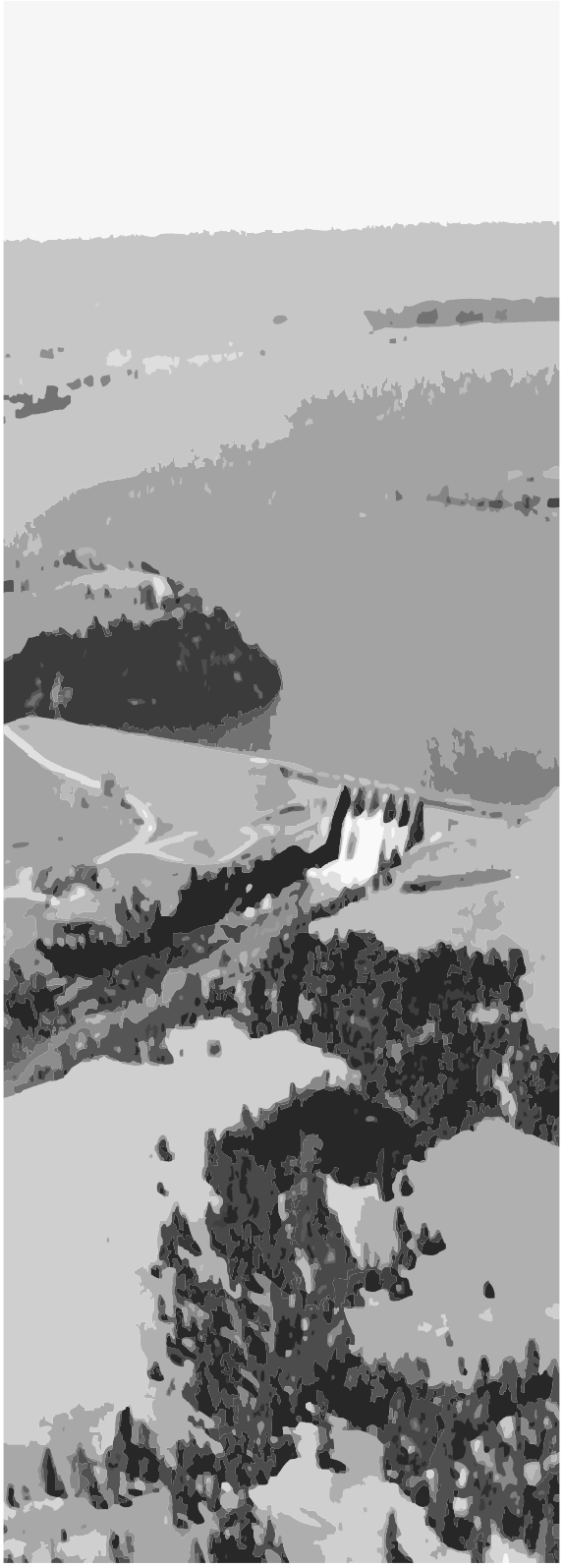
FINAL ENVIRONMENTAL IMPACT STATEMENT

ANGOSTURA UNIT CONTRACT NEGOTIATION AND WATER MANAGEMENT



S U M M A R Y

This EIS (*environmental impact statement*) analyzes impacts of a new long-term water service contract with the Angostura Irrigation District and impacts of water management at the U.S. Bureau of Reclamation's Angostura Unit in southwestern South Dakota. An agency of the Department of the Interior, Reclamation supplies irrigation water to 17 Western States, as well as water for recreation, fish and wildlife, power generation, and municipal and industrial uses.

Reclamation is required to renegotiate a new contract with the District under the 1939 Reclamation Project Act. While authorized purposes of the unit are irrigation and flood control, Angostura Reservoir also provides recreation to the area and benefits to fish and wildlife.

Reclamation is also required to consult with Indian tribes under the Department of the Interior's instructions on Indian trust responsibilities and the Presidential Memorandum of April 29, 1994. The Cheyenne River below Angostura Dam forms part of the boundary of the Pine Ridge Reservation, home of the Oglala Sioux Tribe, and the Cheyenne River Reservation, home of the Cheyenne River Sioux Tribe (see figure 1.1). The Lower Brule Sioux Tribe—on the west bank of the Missouri River below the confluence with the Cheyenne River—also has expressed an interest in how Angostura water is used.

