

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. (The unit includes the dam, reservoir and irrigation facilities.) 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 supplies.

Reclamation is required to renegotiate a 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 and benefits fish and wildlife in the area.

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 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 fig. 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.

After a 60-day review of this draft EIS, a final EIS will be prepared from comments received from the public, Tribes, and from other agencies. Thirty days after publication of the final EIS, a *Record of Decision* will detail Reclamation's final course of action on the

contract and on management of water of the unit.

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

BACKGROUND

For the purpose of this EIS, the Angostura area was considered to be the Cheyenne River drainage from just above Angostura Reservoir to the joining of the Cheyenne River with the Missouri River about 275 river miles downstream (fig. 1.1).

The Cheyenne River rises in the high plains of Wyoming. 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, about 30 miles south of Rapid City, with a population of 4,300, is the town nearest Angostura Reservoir.

Angostura Reservoir itself is about 17 miles long, with another 7.6 miles extending along Horsehead Creek. Total surface area is 4,612 acres at water elevation 3187.2 feet. The east shore is a South Dakota State Recreational Area, with campgrounds, boat ramps, marina, cabin area, day-use areas, and swimming beaches. Recreation totaled 290,769 visitor-days in 1996.

ALTERNATIVES

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

! The *No Action Alternative* would entail no change in the water service contract beyond those required by law and no change in management of water. Up to a maximum of 12,218 acres in the District would be irrigated for the 25-year duration of the new contract (with 10,000 acres irrigated on average). Recreation and fisheries would continue to be secondary to irrigation. Reservoir storage would average from 65,900-71,700 AF (acre-feet) at elevation 3163 feet (depending on the irrigated acreage), while elevations would average from 3180.3-3182.1 feet. Annual releases to the river would average 55.1- 46.4 cfs (cubic feet/second). Irrigation would continue to generate about \$525,000 annually in benefits to the nation. Reservoir recreation would continue to average 271,100 visitors-days annually, translating to about \$7.08 million in benefits.

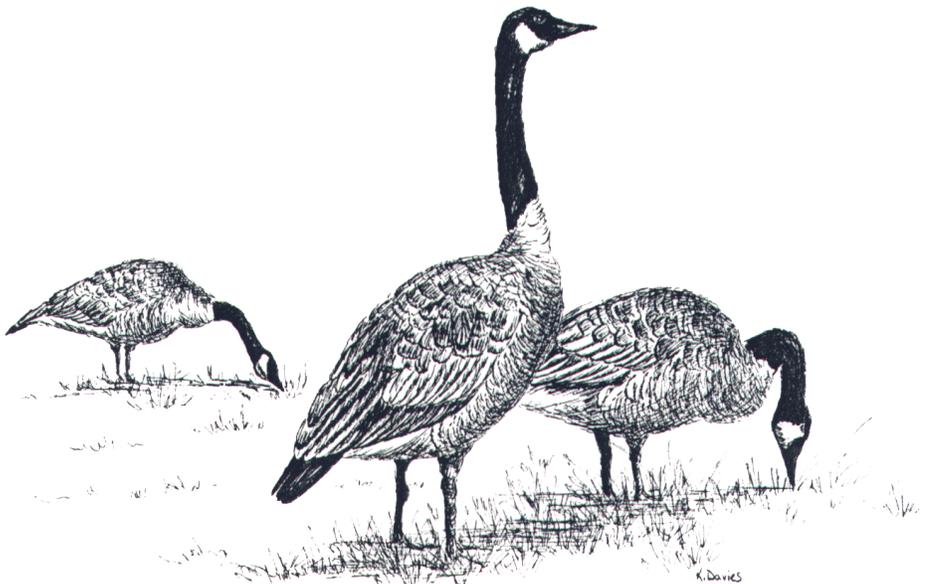
! The *Reestablishment of Natural Flows Below the Dam Alternative* would re-establish natural flows as nearly as possible in the river downstream of the dam (stock dams upstream of the reservoir, groundwater pumping, and changes in farming practices in the area make complete reestablishment impossible). No contract would be

