RECLAMATION Managing Water in the West

FINDING OF NO SIGNIFICANT IMPACT, DECISION AND ENVIRONMENTAL ASSESSMENT

WATER SERVICE CONTRACT RENEWAL FOR DOUGLAS S. and MICHELLE C. HAMILTON AND WADE W. JACOBSEN

BOYSEN UNIT
PICK-SLOAN MISSOURI BASIN PROGRAM





Department of the Interior Bureau of Reclamation Wyoming Area Office Mills, Wyoming

November 2014

MISSION STATEMENTS

Department of the Interior

The mission of the Department of the Interior is to protect and provide access to our Nation's natural and cultural heritage and honor our trust responsibilities to Indian Tribes and our commitments to island communities.

Bureau of Reclamation

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

FINDING OF NO SIGNIFICANT IMPACT

WATER SERVICE CONTRACT RENEWAL for DOUGLAS S. and MICHELLE C. HAMILTON and WADE W. JACOBSEN

BOYSEN UNIT
PICK-SLOAN MISSOURI BASIN PROGRAM

FONSI # <u>WY-4000-15-01</u>



Department of the Interior Bureau of Reclamation Great Plains Region Wyoming Area Office

November 2014

FINDING OF NO SIGNIFICANT IMPACT

WATER SERVICE CONTRACT RENEWAL for DOUGLAS S. and MICHELLE C. HAMILTON and WADE W. JACOBSEN

FONSI # WY-4000-15-01

PROPOSED ACTION

Reclamation is proposing to renew long-term water service contracts with Douglas S. and Michelle C. Hamilton and Wade W. Jacobsen (collectively referred to as the Contractors).

BACKGROUND

In 1973, the Bureau of Reclamation (Reclamation) entered into Contract No. 14-06-600-964A with Vernon E. Bower, which was transferred to TD Farms, Inc., in 2008, and to Douglas S. and Michelle C. Hamilton in 2011. Also in 1973, Reclamation entered into Contract No. 14-06-600-843A with Floyd and Ruth Kleinschmidt, which was transferred to Elmer and Ester Nelson in 1974, transferred to Dan and Alecka Madden in 2007, and transferred to Wade Jacobsen in 2012. Each contract provided for supplemental water service from storage in Boysen Reservoir and contained a provision which provided for the renewal of the contracts with terms and conditions mutually agreeable to the parties at the time of renewal.

Under the proposed alternative, there would be no change in method of operations. Existing delivery facilities will be used with no modifications and no land use changes are proposed. Historically, the Hamilton's have been allowed to divert up to 94 acre-feet of supplemental irrigation water from Boysen storage for the irrigation of 35.4 acres, and the Jacobsen's have been allowed to divert up to 750 acre-feet for the irrigation of 250 acres. The proposed alternative would allow each contract to be renewed for a 40-year term.

Appropriate water service charges will be established in the contract. The negotiable water service charges will be calculated on a per acre-foot basis. In addition, each Contractor will pay an annual billing and accounting charge, and an annual amount on a per acre-foot basis for operation, maintenance and replacement (OM&R) costs of Boysen Dam and Reservoir allocated to irrigation. Each Contractor is obligated to make the above payments annually regardless of the amount of water actually used by the Contractor.

This alternative is the proposed alternative and consistent with the Reclamation Project Act of 1939 Section 9(e) which permits Reclamation to enter into a contract to furnish water for irrigation purposes at such rates which "will produce revenues at least sufficient to cover an appropriate share of the annual O&M cost and an appropriate share of such fixed charges..." and the Act of July 2, 1956, which provides for the renewal of water service contracts entered into under Section 9(e) of the Reclamation Project Act of 1939.

DECISION

Based on the analysis presented in the environmental assessment, Reclamation concludes that a Finding of No Significant Impact (FONSI) is appropriate and an environmental impact statement is not needed because:

- 1. Renewing the contracts result only in administrative or financial changes. Water service contract renewals will not affect Contractor or Reclamation operations.
- 2. Contract renewals will not change the hydrology, quantity and/or timing of the supplemental water supply for irrigation. Each Contractor would continue to use supplemental storage water from Boysen Reservoir as that supplemental storage water which has been used historically.
- 3. Contract renewals would not change current conditions for land use, vegetation, fish and wildlife, threatened or endangered species, and cultural resources.
- 4. Climate change is not anticipated to affect water service obligations. Should the regional (basin) climate measurably or noticeably change under the proposed alternative, Reclamation and the Contractors will adapt to the change.
- 5. Environmental justice issues have not been identified regarding this water service contract renewal in the area or within the Contractor acreage.
- 6. Contract renewals will not affect tribal water rights or other Indian Trust Assets. These contract renewals are subject to the future development of Native American Reserved Water Rights and may be terminated should the Secretary of the Interior or judicial decisions determine that it infringes on such rights.

Approved:

Carlie Ronca

Wyoming Area Manager

Date

ENVIRONMENTAL ASSESSMENT

WATER SERVICE CONTRACT RENEWAL for DOUGLAS S. and MICHELLE C. HAMILTON and WADE W. JACOBSEN,

BOYSEN UNIT PICK-SLOAN MISSOURI BASIN PROGRAM



U.S. Department of the Interior Bureau of Reclamation Great Plains Region Wyoming Area Office Mills, Wyoming