The draft EIS was released in January 2001 for review by the public, Tribes, and other agencies as required by NEPA (National Environmental Policy Act). This final EIS incorporates responses to substantive comments received on the draft (all comments/responses can be found

in the first section of this document). No sooner than 30 days after publication of the final EIS, a *Record of Decision* will be released detailing Reclamation's final course of action on the contract and on management of water of the Angostura Unit.

As can be seen from the *Comments and Responses* section, Reclamation and some of the groups cooperating with the EIS disagreed over some of the findings. NEPA, however, demands full disclosure of all substantive issues and significant impacts, which Reclamation has accomplished in this document.

Further information on purpose, need, and background can be found in Chapter One.

BACKGROUND

The Cheyenne River rises in the high plains of Wyoming (figure 1.1). Much of the river basin is relatively flat and gently rolling. The river channel ranges from 50 feet wide in the upper reaches to 300 feet wide in the lower. The region through which the river passes is a transition zone of ponderosa pine woodlands of the Black Hills and the mixed-grass prairie of the Northern Plains. Diverse habitat attracts a wide variety of wildlife to the area.

Rapid City, South Dakota, is the largest city in the region, with a 1990 population of about 54,500. Hot Springs, with a population of 4,300, is the town nearest Angostura Reservoir.

The Angostura Unit includes the dam, reservoir, and irrigation facilities. The concrete gravity dam is 193 feet high and 2,030 feet long, including the earth embankment. Maximum releases to the main canal are 720 cfs (cubic feet/second) at the top of active conservation storage (elevation 3187.2 feet). The 30-mile long canal is earth-lined or membrane-lined, with a typical bottom width of 14 feet. Releases to the river are 590 cfs at top of surcharge storage (elevation 3198.1 feet).

Construction of Angostura dam began in 1946, and it was completed in 1949. Full water delivery service began in 1956.

Angostura Reservoir is about 17 miles long, with another 7.6 miles extending along Horsehead Creek. Total surface area is 4,612 acres at the top of active conservation storage. The east shore is a South Dakota State Recreational Area, with campgrounds, boat ramps, marina, cabin area, day-use areas, and swimming beaches.

ALTERNATIVES

Reclamation, with help from the District, Tribes, and cooperating agencies, developed four alternative plans to renegotiate a new contract and manage water in the reservoir:

- The *No Action Alternative* would require no change in the water service contract beyond those required by policy and no change in management of water at the reservoir. A maximum of 12,218 acres in the District would be irrigated for the 25-year duration of the new contract (with an average of 10,000 acres being irrigated). Recreation and fisheries would continue to be secondary to irrigation. Reservoir storage would average from 65,900-71,700 AF (acre-feet) to minimum elevation 3163 feet (depending on irrigated acreage), while reservoir elevations would average from 3180.3-3182.1 feet. Annual releases to the river would average 55.1- 46.4 cfs. Agriculture would continue to supply $540,000 in income and 47 jobs to the area annually. Recreation would continue to be about 271,000 visitor-days annually, resulting in $1,200,000 in related

household income and 92 jobs. Economic conditions on the Pine Ridge Reservation would remain as at present.

- The *Reestablishment of Natural Flows Below the Dam Alternative* would re-establish natural flows as nearly as possible in the river downstream of the dam (stock dams upstream of the reservoir, groundwater pumping, and changes in farming practices in the area make complete reestablishment impossible). No water would be available from the Angostura Unit for irrigation; no contract would be signed with the District. The spillway's five radial gates would be opened, with inflows allowed to pass through the reservoir. Annual reservoir storage would be 13,300 AF at elevation 3158.9 feet, about 80% less than for No Action. Annual releases to the river would more than double—to an average of 120.7 cfs—and flows above 5,000 and 10,000 cfs would be more frequent. Low flows would also be more frequent, and the river could periodically dry up. About $540,000 in annual agricultural income would be lost, along with 47 jobs. Recreation would decline 83,100 visitor-days annually, translating to a loss of $2,168,000 in benefits compared to No Action. The economy of the Pine Ridge Reservation could be improved if water were applied to beneficial uses. Changing authorized water use in the reservoir would require changes in the Flood Control Act of 1944, which governs the Pick-Sloan Missouri River Basin Program (of which the Angostura Unit is part).