signed with the District, so no water would be available from the Angostura Unit for irrigation: The dam's 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 in comparison to No Action. Annual releases to the river would more than double to an average of 120.7 cfs. Low flows in the river would be more frequent and the river could periodically dry up. About \$525,000 in irrigation benefits would be lost to the nation annually. Economic conditions on the Pine Ridge Reservation might be affected by economic losses in the area, or they could improve if increased river flows were used to create income and jobs. 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* would increase efficiency of the District's water delivery system and on-farm efficiencies. Reclamation would establish a public process to determine the best use of the saved water. It 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 (for 12,218 or 10,000 irrigated acres), while elevations would average from 3182.2-3183.6 feet. Annual releases to the river would average 68.9- 76.3 cfs. Reservoir storage and elevations and releases to the river would be greater than in comparison to No Action. Irrigation benefits would increase slightly due to less likelihood of water shortages in this alternative. Recreation would increase from about 11,800-14,600 visitor-days annually, resulting in an extra \$207,000-\$382,000 in benefits. Legislation to change the Flood Control Act would be required and special legislation might be needed if the authorized water uses of the unit were changed.

! The *Reservoir Recreation and Fisheries Alternative* would give priority to recreation and fisheries in the reservoir. 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 in No Action, elevations would be higher to maintain a larger water surface area, make as many boat ramps available as possible, help fish propagation, and to establish beaches. Water conservation would be instituted to minimize drawdown when the reservoir dropped below elevation 3173.0 feet. Annual releases to the river would average 62.3- 70 cfs, slightly more than in No Action. Irrigation would be adversely affected by the greater likelihood of water shortages, but recreation would increase by about 4,000 visitor-days annually, resulting in an extra \$104,000 in benefits. 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 O&M (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 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, and from computer models, and studies initiated specifically for this EIS. Details on how data was collected for the environmental factors can be found in Chapter Three.

ENVIRONMENTAL IMPACTS

Impacts of the alternatives are outlined in Table S.1. Impacts were arranged around *indicators*, measurements that indicate changes. Chapter Four details the impacts shown in the table.