November 2014

TABLE OF CONTENTS

Purpose and Need Background and Location Authority 2. Alternatives Proposed Alternative: Renew Water Service Contracts with Changes in Contract Articles 5. Proposed Environment and Environmental Consequences 6. Hydrology 6. Socioeconomics 6. Land Use 7. Vegetation 7. Fish and Wildlife 8. Threatened and Endangered Species 9. Cultural Resources 10. Indian Trust Assets 11. Climate Change 15. Consultation and Coordination 16. Literature Cited Figure 2. General location area of Hamilton lands Figure 2. General location area of Jacobsen lands 5. List of Attachments Attachment A. U.S. Fish and Wildlife Service "List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project location and location and location and location and location and location	1. Introduction	n	1
Authority 2. Alternatives 5 Proposed Alternative: Renew Water Service Contracts with Changes in Contract Articles 5 3. Existing Environment and Environmental Consequences 6 Hydrology 6 Socioeconomics 6 Land Use 8 Vegetation 8 Fish and Wildlife 8 Threatened and Endangered Species 9 Cultural Resources 10 Indian Trust Assets 14 Climate Change 15 4. Consultation and Coordination 16 Literature Cited Figures Figure 1. General location area of Hamilton lands 4 Figure 2. General location area of Jacobsen lands 5 List of Attachments Attachment A. U.S. Fish and Wildlife Service "List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project location, and/or may be affected by your proposed project rothe Hamilton and Jacobsen Lands Attachment B. Environmental Commitments Attachment C. Laws, Regulations, and Executive Orders Associated with the Douglas S. and Michelle C. Hamilton, and Wade W. Jacobsen			
2. Alternatives	Backgr	ound and Location	1
2. Alternatives			
Contract Articles 5 3. Existing Environment and Environmental Consequences 6 Hydrology 6 Socioeconomics 6 Land Use 8 Vegetation 8 Fish and Wildlife 8 Threatened and Endangered Species 9 Cultural Resources 10 Indian Trust Assets 14 Climate Change 15 4. Consultation and Coordination 16 Literature Cited Figure 2. General location area of Hamilton lands 4 Figure 2. General location area of Jacobsen lands 5 List of Attachments Attachment A. U.S. Fish and Wildlife Service "List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project location, and/or may be affected by your proposed project location, and/or may be affected by your proposed project location, and/or may be affected by your proposed project location, and/or may be affected by your proposed project location, and/or may be affected by your proposed project location, and/or may be affected by your proposed project Lambert B. Environmental Commitments Attachment B. Environmental Commitments Attachment C. Laws, Regulations, and Executive Orders Associated with the Douglas S. and Michelle C. Hamilton, and Wade W. Jacobsen			
Contract Articles 5 3. Existing Environment and Environmental Consequences 6 Hydrology 6 Socioeconomics 6 Land Use 8 Vegetation 8 Fish and Wildlife 8 Threatened and Endangered Species 9 Cultural Resources 10 Indian Trust Assets 14 Climate Change 15 4. Consultation and Coordination 16 Literature Cited Figure 2. General location area of Hamilton lands 4 Figure 2. General location area of Jacobsen lands 5 List of Attachments Attachment A. U.S. Fish and Wildlife Service "List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project location, and/or may be affected by your proposed project location, and/or may be affected by your proposed project location, and/or may be affected by Service "List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project location, and/or may be affected by Service "Compared the Hamilton and Jacobsen Lands Attachment B. Environmental Commitments Attachment C. Laws, Regulations, and Executive Orders Associated with the Douglas S. and Michelle C. Hamilton, and Wade W. Jacobsen			
3. Existing Environment and Environmental Consequences 6 Hydrology 6 Socioeconomics 6 Land Use 8 Vegetation 8 Fish and Wildlife 8 Threatened and Endangered Species 9 Cultural Resources 10 Indian Trust Assets 14 Climate Change 15 4. Consultation and Coordination 16 Literature Cited Figure S Figure 1. General location area of Hamilton lands 4 Figure 2. General location area of Jacobsen lands 5 List of Attachments Attachment A. U.S. Fish and Wildlife Service "List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project location, and/or may be affected by your proposed project he Hamilton and Jacobsen Lands Attachment B. Environmental Commitments Attachment C. Laws, Regulations, and Executive Orders Associated with the Douglas S. and Michelle C. Hamilton, and Wade W. Jacobsen	•	ullet	5
Hydrology 6 Socioeconomics 6 Land Use 8 Vegetation 8 Fish and Wildlife 8 Fish and Wildlife 9 Cultural Resources 10 Indian Trust Assets 14 Climate Change 15 Consultation and Coordination 16 Literature Cited Figure 1. General location area of Hamilton lands 16 Literature Cited Figure 2. General location area of Jacobsen lands 5 List of Attachments Attachment A. U.S. Fish and Wildlife Service "List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project rothe Hamilton and Jacobsen Lands Attachment B. Environmental Commitments Attachment C. Laws, Regulations, and Executive Orders Associated with the Douglas S. and Michelle C. Hamilton, and Wade W. Jacobsen			
Socioeconomics 6 Land Use 8 Vegetation 8 Fish and Wildlife 8 Threatened and Endangered Species 9 Cultural Resources 10 Indian Trust Assets 14 Climate Change 15 4. Consultation and Coordination 16 Literature Cited Figures Figure 1. General location area of Hamilton lands 4 Figure 2. General location area of Jacobsen lands 5 List of Attachments Attachment A. U.S. Fish and Wildlife Service "List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project location, and/or may be affected by your proposed project the Hamilton and Jacobsen Lands Attachment B. Environmental Commitments Attachment C. Laws, Regulations, and Executive Orders Associated with the Douglas S. and Michelle C. Hamilton, and Wade W. Jacobsen	_		
Land Use 8 Vegetation 8 Fish and Wildlife 8 Threatened and Endangered Species 9 Cultural Resources 10 Indian Trust Assets 14 Climate Change 15 4. Consultation and Coordination 16 Literature Cited Figures Figure 1. General location area of Hamilton lands 4 Figure 2. General location area of Jacobsen lands 5 List of Attachments Attachment A. U.S. Fish and Wildlife Service "List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project location, and/or may be affected by your proposed project the Hamilton and Jacobsen Lands Attachment B. Environmental Commitments Attachment C. Laws, Regulations, and Executive Orders Associated with the Douglas S. and Michelle C. Hamilton, and Wade W. Jacobsen			
Vegetation 8 Fish and Wildlife 8 Threatened and Endangered Species 9 Cultural Resources 10 Indian Trust Assets 14 Climate Change 15 4. Consultation and Coordination 16 Literature Cited Figures Figure 1. General location area of Hamilton lands 4 Figure 2. General location area of Jacobsen lands 5 List of Attachments Attachment A. U.S. Fish and Wildlife Service "List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project location, and/or may be affected by your proposed project the Hamilton and Jacobsen Lands Attachment B. Environmental Commitments Attachment C. Laws, Regulations, and Executive Orders Associated with the Douglas S. and Michelle C. Hamilton, and Wade W. Jacobsen			
Fish and Wildlife 8 Threatened and Endangered Species 9 Cultural Resources 10 Indian Trust Assets 14 Climate Change 15 4. Consultation and Coordination 16 Literature Cited Figures Figure 1. General location area of Hamilton lands 4 Figure 2. General location area of Jacobsen lands 5 List of Attachments Attachment A. U.S. Fish and Wildlife Service "List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project location, and/or may be affected by your proposed project the Hamilton and Jacobsen Lands Attachment B. Environmental Commitments Attachment C. Laws, Regulations, and Executive Orders Associated with the Douglas S. and Michelle C. Hamilton, and Wade W. Jacobsen			
Threatened and Endangered Species 9 Cultural Resources 10 Indian Trust Assets 14 Climate Change 15 4. Consultation and Coordination 16 Literature Cited Figures Figure 1. General location area of Hamilton lands 4 Figure 2. General location area of Jacobsen lands 5 List of Attachments Attachment A. U.S. Fish and Wildlife Service "List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project location, and/or may be affected by your proposed project location, and Jacobsen Lands Attachment B. Environmental Commitments Attachment C. Laws, Regulations, and Executive Orders Associated with the Douglas S. and Michelle C. Hamilton, and Wade W. Jacobsen			
Cultural Resources 10 Indian Trust Assets 14 Climate Change 15 4. Consultation and Coordination 16 Literature Cited Figures Figure 1. General location area of Hamilton lands 4 Figure 2. General location area of Jacobsen lands 5 List of Attachments Attachment A. U.S. Fish and Wildlife Service "List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project location, and/or may be affected by your proposed project attachment B. Environmental Commitments Attachment B. Environmental Commitments Attachment C. Laws, Regulations, and Executive Orders Associated with the Douglas S. and Michelle C. Hamilton, and Wade W. Jacobsen			
Indian Trust Assets			
Climate Change			
4. Consultation and Coordination			
Figures Figure 1. General location area of Hamilton lands			
Figure 1. General location area of Hamilton lands			
Figure 1. General location area of Hamilton lands	Literature Cite	<u>ed</u>	
Figure 1. General location area of Hamilton lands			
Figure 2. General location area of Jacobsen lands			
Attachment A. U.S. Fish and Wildlife Service "List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project" for the Hamilton and Jacobsen Lands Attachment B. Attachment B. Environmental Commitments Laws, Regulations, and Executive Orders Associated with the Douglas S. and Michelle C. Hamilton, and Wade W. Jacobsen			
Attachment A. U.S. Fish and Wildlife Service "List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project" for the Hamilton and Jacobsen Lands Attachment B. Attachment C. Environmental Commitments Laws, Regulations, and Executive Orders Associated with the Douglas S. and Michelle C. Hamilton, and Wade W. Jacobsen	Figure 2. Gen	eral location area of Jacobsen lands	5
Attachment A. U.S. Fish and Wildlife Service "List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project" for the Hamilton and Jacobsen Lands Attachment B. Attachment C. Environmental Commitments Laws, Regulations, and Executive Orders Associated with the Douglas S. and Michelle C. Hamilton, and Wade W. Jacobsen			
endangered species that may occur in your proposed project location, and/or may be affected by your proposed project" for the Hamilton and Jacobsen Lands Attachment B. Attachment C. Environmental Commitments Laws, Regulations, and Executive Orders Associated with the Douglas S. and Michelle C. Hamilton, and Wade W. Jacobsen	List of Attach	<u>ments</u>	
endangered species that may occur in your proposed project location, and/or may be affected by your proposed project" for the Hamilton and Jacobsen Lands Attachment B. Attachment C. Environmental Commitments Laws, Regulations, and Executive Orders Associated with the Douglas S. and Michelle C. Hamilton, and Wade W. Jacobsen	Attachment A	U.S. Fish and Wildlife Service "List of threatened and	
location, and/or may be affected by your proposed project" for the Hamilton and Jacobsen Lands Attachment B. Environmental Commitments Attachment C. Laws, Regulations, and Executive Orders Associated with the Douglas S. and Michelle C. Hamilton, and Wade W. Jacobsen	Allacillient A		
Attachment B. Attachment C. Laws, Regulations, and Executive Orders Associated with the Douglas S. and Michelle C. Hamilton, and Wade W. Jacobsen			r
Attachment B. Environmental Commitments Attachment C. Laws, Regulations, and Executive Orders Associated with the Douglas S. and Michelle C. Hamilton, and Wade W. Jacobsen			1
Attachment C. Laws, Regulations, and Executive Orders Associated with the Douglas S. and Michelle C. Hamilton, and Wade W. Jacobsen	Attachment B		
Douglas S. and Michelle C. Hamilton, and Wade W. Jacobsen			
	Allacillient C		
Water Service Contract Renewals		Water Service Contract Renewals	