- The *Improved Efficiencies Alternative* (the Preferred Alternative) would increase efficiencies of both the water delivery system and on-farm practices to save up to 9,000 AF annually. Saved water could be used for irrigation, recreation, fisheries, downstream flows, or other uses. A contract for up to 12,218 acres of irrigation would be signed with the District. Annual storage in the reservoir would average from 72,000-76,700 AF to minimum elevation 3163 feet (depending on whether 12,218 or the average 10,000 acres were irrigated), while reservoir elevations would average from 3182.2- 3183.6 feet. Annual releases to the river would average 68.9-76.3 cfs. Both storage and elevations in the reservoir and releases to the river would be greater than for No Action. Irrigated agriculture would benefit due to the reduced likelihood of water shortages. Recreation would increase by 11,800-14,600 visitor-days annually, resulting in increased benefits to the area from $207,000-$382,000 in comparison to No Action. Economic conditions on the Pine Ridge Reservation would be as for No Action. Legislation to change the Flood Control Act would be required and special legislation might be needed if authorized water uses of the unit were changed. Changes in South Dakota law might also be needed to protect downstream flows from diversion.

- The *Reservoir Recreation and Fisheries Alternative* would give priority to reservoir recreation and fisheries. A contract would be signed with the District for irrigation ranging from 12,218 acres to no irrigation at all. Annual reservoir storage would average from 63,800-68,600 AF to minimum elevation 3170 feet (depending on irrigated acreage). Annual elevations would average from 3180-3181.4 feet. While storage would be about the same as for No Action, elevations would be higher to maintain a larger water surface area, make as many boat ramps available as possible, help with fish propagation, and establish beaches. Annual releases to the river would average 62.3-70 cfs, slightly more than for No Action. Effects to irrigated agriculture

would be as in No Action if there were irrigation in this alternative; otherwise effects would be similar to the Reestablishment Alternative. Recreation would increase 4,000 visitor-days annually, resulting in increased benefits of about $104,000 compared to No Action. Economic conditions on the Reservation would be as for No Action. Legislation would be needed to re-authorize the unit for recreation and fish and wildlife benefits, and to reallocate construction costs for new uses. Increases in congressional appropriations would be needed to cover greater Federal expenditures for operations and maintenance.

Two other alternatives were analyzed but eliminated during course of the study. The Pine Ridge Reservation Irrigation Alternative would have irrigated lands at the town of Red Shirt, in addition to those in the District. It was dropped at the request of the Oglala Sioux Tribe. The Hydropower Alternative analyzed power generation for benefit of the Cheyenne River Sioux Tribe. This alternative was dropped because of impacts to fish and wildlife habitat and because of high costs.

More details on the alternatives can be found in Chapter Two.

AFFECTED ENVIRONMENT

Reclamation determined some of the environmental factors to be analyzed in this EIS, and the District, Tribes, and cooperating agencies provided others. Concerns were also gathered from the public at scoping meetings and from letters. By this process, the following environmental factors were established for analysis:

- Surface Water Quantity
- Surface Water Quality
- Groundwater
- Sediment
- Stream Corridor
- Wetlands
- Fisheries
- Wildlife
- Threatened or Endangered Fish and Wildlife Species/Species of Special Concern
- Social and Economic Conditions
- Indian Trust Assets
- Environmental Justice
- Cultural Resources
- Paleontological Resources.

Information was obtained from the District; Tribes; U.S. Geological Survey; Environmental Protection Agency; U.S. Fish and Wildlife Service; U.S. Bureau of Census; U.S. Bureau of Indian Affairs; U.S. Natural Resources Conservation Service; South Dakota Department of Environment and Natural Resources; and South Dakota Department of Game, Fish, and Parks, among others, from computer models, and from studies initiated specifically for this EIS. Details on how data was collected can be found in Chapter Three.

ENVIRONMENTAL IMPACTS

Impacts of the alternatives are detailed in table S.1, arranged by *indicators*, measurements that indicate changes from one alternative to another. The analyses were conducted for a 25-year contract period. Chapter Four discusses the impacts shown in the table.