Table S.1: Impacts of the Alternatives

	No Action	Reestablishment of Natural Flows Below the Dam	Improved Efficiencies	Reservoir Recreation and Fisheries
Surface Water Quantity	<p><i>Annual average reservoir EOM (end-of-month) contents</i> 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;</p> <p><i>Annual average releases to the District</i> would range from 55.1 cfs to 46.4 cfs and would be available 93% of the 45-year period of analysis;</p> <p><i>Annual average releases to the river</i> 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;</p> <p><i>Accretion and irrigation return flows</i> would range from a combined 66 to 62 cfs.</p>	<p><i>Annual average reservoir EOM storage</i> would be 13,300 AF at EOM elevation 3158.9 feet;</p> <p><i>No releases</i> would be made to the District;</p> <p><i>Annual average releases to the river</i> would be 120.7 cfs, with flows at Buffalo Gap of 158.5 cfs;</p> <p><i>Accretion flows</i> would be 36 cfs but there would be no return flows.</p>	<p><i>Annual average reservoir EOM storage</i> 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;</p> <p><i>Annual average releases to the District</i> would range from 45.7 to 37.7 cfs and would be available from 93 to 100% of the period;</p> <p><i>Annual average releases to the river</i> would range from 68.9 cfs to 76.3 cfs, with flows at Buffalo Gap ranging from 129.6 to 132.7 cfs;</p> <p><i>Accretion and return flows</i> would range from a combined 60.7 cfs to 56.4 cfs.</p>	<p><i>Annual average reservoir EOM storage</i> 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;</p> <p><i>Annual average releases to the District</i> would range from 53.5 to 45.3 cfs, and would be available from 82 to 93% of the period;</p> <p><i>Annual average releases to the river</i> would range from 62.3 to 70.0 cfs, with flows at Buffalo Gap ranging from 127.2 to 130.5 cfs;</p> <p><i>Accretion and return flows</i> would be as described for the No Action Alternative.</p>
Surface Water Quality	<p><i>Eutrophication index</i> would be 4.539, 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 (for 12,218 ac.) to 0.57 grams/m²/year (10,000 ac.);</p> <p><i>Annual average TDS in the reservoir</i> would range from 1,750 (10,000 ac) to 1,770 mg/L (12,218 ac.);</p> <p><i>Annual average TDS in the river</i> would be 1,890 mg/L at Buffalo Gap, 1,340 (10,000 ac.) to 1,350 mg/L (12,218 ac.) at Cherry Creek.</p>	<p><i>Eutrophication index</i> 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;</p> <p><i>Annual average TDS in the reservoir</i> would be 1,930 mg/L;</p> <p><i>Annual average TDS in the river</i> would be 1,860 mg/L at Buffalo Gap, 1,280 mg/L at Cherry Creek.</p>	<p><i>Eutrophication indices</i> 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;</p> <p><i>Annual average TDS in the reservoir</i> would range from 1,720 to 1,740 mg/L;</p> <p><i>Annual average TDS in the river</i> would range from 1,880 to 1,890 mg/L at Buffalo Gap, 1,320 to 1,330 mg/L at Cherry Creek.</p>	<p><i>Eutrophication index</i> 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;</p> <p><i>Annual average TDS in the reservoir</i> would be 1,750 mg/L;</p> <p><i>Annual average TDS in the river</i> would be 1,890 mg/L at Buffalo Gap, 1,340 mg/L at Cherry Creek.</p>
Groundwater	<p><i>Quantities</i> in the shallow wells and springs in the area would remain as at present;</p> <p><i>TDS</i> in groundwater would range from 1,380 to 1,670 mg/L as at present.</p>	<p><i>Quantities</i> in shallow wells and springs would be affected as return flows were eliminated;</p> <p><i>TDS</i> in groundwater would probably improve since return flows would be eliminated.</p>	<p><i>Quantities</i> in shallow wells and springs would experience some changes, since return flows would be reduced;</p> <p><i>TDS</i> in groundwater would be as described for No Action.</p>	<p><i>Quantities</i> would be as described for No Action.</p> <p><i>TDS</i> would be as described for No Action.</p>

	No Action	Reestablishment of Natural Flows Below the Dam	Improved Efficiencies	Reservoir Recreation and Fisheries
Sediment	<p><i>Quantities</i> of sediment in the reservoir would total 91,605 AF by 2042, a loss of 57% of original capacity; <i>Quality</i> of sediment would remain as at present—uranium near the dam was 5.8 mg/L, slightly exceeding the upper confidence level, and 17.8 mg/L at an off-river site.</p>	<p><i>Quantities</i> of sediment would fill the reservoir to elevation 3157.2 feet by 2021; <i>Quality</i> would be as described for No Action, except more sediment would pass through the reservoir to the river.</p>	<p><i>Quantities</i> of sediment would be as described for No Action; <i>Quality</i> would be as described for No Action.</p>	<p><i>Quantities</i> of sediment would be as described for No Action; <i>Quality</i> would be as described for No Action.</p>
Stream Corridor	<p><i>Annual flows in the river</i> would remain about 60.2-68.4 cfs; <i>Peak flows in the river</i> 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; <i>Stream length</i> would remain at about 199 miles; <i>The area of exposed sediment</i> would remain at about 7,156 ac; <i>Area of vegetation coverage</i> would remain at about 22,997 ac; <i>Number of vegetated polygons</i> would remain at about 1,113; <i>Riparian vegetation</i> 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.</p>	<p><i>Annual flows</i> would increase, restructuring the river channel; <i>Peak flows</i> above 5,000 and 10,000 cfs would increase; <i>Stream length</i> would decrease; <i>Area of exposed sediment</i> would increase; <i>Area of vegetation coverage</i> would decrease; <i>Number of vegetated polygons</i> would decrease; <i>Riparian vegetation</i> would change to mirror pre-dam conditions some time beyond the end of the period of analysis.</p>	<p><i>Annual flows</i> would increase, slightly restructuring the river channel; <i>Peak flows</i> above 5,000 and 10,000 cfs would increase; <i>Stream length</i> would increase; <i>Area of exposed sediment</i> would decrease; <i>Area of vegetation coverage</i> would decrease; <i>Number of vegetated polygons</i> would decrease; <i>Riparian vegetation</i> would be as described for No Action.</p>	<p>Impacts would be as described for No Action.</p>
Wetlands	<p><i>Wetlands in the reservoir</i> along the shoreline would remain as at present; <i>Wetlands around the reservoir</i> would remain at about 376 ac; <i>District wetlands</i> would remain at about 794 ac; <i>Riparian wetlands</i> along the river would remain at about 2,085 ac.</p>	<p><i>Wetlands in the reservoir</i> would be replaced by a sequence of shallow-marsh wetlands, then floodplain wetlands, and finally riparian wetlands; <i>Wetlands around the reservoir</i> would be as described for No Action; <i>District wetlands</i> would change from permanent to seasonal or be lost altogether; <i>Riparian wetlands</i> would experience no net loss;</p>	<p><i>Wetlands in the reservoir</i> could be increased if saved water were devoted to storage; <i>Wetlands around the reservoir</i> would be as described for No Action; <i>District wetlands</i> would be decreased by reduced return flows and seepage; <i>Riparian wetlands</i> could increase if saved water were devoted to river flows.</p>	<p>Impacts would be as described for No Action.</p>