ENVIRONMENTAL ASSESSMENT WATER SERVICE CONTRACT RENEWAL FOR DOUGLAS S. AND MICHELLE C. HAMILTON AND WADE W. JACOBSEN

1. Introduction

Purpose and Need

This Environmental Assessment (EA) has been prepared to assess the environmental effects of renewing the water service contracts with Douglas S. and Michelle C. Hamilton, and Wade W. Jacobsen (collectively referred to as the Contractors).

In 1973, the Bureau of Reclamation (Reclamation) entered into Contract No. 14-06-600-964A with Vernon E. Bower, which was transferred to TD Farms, Inc., in 2008, and to Douglas S. and Michelle C. Hamilton in 2011. Also in 1973, Reclamation entered into Contract No. 14-06-600-843A with Floyd and Ruth Kleinschmidt, which was transferred to Elmer and Ester Nelson in 1974, transferred to Dan and Alecka Madden in 2007, and transferred to Wade Jacobsen in 2012. Each contract provided for supplemental water service from storage in Boysen Reservoir and contained a provision which provided for the renewal of the contracts with terms and conditions mutually agreeable to the parties at the time of renewal.

The purpose of this action is to renew the long-term contracts which would allow Reclamation to continue to provide water service for irrigation to the Contractors.

Background and Location

The Boysen Unit of the Pick-Sloan Missouri Basin Program is located on the Wind River about 20 miles south of Thermopolis, Wyoming, and consists of Boysen Dam, reservoir and powerplant. The dam and powerplant were constructed between 1947 and 1952 for flood control, power generation, irrigation, recreation, and fish and wildlife. Boysen Reservoir is essential to irrigation in the Wind River Basin above the reservoir and the Bighorn Basin below the reservoir. Water is supplied from Boysen Reservoir via the Bighorn River to downstream water users, and via the Wind River to upstream water users by exchange.

The Boysen Unit was authorized by the Flood Control Act of December 22, 1944, Public Law 534. Boysen Reservoir has a capacity of about 741,594 acre-feet of water at elevation 4725, the top of the joint use pool, and has a water surface area of 19,560 acres. The amount allocated for

active conservation is 378,184 acre-feet; and 144,229 acre-feet is allocated for joint-use flood control storage for a total of 522,413 acre-feet. All of the joint-use space is located between elevation 4717 and 4725 which is the top of the spillway gates when closed.

There are both government and private irrigation districts in the Wind River and Bighorn Basins, as well as private individual irrigators, such as the Contractors. The WYAO has about 28 standing contracts for water service in the Bighorn Basin and also a varying number of temporary water service contracts from year to year. There is over 50,000 AF of water under long term contracts for Boysen Reservoir storage, and a range of 0-16,000 AF for temporary water service contracts for the years 2009-2013.