Table S.1: Impacts of the Alternatives

	No Action	Reestablisment of Natural Flows Below the Dam	Improved Efficiencies (Preferred Alternative)	Reservoir Recreation and Fisheries
Surface Water Quantity	***Annual average reservoir EOM*** (end-of-month) ***contents*** would range from 65,900 (for 12,218 irrigated ac. to min. el. 3163 ft.) to 71,700 AF (for 10,000 ac. to the same min. el.), with EOM elevations ranging from 3180.3 to 3182.1 feet. ***Annual average releases to the District*** would range from 55.1 cfs (12,218 ac.) to 46.4 cfs (10,000 ac.) and would be available 93% of the 45-year period of analysis. ***Annual average releases to the river*** would range from 60.2 (12,218 ac.) to 68.4 cfs (10,000 ac.), with flows at Buffalo Gap ranging from 126 to 129.5 cfs. ***Accretion and irrigation return flows*** would range from a combined 66 cfs (12,218 ac.) to 62 cfs (10,000 ac.).	***Annual average reservoir EOM storage*** would be 13,300 AF at EOM elevation 3158.9 feet. ***No releases*** would be made to the District. ***Annual average releases to the river*** would be 120.7 cfs, with flows at Buffalo Gap of 158.5 cfs. ***Accretion flows*** would be 36 cfs, but there would be no return flows.	***Annual average reservoir EOM storage*** would range from 72,000 (for 12,218 irrigated ac. to min. el. 3163 ft) to 76,700 AF (for 10,000 ac. to the same elevation), with EOM elevations ranging from 3182.2 to 3183.6 feet. ***Annual average releases to the District*** would range from 45.7 to 37.7 cfs and would be available from 93 to 100% of the period. ***Annual average releases to the river*** would range from 68.9 cfs to 76.3 cfs, with flows at Buffalo Gap ranging from 129.6 to 132.7 cfs. ***Accretion and return flows*** would range from a combined 60.7 cfs to 56.4 cfs.	***Annual average reservoir EOM storage*** would range from 63,800 (for 12,218 irrigated ac. to min. el. 3170 ft.) to 68,600 AF (for 10,000 ac. to the same elevation), with EOM elevations ranging from 3180 to 3181.4 feet. ***Annual average releases to the District*** would range from 53.5 to 45.3 cfs and would be available from 82 to 93% of the period. ***Annual average releases to the river*** would range from 62.3 to 70.0 cfs, with flows at Buffalo Gap ranging from 127.2 to 130.5 cfs. ***Accretion and return flows*** would be as described for the No Action Alternative.
Surface Water Quality	***Eutrophication index*** would range from 4.539 (12,218 irrigated ac. to el. 3163 ft.) to 4.451 (10,000 irrigated ac. to same el.), with critical spring phosphorus concentrations of 10 µg/L, critical area loading 0.13 grams/m²/year, and areal phosphorus loading ranging from 0.60 (12,218 ac.) to 0.57 grams/m²/year (10,000 ac.). ***Annual average TDS in the reservoir*** would range from 1,770 (12,218 ac) to 1,750 mg/L (10,000 ac.). ***Annual average TDS in the river*** would range from 1,890 mg/L at Buffalo Gap, 1,350 mg/L at Cherry Creek (12,218 ac.) to 1,890 mg/L at Buffalo Gap, 1,340 at Cherry Creek (10,000 ac.).	***Eutrophication index*** would be 6.093, with critical spring phosphorus concentrations 10 µg/L, critical area loading 0.21 grams/m²/year, and areal phosphorus loading 1.30 grams/ m²/year. ***Annual average TDS in the reservoir*** would be 1,930 mg/L. ***Annual average TDS in the river*** would be 1,860 mg/L at Buffalo Gap, 1,280 mg/L at Cherry Creek.	***Eutrophication indices*** would range from 4.321 to 4.434, critical spring phosphorus concentrations 10 µg/L, critical area loading from 0.12 to 0.13 grams/m²/year, and areal phosphorus loading from 0.52 to 0.56 g/m²/year. ***Annual average TDS in the reservoir*** would range from 1,720 to 1,740 mg/L. ***Annual average TDS in the river*** would range from 1,880 to 1,890 mg/L at Buffalo Gap, 1,320 to 1,330 mg/L at Cherry Creek.	***Eutrophication index*** would be 4.498, critical spring phosphorus concentrations 10 µg/L, critical phosphorus loading 0.13 grams/m²/year, and areal phosphorus loading 0.58 g/m²/year. ***Annual average TDS in the reservoir*** would be 1,750 mg/L. ***Annual average TDS in the river*** would be 1,890 mg/L at Buffalo Gap, 1,340 mg/L at Cherry Creek.
Groundwater	***Quantities*** in the shallow wells and springs in the area would remain as at present, with river flows greater than 10,000 cfs occurring with the same frequency. ***TDS*** in groundwater would range from 1,390 to 1,670 mg/L as at present.	***Quantities*** in shallow wells and springs would be affected as return flows were eliminated. River flows greater than 10,000 cfs would be more frequent than for No Action, recharging shallow aquifers along the river. ***TDS*** in groundwater would improve since return flows would be eliminated.	***Quantities*** in shallow wells and springs would be slightly reduced since return flows could be slightly reduced, with river flows greater than 10,000 cfs as described for No Action. ***TDS*** in groundwater would be as described for No Action.	***Quantities*** would be as described for No Action. ***TDS*** would be as described for No Action.