	No Action	Reestablishment of Natural Flows Below the Dam	Improved Efficiencies	Reservoir Recreation and Fisheries
Fisheries	<p><i>Reservoir fishery</i> would continue to be limited by fluctuating water elevations affecting the reproductive success of fish;</p> <p><i>River fishery</i> would remain as at present;</p> <p><i>Fish health</i> would be unaffected.</p>	<p><i>Reservoir fishery</i> 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;</p> <p><i>River fishery</i> would be affected by more flood flows and the periodic drying up of the river;</p> <p><i>Fish health</i> would be unaffected.</p>	<p><i>Reservoir fishery</i> could benefit if the saved water were devoted to reservoir storage;</p> <p><i>River fishery</i> would be as described for No Action;</p> <p><i>Fish health</i> would be unaffected.</p>	<p><i>Reservoir fishery</i> would benefit from a stable water elevation, allowing for more fish propagation;</p> <p><i>River fishery</i> would be as described for No Action;</p> <p><i>Fish health</i> would be unaffected.</p>
Wildlife	<p><i>Cottonwood</i> recruitment would be limited, depending on land use; trees would continue to age;</p> <p><i>Bird</i> 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.</p>	<p><i>Cottonwood</i> recruitment would increase, the riparian area returning to a condition similar to pre-dam some time beyond 25 years in the future, depending on land use; otherwise, trees would continue to age;</p> <p><i>Bird</i> species would change to more tree-nesters as replacement cottonwoods provided more habitat; cavity-nesting birds would benefit from aging cottonwoods.</p>	<p><i>Cottonwood</i> recruitment could increase if saved water devoted to flood flows;</p> <p><i>Birds</i> species would change to more tree-nesters if recruited cottonwoods provided more habitat; otherwise, cavity-nesting birds would benefit from aging cottonwoods.</p>	<p>Impacts would be as described for No Action.</p>
Threatened or Endangered Species	<p><i>Federal threatened or endangered species</i> would not be adversely affected; <i>State threatened, endangered, or rare plants and animals</i> would not be adversely affected.</p>	<p><i>Federal threatened or endangered species</i> would not be adversely affected; <i>State threatened, endangered, or rare plants and animals</i> would not be adversely affected; the Baird's sparrow, short-horned lizard, and Ottoo skipper butterfly would benefit as ungrazed grasslands spread with elimination of irrigation.</p>	<p><i>Federal threatened or endangered species</i> would not be adversely affected; <i>State threatened, endangered, or rare plants and animals</i> would not be adversely affected.</p>	<p><i>Federal threatened or endangered species</i> would not be adversely affected; <i>State threatened, endangered, or rare plants and animals</i> would not be adversely affected; the spiny softshell turtle would be benefitted by stabilizing water elevations in the reservoir.</p>