The physical setting of the Contractors' land is in a semi-arid intermountain desert basin with the elevation of irrigated lands at about 4,200 feet above mean sea level. The Bighorn Basin contains nearly 7,693,000 acres in which 7,189,200 acres are in Wyoming.

The Contractors' lands are primarily gently rolling and sloping lands consisting of soils in the Lostwells soil series. The Lostwells series are deep, well drained soils that formed in alluvium on alluvial terraces and floodplains and are comprised of fine-loamy and sandy clay loam soils.

The interior of the basin receives very little precipitation. The Worland area receives an average of about 7.5 inches of precipitation a year. Precipitation is variable in the basin, averaging about 12 inches at Thermopolis on the south, 9 inches at Cody on the west, 5 inches at Deaver on the north, and 7 inches at Basin on the east. In the mountains, precipitation averages about 30 inches and consists mostly of snow. Snowfall in the basin is relatively light, seldom exceeding a few inches in a storm.

Temperature extremes range from 106°F in the summer to -38°F in the winter with an annual average of about 45°F. The frost free period averages about 125 days and can extend from early May to late September.

Authority

Section 9(e) of the Reclamation Project Act of 1939 provides Reclamation with the authority to enter into water service contracts for irrigation. Section 9(e) states in part "... the Secretary, in his discretion, may enter into either short or long term contract to furnish water for irrigation purposes."



Figure 1. General location area of Hamilton lands.

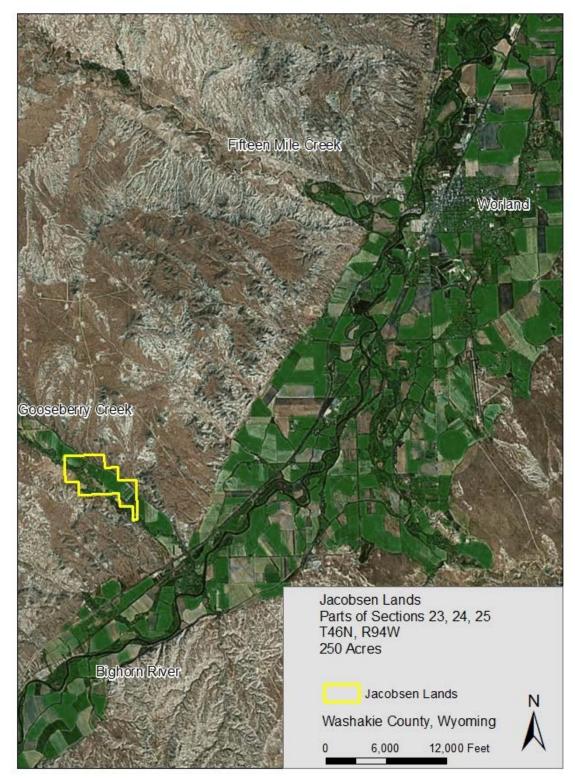


Figure 2. General location area of Jacobsen lands.

2. Alternatives

Proposed Alternative: Renew Water Service Contracts with Changes in Contract Articles

One alternative for each Contractor was considered when preparing this environmental assessment. When provisions specifically for the renewal of a contract are present in the contract, renewal of the contract is a non-discretionary federal action as long as the contractor requested the renewal of the contract. Therefore, the contract renewal is considered a federal non-discretionary action. Since there were provisions in the original contracts which allow for contract renewal, the contracts can be renewed according to terms and conditions mutually agreeable to both parties and according to laws and policies in effect at the time of renewal.

The proposed alternative would allow each contract to be renewed for a 40-year term. New water service contract articles would supersede and replace Articles 1-7 of the existing contract. These articles refer to the water service portion of the new contract regarding the Contractor's water supply obligations. Standard articles (Articles 8-24) in the new contracts are subject to current Reclamation laws and policies in effect at the time of renewal and are not negotiable. These contract renewals are subject to the future development of Native American Reserved Water Rights and may be terminated should the Secretary of the Interior or judicial decisions determine that it infringes on such rights.

Under the proposed alternative, there would be no change in method of operations. Existing delivery facilities would be used with no modifications and no land use changes are proposed. Each Contractor would be allowed supplemental irrigation water of that amount which has been historically delivered to the Contractors, if available, for irrigation. The amount of water that may be delivered to the Contractors in any one year is 94 acre-feet to irrigate 35.4 acres for the Hamilton lands, and 750 acre-feet to irrigate 250 acres for the Jacobsen lands.

Appropriate water service charges would be established in the contracts. The negotiable water service charges would be calculated on a per acre-foot basis. In addition, each Contractor would pay an annual billing and accounting charge, and an annual amount on a per acre-foot basis for operation, maintenance and replacement (OM&R) costs of Boysen Dam and Reservoir allocated to irrigation. Each Contractor is obligated to make the above payments annually regardless of the amount of water actually used by the Contractor.

This alternative was selected as the proposed alternative to meet Reclamation requirements pursuant to the Reclamation Project Act of 1939 Section 9(e) which allows Reclamation to enter into a contract to furnish water for irrigation purposes at such rates which "will produce revenues at least sufficient to cover an appropriate share of the annual O&M cost and an appropriate share of such fixed charges..." and the Act of July 2, 1956, which provides for the renewal of water service contracts entered into under Section 9(e) of the Reclamation Project Act of 1939.

3. Affected Environment and Environmental Consequences

This section addresses the existing environment and the environmental consequences of the proposed alternative. Environmental effects associated with renewing the water service contracts were evaluated.

Hydrology

The Contractors have natural flow water rights on the Bighorn River with beneficial use purposes for irrigation. Currently, the Contractors utilize water from Boysen storage to supplement their natural flow for irrigation. Water is furnished to the Contractors at the outlet works of Boysen Dam for irrigation purposes. The Contractors use transferred works canals to convey water to their lands.

Because the Contractors contract for relatively minor amounts (Hamilton lands, 94 acre-feet, and Jacobsen lands, 750 acre-feet), Reclamation does not perform storage water accounting and assumes the Contractors take their full contract amount each year. This assumption would continue upon contract renewal. The renewal of these contracts would allow each Contractor to divert the amount of supplemental irrigation water provided under the original contracts, such diversions shall not exceed their contracted amounts.

Renewing the contracts would not affect the hydrology, quantity and/or timing of the supplemental water supply for irrigation. Changes from the original contracts are administrative and financial changes only.