Table S.1: Impacts of the Alternatives (Continued)

	No Action	Reestablisment of Natural Flows Below the Dam	Improved Efficiencies (Preferred Alternative)	Reservoir Recreation and Fisheries
Sediment	***Quantities*** of sediment in the reservoir would total 91,605 AF by 2042, a loss of 57% of original capacity. ***Quality*** of sediment would remain as at present—uranium near the dam 5.8 mg/L, sightly exceeding the upper confidence level, and 17.8 mg/L at an off-river site.	***Quantities*** of sediment would fill the reservoir to elevation 3157.2 feet by 2021. ***Quality*** would be as described for No Action, except more sediment would pass through the reservoir to the river.	***Quantities*** of sediment would be as described for No Action. ***Quality*** would be as described for No Action.	***Quantities*** of sediment would be as described for No Action. ***Quality*** would be as described for No Action.
Stream Corridor	***Annual flows in the river*** would remain about 60.2-68.4 cfs. ***Peak flows*** in the river would remain at about the frequency of 1.4 times/year for flows over 5,000 cfs, about 1 every other year for flows over 10,000 cfs. Stream length would remain at about 199 miles. ***The area of exposed sediment*** would remain at about 7,156 ac. ***Area of vegetation coverage*** would remain at about 22,997 ac. ***Number of vegetated polygons*** would remain at about 1,113. ***Riparian vegetation*** would continue to age, with only limited replacement of cottonwoods because of land use; some open grasslands or green ash communities might appear at the end of the period.	***Annual flows*** would increase, restructuring the river channel. Peak flows above 5,000 and 10,000 cfs would increase. ***Stream length*** would decrease. Area of exposed sediment would increase. ***Area of vegetation coverage*** would decrease. ***Number of vegetated polygons*** would decrease. ***Riparian vegetation*** would change to mirror pre-dam conditions some time beyond the end of the period of analysis.	***Annual flows*** would increase, slightly restructuring the river channel. ***Peak flows*** above 5,000 and 10,000 cfs would increase. ***Stream length*** would decrease. ***Area of exposed sediment*** would decrease. ***Area of vegetation coverage*** would decrease. ***Number of vegetated polygons*** would decrease. ***Riparian vegetation*** would be as described for No Action.	Impacts would be as described for No Action.
Wetlands	***Wetlands in the reservoir*** along the shoreline would remain as at present. ***Wetlands around the reservoir*** would remain at about 376 ac. ***District wetlands*** would remain at about 794 ac. ***Riparian wetlands*** along the river would remain at about 2,085 ac.	***Wetlands in the reservoir*** would be replaced by a sequence of shallow-marsh wetlands, then flood plain wetlands, and finally riparian wetlands. ***Wetlands around the reservoir*** would be as described for No Action. ***District wetlands*** would change from permanent to seasonal or be lost altogether. ***Riparian wetlands*** would experience no net loss.	***Wetlands in the reservoir*** could be increased if saved water were devoted to storage. ***Wetlands around the reservoir*** would be as described for No Action. ***District wetlands*** would be decreased by reduced return flows and seepage. ***Riparian wetlands*** could increase if saved water were devoted to river flows.	Impacts would be as described for No Action.