	No Action	Reestablishment of Natural Flows Below the Dam	Improved Efficiencies	Reservoir Recreation and Fisheries
Social and Economic Conditions	<p><i>Irrigated agriculture</i> 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;</p> <p><i>Recreation</i> 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;</p> <p><i>Reservation</i> economic conditions would remain at the same relatively high level of unemployment and low income as at present.</p>	<p><i>Irrigated agriculture</i> 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.</p> <p><i>Recreation</i> visits at the reservoir would decline by 83,100 annually, resulting in losses of \$2.17 million in benefits;</p> <p><i>Reservation</i> economic conditions might be adversely affected by loss of income and jobs in agriculture and recreation to the extent that income from these sectors affects the Reservation; river flows could positively affect the Reservation if the water were used for beneficial uses to generate income and employment.</p>	<p><i>Irrigated agriculture</i> 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;</p> <p><i>Recreation</i> 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;</p> <p><i>Reservation</i> economic conditions would be as described for No Action.</p>	<p><i>Irrigated agriculture</i> 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;</p> <p><i>Recreation</i> visits would annually increase by 4,000 (for 10,000 irrigated ac. to min. el. 3170 ft.), resulting in gains of \$104,000;</p> <p><i>Reservation</i> economic conditions would be as described for No Action.</p>
Indian Trust Assets	<p><i>Reserved water rights</i> settlement between the State and the Oglala Sioux Tribe could affect water available from the Angostura Unit;</p> <p><i>Culturally Important Plants</i>, the American plum, common chokecherry, and buffaloberry would not be affected;</p> <p><i>Fishery</i> The Cheyenne River fishery would be unaffected and the Tribes would retain fishing rights.</p>	<p><i>Reserved water rights</i> settlement between the State and the Oglala Sioux Tribe could be simplified by elimination of irrigation;</p> <p><i>Culturally Important Plants</i> would be as described for No Action;</p> <p><i>Fishery</i> would be as described for No Action.</p>	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.	This alternative would have a negative economic impact on the District; it could benefit the Oglala Sioux Tribe if the water were used for beneficial uses.	Impacts would be as described for No Action.	Impacts would be as described for No Action.
Cultural Resources	<p><i>Reservoir sites</i> (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;</p> <p><i>Floodplain sites</i> would be affected by river flows and ice jams;</p> <p><i>District facilities</i> eligible for the National Register of Historic Places would be maintained.</p>	<p><i>Reservoir sites</i> covered by water would be exposed, and shoreline sites in the would be affected by erosion, with looting and vandalism possible;</p> <p><i>Floodplain sites</i> would be periodically flooded and exposed as river flows fluctuated, resulting in damage and perhaps destruction;</p> <p><i>District facilities</i> eligible for the National Register might be allowed to decay with the elimination of irrigation.</p>	<p><i>Reservoir sites</i> would be as described for No Action;</p> <p><i>Floodplain sites</i> would be as described for No Action;</p> <p><i>District facilities</i> improvement might affect eligibility for the National Register.</p>	<p><i>Reservoir sites</i> 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.</p> <p><i>Floodplain sites</i> would be as described for No Action;</p> <p><i>District facilities</i> would be as described for No Action.</p>

	No Action	Reestablishment of Natural Flows Below the Dam	Improved Efficiencies	Reservoir Recreation and Fisheries
Paleontological Resources	<p><i>Reservoir sites</i> in the fluctuating 24.2 foot shoreline would continue to be subject to erosion and possible looting or vandalism; <i>Floodplain sites</i> would continue to be affected by river flows and ice dams.</p>	<p><i>Reservoir sites</i> above el. 3157 ft would be exposed, and shoreline sites would be affected by erosion, with looting and vandalism possible; <i>Floodplain sites</i> would continue to be affected by river flows and ice jams.</p>	<p><i>Reservoir sites</i> would be as described for No Action, except that construction to improve District facilities would cause ground disturbances, perhaps affecting sites. <i>Floodplain sites</i> would be as described for No Action.</p>	<p><i>Reservoir sites</i> 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; <i>Floodplain sites</i> would be as described for No Action.</p>