Reclamation policy mandates inclusion of water measurement language in all future long- and short-term water service and repayment contracts and amendments of existing contracts. The language in the new contract shall provide for the measurement and reporting of the source and quantity of water for which the Contractors are entitled. The Contractors currently have water measuring devices to measure the quantity of water diverted. The contractors are exempt from preparing water conservation plans as mandated by the Reclamation Reform Act because they are under the 2000 acre threshold set in the Reclamation Manual Directives and Standards WTR 01-01.

Socioeconomics

Hamilton lands are located approximately 10 miles north-northeast of Worland, and the Jacobsen lands are located approximately 8 miles southwest of Worland, Wyoming. Worland is the county seat for Washakie County and has a population of about 5,500. Ten Sleep, the other established town in Washakie County is 26 miles east of Worland and has a population of about 260 people. The economy of the area is based on agriculture and tourism. Ranching, farming, and tourism comprise the foundation of Washakie County's economy.

There was a total of 39,942 acres of cropland in Washakie County according to the 2012 National Agricultural Statistics Service (NASS, 2012). Of these, about 38,426 acres were irrigated. The main crops in Washakie County were forage-land (hay, haylage, grass silage and greenchop), barely for grain, sugar beets for sugar, corn for silage and corn for grain. Crop sales accounted for about \$26,570,000 (51 percent) and livestock sales accounted for \$25,294,000 (49 percent) of the total agricultural market value for the county in 2012. The combined Contractor acreage irrigated with a federal supplemental water supply is about 285.4 acres, approximately 0.7% of the total irrigated acreage for the county.

Since 1973, the Hamilton's have been assessed an annual water service charge of \$122.20 for 94 acre-feet of water, and the Jacobsen's have been assessed \$975 for 750 acre-feet.

Under the proposed alternative, the Contractors would continue to be provided supplemental storage water from Boysen Reservoir in an amount historically delivered, if available, for irrigation.

Each renewed contract would establish the following payments:

- 1) A water service payment;
- 2) An annual OM&R payment; and
- 3) An annual billing and accounting charge

The Contractors would be obligated to make the above payments annually regardless of the amount of water actually used. The amounts established for these costs are not expected to result in a hardship for the Contractors. Each Contractor understands that the government is obligated to receive payment for the cost of providing water to the Contractors. The annual water service charge, OM&R cost, and billing and accounting charge are expected to be reasonable for the Contractors and allow the government to receive payment for the water service provided.

The United States has determined that water is currently available from Boysen Reservoir to provide the Contractor's water needs subject to future development of Native American reserved water rights and the final adjudication of water rights in the Bighorn Basin under the Bighorn Basin General Adjudication. These contract renewals are subject to the future development of Native American Reserved Water Rights and may be terminated should the Secretary of the Interior or judicial decisions determine that it infringes on such rights.

Federal agencies are to identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations, and allow all portions of the population a meaningful opportunity to participate in the development of, compliance with, and enforcement of Federal laws, regulations and policies, affecting human health or the environment regardless of race, color, national origin or income. If a minority or low-income population is identified, appropriate outreach actions will be initiated to ensure dissemination of information and participation.

Environmental justice issues have not been identified regarding these water service contract renewals in the area. The proposed alternative would not disproportionately impact or affect low income or minority groups.

The proposed contract renewals reflect administrative and financial changes only. They do not affect the Contractors' or Reclamation operations.

Land Use

Land uses along the Bighorn River and the Contractors' areas include recreation and wildlife habitat at higher elevations, and agricultural uses such as the field crops and cropping of hayfields along the floodplain, and grazing. Main crops include forage-land (hay, haylage, grass silage and greenchop), barely for grain, sugar beets for sugar, corn for silage and corn for grain. Crop production in the area is combined with livestock production. Livestock fattening operations provide a substantial part of farm income in the area. Feed grains and alfalfa hay are marketed mostly through livestock feeding operations.

Recreation activities such as fishing, hunting, camping, hiking, and horseback riding, occur within the Contractors' area and the Bighorn River.

The proposed alternative of renewing the contracts would not change land uses in the area. Land would continue to be used for recreation, wildlife, agriculture, and grazing. Cropping patterns are not anticipated to change. Renewing the contracts would result only in administrative or financial changes.

Vegetation

Upland vegetation consists of sagebrush species, rabbitbrush, prickly pear cactus, greasewood, wheatgrass, and ricegrass. Cottonwood, Russian olive and willow trees inhabit areas in drainages. Wetland and riparian habitats are formed by deep percolation from irrigation and/or seepage from laterals. Wetland and riparian vegetation consists of willow, bulrushes, cattails, sedges, and water associated grasses. These habitat types are usually not found in the arid sagebrush-grass type where the Contractors' lands are located. These habitat features have developed as a result of construction and operation of the irrigation system.

The proposed alternative of renewing the contractors would not change present vegetative uses. Water service to supplement the natural flow to the Contractors would continue. Wetland and riparian areas along canals, ditches and laterals would not be affected by the contract renewals as the contract renewals would only result in administrative or financial changes.

Fish and Wildlife

Big game animals in the area of the Contractor include pronghorn, mule deer, white-tailed deer,

and elk. Desert cottontail rabbit is a common small game animal found in the area. Predators such as the coyote and red fox and furbearers such as the bobcat and badger can be found in most habit types in the area. Beaver, muskrat and mink can be found along creeks and rivers and other aquatic habitats in the area. A variety of small mammals such as the least chipmunk, Wyoming ground squirrel, red squirrel, bushytail woodrat, and deer mouse are likely to occur in the area.

Waterfowl such as mallard, gadwall, pintail, blue-winged teal, wood duck, common merganser and Canada geese are likely to be observed on or near the Contractors' lands and nest in the denser cover near the river, canals, and wetlands. Grain crop residues provide important winter foods for most of these waterfowl.

Upland game birds such as ring-necked pheasant, Hungarian partridge, wild turkey, mourning dove and chukar may be observed. Raptors which could be observed include the red-tailed hawk, American kestrel, and great horned owl. Nongame birds commonly found in the area are Brewer's and red-winged blackbirds, crow, black-billed magpie, nighthawks, horned larks, and western meadowlarks.

Reptiles that could be found in the area include spotted lizards, bullsnakes, and rattlesnakes.

The Bighorn River in the vicinity of the Contractors was classified by the WDEQ as Class 2AB waters with use designations for drinking water, game and non-game fish, fish consumption, other aquatic life, recreation wildlife, agriculture, industry, and scenic values.