Table S.1: Impacts of the Alternatives (Continued)

	No Action	Reestablisment of Natural Flows Below the Dam	Improved Efficiencies (Preferred Alternative)	Reservoir Recreation and Fisheries
Fisheries	***Reservoir fishery*** would continue to be limited by fluctuating water elevations affecting the reproductive success of fish. ***River fishery*** would remain as at present. ***Fish health*** would be unaffected.	***Reservoir fishery*** would benefit in the short term due to a stable water elevation, smaller surface area, and shallower depth, but species diversity would diminish in the long term as the reservoir changed into a riverine fishery. ***River fishery*** would be affected by more flood flows and the periodic drying up of the river. ***Fish health*** would be unaffected.	***Reservoir fishery*** could benefit if the saved water were devoted to reservoir storage. ***River fishery*** could benefit if saved water used for downstream flows. ***Fish health*** would be unaffected.	***Reservoir fishery*** would benefit from a stable water elevation, allowing for more fish propagation. ***River fishery*** would be was described for No Action. ***Fish health*** would be unaffected.
Wildlife	***Cottonwood*** recruitment would be limited, depending on land use; trees would continue to age. ***Bird*** species would change to more cavity-nesters as aging cottonwoods provided more cavities for habitat; habitat for tree- and shrub-nesting birds and ground-nesting birds would remain as at present.	***Cottonwood*** recruitment would increase, the riparian area returning to a condition similar to pre-dam some time beyond the 25-year long term, depending on land use; otherwise, trees would continue to age. ***Bird*** species would change to more tree-nesters as replacement cottonwoods provided more habitat; cavity-nesting birds would benefit from aging cottonwoods.	***Cottonwood*** recruitment could increase if saved water were devoted to flood flows. ***Birds*** species would change to more tree-nesters if recruited cottonwoods provided more habitat; otherwise, cavity-nesting birds would benefit from aging cottonwoods.	Impacts would be as described for No Action.
Threatened or Endangered Species	***Federal threatened or endangered species*** would not be adversely affected. ***State threatened, endangered, or rare plants and animals*** would not be adversely affected.	***Federal threatened or endangered species*** would not be adversely affected. ***State threatened, endangered, or rare plants and animals*** would not be adversely affected; the Baird's sparrow, short-horned lizard, Ottoe skipper butterfly, burrowing owl, and Brewer's sparrow would benefit as ungrazed grasslands spread with elimination of irrigation.	***Federal threatened or endangered species*** would not be adversely affected. ***State threatened, endangered, or rare plants and animals*** would not be adversely affected.	***Federal threatened or endangered species*** would not be adversely affected. ***State threatened, endangered, or rare plants and animals*** would not be adversely affected; the spiny softshell turtle would be benefitted by stabilizing water elevations in the reservoir.

Table S.1: Impacts of the Alternatives (Continued)

