 1951, did report the results of the U.S. Fish and Wildlife Service (FWS) report issued in January 1951. However, MRBI Report No. 117 did not "utilize" that information to establish values for the wildlife losses at Cheyenne River. The report that contained MRBI's complete evaluation of the damages to the Cheyenne River Sioux tribe was MRBI Report No. 138, dated April 1954. MRBI Report No. 138 also contained the results of the FWS report, as did MRBI Report No. 117. MRBI Report No. 138 used the FWS report in evaluating the wildlife losses the tribe would sustain. In doing so, MRBI concluded that FWS' method of valuing wildlife

losses, based on sportsmen's expenditures for hunting, was not appropriate for determining the tribe's wildlife losses.

MRBI Report No. 138 found that the sportsmen's expenditure values used by FWS overstated the tribe's losses because the Indian people were more efficient hunters and therefore gathered wildlife at less cost than sportsmen. Moreover, the MRBI report concluded that since the wildlife were primarily used as food, determining the replacement cost for the lost food supply would be an appropriate method for valuing the tribe's wildlife losses. These assumptions are reasonable in our view.

8. The consultant did not offer any evidence that the timber harvest levels used in his analysis could be sustained in perpetuity. Although he reiterated his concerns about how the volume of timber in the taking area was determined, he did not provide any information on how the overall timber volume should be adjusted. Instead, he set aside the government's sustainable yield levels, thereby assuming, in effect, that the tribe had an infinite supply of timber that it could consume at recent harvest levels in perpetuity. We believe that this assumption is questionable and that the damage estimate for timber products should be based on sustainable yield levels.

Objectives, Scope, and Methodology

In response to Senator Daschle's request we assessed the consultant's two approaches for calculating additional compensation for the Cheyenne River Sioux tribe for damages caused by the taking of 104,420 acres of their reservation for the Oahe reservoir. As agreed, we did not address the question of whether additional compensation should be provided or evaluate the adequacy of the original compensation amount appropriated by the Congress.

We conducted audit work primarily at the National Archives in Washington, D.C., and College Park, Maryland. We met with officials from the U.S. Army Corps of Engineers at the Oahe Project Office in Pierre, South Dakota, and toured the Oahe dam and project facilities. We also met with Cheyenne River Sioux tribal officials in Eagle Butte, South Dakota, and with the tribe's consultant in Bismarck, North Dakota, to obtain their views on past and current damage estimates.

In reviewing the consultant's primary approach, we compared his approach and methodology to (1) standard economic principles and (2) the approach and methodology used in the 1950s by the tribe and MRBI in calculating their damage estimates. To obtain information on the estimates prepared by the tribe in 1952 and 1954, we reviewed Bureau of Indian Affairs files and congressional files at the National Archives. Specifically, at the National Archives we reviewed the Cheyenne River Sioux Tribal Council's minutes from the late 1940s through the late 1950s and the tribe's minutes and the Bureau's minutes covering the settlement negotiations in 1952. We obtained information on MRBI's damage estimates from MRBI reports in the Department of the Interior's library in Washington, D.C.

In reviewing the consultant's secondary approach, we evaluated his application of the approach we proposed in our 1991 report. We obtained documents on the legislative history of the compensation bill (P.L. 83-776) and the tribe's 1954 damage estimate from the National Archives.

Our review was performed from April 1997 through November 1997 in accordance with generally accepted government auditing standards.

Major Contributors to This Report

Resources, Community, and Economic Development Division, Washington, D.C.

Charles W. Bausell, Jr.
Timothy J. Guinane
James Hunt
Jeffery Malcolm

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