The Jacobsen lands are located adjacent to Gooseberry Creek, a tributary to the Bighorn River. WDEQ has classified the lower 90% of Gooseberry Creek as Class 2C and designated the creek as a warm water, non-game fishery. The upper 10% of the creek was classified by the WDEQ as Class 2B and designated as a coldwater game fishery.

The primary species of fish in this area are the white sucker, carp, shorthead redhorse and river carpsucker with an occasional brown and rainbow trout, burbot, and flathead chub. The WGF stocks rainbow trout in Boysen Reservoir and below the dam in the Bighorn River.

The proposed alternative of renewing the contracts would not change present fish and wildlife conditions. Boysen Reservoir, the Bighorn River, and the areas where the Contractors are established would continue to provide habitat for upland species and wintering waterfowl. Populations and distributions of fish and wildlife species are not expected to change. Renewing the contracts would result only in administrative or financial changes.

Threatened and Endangered Species

The U.S. Fish and Wildlife Service (Service) uses the Information, Planning, and Conservation (IPaC) decision support system to provide the public and other agencies with a list of threatened, endangered and candidate species that may occur in the area when an action is proposed.

Documents generated by the IPaC support system and referenced by the Service as Consultation

Tracking Number: 06E13000-2014-SLI-0184 for the Hamilton lands and Consultation Tracking Number: 06E13000-2014-SLI-0185 for the Jacobsen lands, are included in Attachment A. These documents list endangered and threatened and candidate species occurring in Washakie County, Wyoming that may occur in the area of the proposed action and fulfills the Service's requirement under Section 7(c) of the Endangered Species Act to provide a list of endangered and threatened species upon request.

Federally listed threatened and endangered species that may be found in the vicinity of the Contractors' lands near Worland, Wyoming include the Ute ladies'-tresses (*Spiranthes diluvialis*), a threatened species. A candidate species, the greater sage-grouse (*Centrocercus urophasianus*), may also be found in the area.

The Ute ladies'-tresses is a Federally listed threatened plant species and occurs in Converse, Goshen, Laramie and Niobrara Counties in southeastern Wyoming. It is found mostly on low, flat floodplain terraces or abandoned oxbows within 0.5-50 meters of small perennial streams or rivers. These sites are subirrigated, often seasonally flooded, and remain moist into the summer. Renewing the contract would have no adverse effect on the Ute ladies' tresses. The Ute ladies' tresses habitat requirements of flat floodplain terraces or abandoned oxbows within close proximity to perennial streams or rivers are not present in the areas where the Contractors' lands are situated. In addition, no new surface disturbances of agricultural cropland are anticipated.

The greater sage-grouse is a Federally listed candidate species that may occur in the area. The Service has determined that the greater sage-grouse warrants listing under the Endangered Species Act, but the development of a proposed listing rule was precluded by other higher priority listing actions. The State of Wyoming has issued Executive Order 2011-5 Greater Sage-Grouse Core Area Protection to ensure greater sage-grouse conservation. The WGF and the Service developed core and distribution areas and management strategies to coordinate on-going efforts to conserve the greater sage-grouse and preclude the need for listing the bird as a threatened or endangered species. The Hamilton and Jacobsen lands considered for this contract renewal are not within greater sage-grouse Core Population Areas and are under existing agricultural activities. No further review of the greater sage-grouse is necessary for these lands. Renewal of the contract would have no adverse effect on the greater sage-grouse.

The proposed alternative would not affect present threatened or endangered species. Renewing the contracts would only result in administrative or financial changes.

Cultural Resources

The Hamilton lands are situated in the Bighorn River valley of the Bighorn Basin, approximately ten miles north-northeast of Worland, Wyoming. Approximating 35.4 acres, they are also located about 2 miles east of the Bighorn River, and 1.3 miles east of U.S. Highway 20.

The Jacobsen lands are situated in the Gooseberry Creek valley of the southern Bighorn Basin, approximately nine miles southwest of Worland, Wyoming. Approximating 250 acres, they are

adjacent to Wyoming State Highway 431 and approximately two to three miles northwest of the confluence of the Bighorn River and Gooseberry Creek, which is the vicinity of the intersection of U.S. Highway 20 and Highway 431.

A working definition of cultural resources as found in Bureau of Reclamation Manual LND P01 (Reclamation, 2013a) is "any prehistoric and historic district, site, building, structure, or object, cultural landscape, sacred site, and traditional cultural property." Within this broad spectrum are those of recognized importance such that they qualify for listing in the National Register of Historic Places (NRHP) based upon formal determination by the Secretary of the Interior or the Bureau of Reclamation in consultation with the appropriate State or Tribal Historic Preservation Officer (SHPO/THPO). Such NRHP-eligible values (including artifacts, records and remains that are associated or located therein) are called "historic properties." With this in mind, following is a brief assessment of the potential of the Hamilton and Jacobsen parcels to contain cultural resources of a prehistoric archaeological or historical nature.

According to the *Geologic Map of Wyoming* (Love and Christiansen 1985), the western portion of the Hamilton parcel is situated within Quaternary Period (Pleistocene and Holocene Epochs) alluvium and colluvium, while Eocene Willwood Formation materials (described as variegated claystone, sandstone and shale, including some lenticular gold-bearing quartzite conglomerate) is found in eastern portions of the parcel. Using the same resource map, the Jacobsen parcel lies within Quaternary Period (Pleistocene and Holocene) alluvium, colluvium, gravel, pediment and fan deposits.

For years the best potential for the discovery of prehistoric archaeological sites has been focused upon Holocene soils, based upon the idea that prehistoric man did not populate North America until some 10,000 to 12,000 years ago. However, over four decades of archaeological research and discoveries in North and South America strongly suggest that prehistoric Indians populated the New World several thousand years earlier than previously believed. No longer can late Pleistocene soils be categorically ruled out as regards potential for Paleoindian sites.

Based upon past archaeological field investigations conducted in Wyoming's Bighorn Basin over several decades, it is reasonable to believe that human occupation in the vicinity of the proposed Hamilton and Jacobsen water service contract renewal areas of potential effects occurred at some time during the Holocene Epoch and perhaps even during Pleistocene times; that evidence of ancient human occupation might be buried within aeolian (wind-blown) or thinly developed Holocene soils that may overlay the nearby Willwood Formation, or in such unconsolidated Quaternary alluvial/colluvial deposits.

The real question is whether or not any such archaeological materials have been preserved intact within the Hamilton and Jacobsen parcels (or the probability of such preservation), as erosion over millennia and/or modern development uses can erase evidence of such prehistoric occupation. This question can be answered only (with certainty) by conducting Class III inventories and/or archaeological testing.