	No Action	Reestablisment of Natural Flows Below the Dam	Improved Efficiencies (Preferred Alternative)	Reservoir Recreation and Fisheries
Social and Economic Conditions	***Irrigated agriculture*** in the District would continue to generate about $525,000 annually (for 10,000 ac.) in benefits to the Nation, $1.16 million in household income from all sectors, $540,000 in agricultural income, and 47 jobs. ***Recreation*** visits at the reservoir would continue to be about 271,100 visitor days annually (for 10,000 ac. to min. el. 3163 ft.), translating into about $7.08 million in annual benefits, regional economic recreation-associated impacts of about $1.2 million, and 92 jobs. ***Reservation*** economic conditions would remain at the same relatively high level of unemployment and low income as at present. ***Ecological benefits/costs*** would be neutral, as No Action would have no effect on the State's endangered, threatened, or rare plants and animals.	***Irrigated agriculture*** loss would reduce regional economic impacts from agricultural production about $2.02 million in final demand, total industry output $2.32 million, total regional household from all sectors $1.16 million, agricultural income $540,000, and cost 47 jobs. ***Recreation*** visits at the reservoir would decline by 83,100 annually, resulting in losses of $2.17 million in benefits. ***Reservation*** economic conditions could be positively affected if water were applied to beneficial uses like irrigation for subsistence farming or commercial agriculture, and downstream recreational benefits might also accrue. These economic activities could generate direct employment income and overall economic improvement to the Reservation; negative impacts could also occur to the extent of some losses of secondary spending on the Reservation from lost agricultural- and recreational-related income; net impacts cannot be estimated with any certainty. ***Ecological benefits/costs*** would be positive, as this alternative would benefit five of the State's endangered, threatened, or rare plants and animals.	***Irrigated agriculture*** would increase slightly due to less likelihood of water shortages (for 10,000 ac. to min. el. 3163); otherwise impacts would be as described for No Action. ***Recreation*** visits would annually increase from 11,800 (for 10,000 irrigated ac. to min. el. 3163 ft.) to 14,600 (10,000 ac to min. el. 3184 ft.), resulting in gains of $207,000 to $382,000 in benefits. ***Reservation*** economic conditions would be as described for No Action. ***Ecological benefits/costs*** would be as described for No Action.	***Irrigated agriculture*** benefits would be as described for No Action if there were irrigation in this alternative; the increased possibility of water shortages would have an adverse effect, but impacts on benefits and the regional economy would be much smaller than in the Reestablishment Alternative; if there were no irrigation, the effects would be as described for the Reestablishment Alternative. ***Recreation*** visits would annually increase by 4,000 (for 10,000 irrigated ac. to min. el. 3170 ft.), resulting in gains of $104,000. ***Reservation*** economic conditions would be as described for No Action. ***Ecological benefits/costs*** would be positive, as the alternative would benefit one of the State's endangered, threatened, or rare plants and animals.
Indian Trust Assets	***Reserved Indian water rights*** settlement under the Winters Doctrine could affect water available from the Angostura Unit. ***Culturally important plants,*** the American plum, common chokecherry, and buffalo-berry would not be affected. ***Fishery*** The Cheyenne River fishery would be unaffected and the Tribes would retain fishing rights.	***Reserved Indian water rights*** settlement under the Winters Doctrine could be simplified by elimination of irrigation. ***Culturally important plants*** would be as described for No Action. ***Fishery*** would be as described for No Action.	Impacts would be as described for No Action.	Impacts would be as described for No Action.
Environmental Justice	This alternative would not place an undue burden on any low-income or minority population.	Impacts would be as described for No Action.	Impacts would be as described for No Action.	Impacts would be as described for No Action.

Table S.1: Impacts of the Alternatives (Continued)

	No Action	Reestablisment of Natural Flows Below the Dam	Improved Efficiencies (Preferred Alternative)	Reservoir Recreation and Fisheries
Cultural Resources	***Reservoir sites*** (28) would continue to be covered by water, while sites in the 24.2-foot fluctuating shoreline would continue to be affected by inundation, erosion, and exposure, with looting or vandalism possible. ***Flood plain sites*** would be affected by river flows and ice jams. ***District facilities*** eligible for the National Register (National Register of Historic Places) would be maintained.	***Reservoir sites*** covered by water would be exposed, and shoreline sites in the reservoir would be affected by erosion, with looting and vandalism possible. ***Flood plain sites*** would be periodically flooded and exposed as river flows fluctuated, resulting in damage and perhaps destruction. ***District facilities*** eligible for the National Register might be allowed to decay with the elimination of irrigation.	***Reservoir sites*** would be as described for No Action. Flood plain sites would be as described for No Action. ***District facilities*** improvement might affect eligibility for the National Register.	***Reservoir sites*** would be as described for No Action, except the fluctuating shoreline zone would be reduced to 17.2 feet, resulting in fewer sites being exposed to erosion and possible looting and vandalism. ***Flood plain sites*** would be as described for No Action. ***District facilities*** would be as described for No Action.
Paleontological Resources	***Reservoir sites*** in the fluctuating 24.2 foot shoreline would continue to be subject to erosion and possible looting or vandalism. ***Flood plain sites*** would continue to be affected by river flows and ice dams.	***Reservoir sites*** above el. 3157 ft would be exposed, and shoreline sites would be affected by erosion, with looting and vandalism possible. ***Flood plain sites*** would continue to be affected by river flows and ice jams.	***Reservoir sites*** would be as described for No Action, except that construction to improve District facilities would cause ground disturbances, perhaps affecting sites. ***Flood plain sites*** would be as described for No Action.	***Reservoir sites*** would be as described for No Action, except the fluctuating shoreline would be reduced to 17.2 feet, resulting in fewer sites being exposed to possible looting and vandalism. ***Flood plain sites*** would be as described for No Action.