According to Frison (1991), the Bighorn Basin is included in the Northwestern Plains Culture Area, which was home to various Native American tribes during the prehistoric Paleoindian Period, the Early, Middle and Late Archaic Periods, the Late Prehistoric Period, and during the Protohistoric and Historic Periods. With the near extinction of bison upon which the Indians depended, contributing to the defeat of the Indians tribes by the U.S. Army in the latter part of the 19th Century, and the removal the tribes to various reservations, the only indication of prior Indian occupation was the remnants of their material culture left on the ground, in some cases buried by fluvial or aeolian forces and later re-exposed to view by erosion. Prehistoric archaeological sites that might be found in the project area vicinity would be indicative of nomadic hunters and foragers, and typically could include stone circles from abandoned tipi campsites (and associated activity areas), fire hearths and burned/cracked rock, surface scatters of chipped stone (lithic) tools and debitage, ground stone, occasional crude pottery shards, and toolstone sources/quarries.

By way of comparison, buried archaeological materials associated with midwestern Native American sedentary horticulturalist-hunters (who lived in permanent villages [Plains Woodland and Plains Village Traditions] farming such crops as maize, beans, squash, pumpkins, sunflowers and tobacco) occasionally become exposed to view during modern-day plowing and farming. In some cases, these archaeological materials are buried deeply enough to escape complete destruction, whereby their scientific data potential can be recovered through archaeological excavation. In contrast, because the nomadic hunter-gatherers who occupied the Bighorn Basin practiced little or no agriculture (with no associated need for permanent settlements), archaeological evidence of their presence tends to be more transient and shallow, and less likely to survive intact over the centuries.

It is possible that portions of the Hamilton and Jacobsen lands were farmed before Reclamation awarded the first water service contracts for them in 1973, in which case they would have been subject to significant surface disturbance for years. Based upon aerial photos (Bing and Google Earth), approximately two-thirds of the Hamilton parcel and one-half of the Jacobsen parcel has experienced significant ground disturbance from irrigation and cultivation. Such surface disturbance would have had a detrimental or destructive effect upon any cultural resources (prehistoric archaeological and/or historical era sites or materials) located in the plow/irrigation zones or other vehicle use and ground disturbance areas.

Historic era (post-1800 A.D.) sites typical for this part of the Bighorn Basin include historic roads, standing structures or foundations associated with early homesteading and ranching, early privately-constructed irrigation canals, early railroads and associated community remains, trash and debris scatters. Early exploration/fur-trade era sites are less likely to be found due to the short-term duration of occupation at those sites, difficulty in determining exactly where they occurred from sketchy historical accounts, and a century and a half of cumulative effects of landaltering developments of various kinds. Expansion and Depression Era homestead remains may be encountered in the vicinity, often in the form of debris and trash scatters and building foundations, but standing buildings and structures may still survive in some locations.

Files search information provided on August 22, 2014, by the Wyoming SHPO Cultural Records Office (CRO) for the Hamilton lands indicates that there have been two Class III inventories conducted in Section 10, T. 48 N., R. 92 W. and five Class III inventories conducted in Section 15, T. 48 N., R. 92 W. Only one of these inventories occurred within the Hamilton parcel, leading to the recordation of the NRHP-eligible Upper Hanover Canal (48WA158). Although the NRHP-eligible Lower Hanover Canal (48WA1177) was also documented in western portions of Sections 10 and 15 of T. 48 N., R. 92 W., it is not located within the Hamilton parcel.

Files search information provided on August 22, 2014, by the Wyoming SHPO Cultural Records Office (CRO) for the Jacobsen lands indicates that there have been five Class III surveys conducted in Section 23, T. 46 N., R. 94 W. and three surveys conducted in Section 24, T. 46 N., R. 94 W., while no Class III surveys are on record for Section 25, T. 46 N., R. 94 W.

SHPO/CRO files search information indicates the presence of a NRHP ineligible prehistoric lithic landscapes (48WA1182 and 48WA1183) in Sections 23 and 24 of T. 46 N., R. 94 W. While no specific information about Class III inventories for Section 25 has yet been entered into the SHPO/CRO data base, files search results indicate that 48WA1182 and 48WA1183 also extend into Section 25, suggesting that some Class III inventory has been previously conducted in Section 25.

Lithic landscapes are extensive or widely occurring sources of potential stone tool raw materials naturally distributed across the landscape, including such lithic materials occurring in archaeological/historical or cultural contexts. Lithic landscapes provided Native Americans a source of stone tool-making materials and/or provide evidence of their tool-making procurement activities over a broad area. It is possible that 48WA1182 and/or 48WA1183 extend into the Jacobsen lands, however, it is unknown whether any remnants (if any) of it may be present.

Other cultural resources values reported for the Jacobsen lands include:

Section 23 – Blake-Denton/Gooseberry Ditch (48WA587), considered NRHP unevaluated; Gooseberry Creek Wagon Road (48WA588), considered ineligible for the NRHP; and NRHP eligible multi-component (prehistoric archaeological/historic) sites 48WA974, 48WA975, and 48WA976.

Section 24 – NRHP ineligible prehistoric archaeological site 48WA167; historic ditch 48WA587, historic wagon road 48WA588; NRHP eligible multi-component site 48WA974, and NRHP ineligible archaeological landscape 48WA1183.

While it is unlikely that there are any intact archaeological resources located within areas that have been previously cultivated, it is possible that there could be archaeological sites or materials in the Hamilton and Jacobsen parcels that are located outside of those previously farmed areas. Because additional water rights would be needed to develop additional irrigable acreage (beyond those already irrigated) within the Hamilton and Jacobsen parcels (which necessitates application to the Wyoming State Engineer's Office and following an involved process to obtain approval),

there are no plans to expand irrigation and farming into such areas that have not already been utilized. Therefore, continued irrigation and farming of established cultivated areas in this case will not cause any new surface ground disturbance in any previously undeveloped lands that might contain any NRHP quality cultural resources ("historic properties").

Accordingly, continuation of use as proposed within the Hamilton and Jacobsen boundaries is (under the National Historic Preservation Act (NHPA), Section 106 implementing regulations 36 CFR Part 800.d[1]) to be a federal undertaking that will not affect historic properties. This action would be unlikely to affect any cultural resources of a prehistoric archaeological or historical nature, including historic irrigation canals, 48WA158 and 48WA1177, or the above recorded sites. However, if any previously unrecorded archaeological sites are discovered in the project area of potential effects in the future, they should be recorded, evaluated, and assessed with respect to any possible effects to them.

The proposed alternative of renewing the contracts would not change the present cultural resource conditions, so long as irrigation and cultivation areas are not expanded beyond currently established boundaries, in which case the renewal of such contracts would result only in administrative or financial changes.

Indian Trust Assets

The United States has an Indian trust responsibility to protect and maintain rights reserved by or granted to Native American tribes or Native American individuals by treaties, statutes, and executive orders. This trust responsibility requires that all Federal agencies take all actions reasonably necessary to protect trust assets. Reclamation's policy is to protect Indian trust assets from adverse impacts of Reclamation programs and activities. Indian trust assets (ITA) are legal interests in property held in trust by the United States for Indian tribes or individuals. Indian trust assets include, but are not limited to, lands, minerals, hunting and fishing rights, and water rights.

In a 1989 Wyoming court case, the Eastern Shoshone and Northern Arapaho Tribes were awarded approximately 500,000 acre-feet of water in the Wind River Basin under reserved water rights with an 1868 priority date. This is the earliest priority date on the Wind River, giving the Tribes the first rights to water in the Wind River.

The Winter's Doctrine, also known as the "implied reservation of water" doctrine, is the mechanism which entitles an Indian tribe to enough water to irrigate its reservation. A tribe cannot lose its "Winter's rights" through nonuse. The Tribes' water rights are protected and are senior to other entities in the Wind River and Bighorn River Basins.

The proposed alternative of renewing the contracts would not affect tribal water rights or other ITA's because the Tribes have the senior water right, therefore, their water rights would be met first in order of priority. Existing water rights junior to the Tribes' water rights would be subject to future development of Native American reserved water rights and the final adjudication of

water rights in the Bighorn Basin under the ongoing Bighorn Basin General Adjudication. Renewing the contracts would only result in administrative or financial changes for the Contractors.

Climate Change

Many climate scientists believe that global climate change is occurring and could lead to many changes in the environment. It is not precisely known what effects would occur, though in general it is believed that there would be increases in temperature and changes in precipitation patterns. Regional climate changes are much less reliable than global ones, and it is unclear whether regional climate will become more variable.

Information for this section was largely taken from Technical Memorandum 86-68210-2013-06 Literature Synthesis on Climate Change Implications for Water and Environmental Resources (Reclamation, 2013b). According to the literature synthesis, temperatures in the northern Great Plains Region generally have risen faster than other areas within the region. The western Great Plains Region experienced a general decline in spring snowpack, reduced snowfall to winter precipitation ratios and earlier snowmelt runoff. Reduced snowfall to winter precipitation ratios from 1949-2005 were also indicated in the northern Great Plains Region. Recent snowpack changes across western North America and the northwest Great Plains Region are due to regional-scale warming which implies a possible loss of late season snowpack and an earlier melt season. On the other hand, analyses also suggest that, in high-altitude and high-latitude areas, cool-season snowpack actually could increase in the 21st century. However, a paper by the Congressional Budget Office indicates that warming will tend to be greater at high altitudes and in the interiors of the United States, and that future climate conditions will feature less snowfall and more rainfall, and that warming will lead to more intense and heavy rainfall that will tend to be interspersed with longer relatively dry periods.

It is unknown precisely what affects climate change, global or regional, would have in the Bighorn Basin. In addition, it is unknown what effects climate changes would have on actions such as entering into long-term water service contracts. However, climate change is not anticipated to affect Reclamation water service obligations. Should the regional (basin) climate measurably or noticeably change under the proposed or no action alternative, Reclamation and the Contractors would adapt to the change.

4. Consultation and Coordination

Because the contract renewal action is financial and administrative in nature, Reclamation believed it only necessary to consult and coordinate with the Contractors. This document is made available as identified at the Locations of Availability below.

Distribution List

Distribution of the final EA/FONSI will be made to the following entities:

Bureau of Reclamation Great Plains Region

Douglas S. and Michelle C. Hamilton

Wade W. Jacobsen

Wyoming State Historic Preservation Office

Office of Federal Land Policy (Wyoming Clearinghouse)

Locations of Availability

The final EA/FONSI will be made available at:

Bureau of Reclamation Wyoming Area Office, 705 Pendell Boulevard, Mills WY 82644

List of Preparers

This EA/FONSI was prepared by the Bureau of Reclamation, Wyoming Area Office. Listed below are those who made significant contributions to the preparation of the document:

Lyle Myler - Wyoming Deputy Area Manager – document review

Laura Schwieger - WYAO Environmental Specialist – NEPA coordinator, environmental resource analysis, document preparation

Brock Merrill - WYAO Natural Resource Specialist – contract negotiations, technical review, document preparation

Dale Austin - WYAO Archeologist - document preparation

LITERATURE CITED

- Frison, George C. 1991. *Prehistoric Hunters of the High Plains, Second Edition*. Academic Press, Inc., San Diego, California.
- Love, J.D. and Ann Coe Christiansen
 1985 Geologic Map of Wyoming. U.S. Geological Survey, Denver, Colorado.
- National Agricultural Statistics Service (NASS), 2012. http://www.nass.usda.gov/Statistics_by_State/Wyoming/
- Reclamation, 2013a. U.S. Department of the Interior, Bureau of Reclamation Reclamation Manual Policy LND P01: Cultural Resources Office of Policy and Administration, Denver, Colorado.
- Reclamation, 2013b. Technical Memorandum 86-68210-2013-06 Literature Synthesis on Climate Change Implications for Water and Environmental Resources. Third Edition. September 2013, pp. 113-139 and 167-175.

ATTACHMENT A



United States Department of the Interior

FISH AND WILDLIFE SERVICE Wyoming Ecological Services Field Office 5353 YELLOWSTONE ROAD, SUITE 308A CHEYENNE, WY 82009 PHONE: (307)772-2374 FAX: (307)772-2358

URL: www.fws.gov/wyominges/



Consultation Tracking Number: 06E13000-2014-SLI-0184 Project Name: Hamilton Water Service Contract Renewal September 22, 2014

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project.

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U-S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the Environmental Conservation Online System-Information, Planning, and Conservation System (ECOS-IPaC) website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

Please feel free to contact us if you need more information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. We also encourage you to visit the Wyoming Ecological Services website at http://www.fws.gov/wyominges/Pages/Species/Species_Endangered.html for more information about species occurrence and designated critical habitat.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to use their authorities to carry out programs for the conservation of threatened and endangered

species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A biological assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a biological assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a biological assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the biological assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species, and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

We also recommend that you consider the following information when assessing impacts to federally listed species, as well as migratory birds, and other trust resources:

Colorado River and Platte River Systems: Consultation under section 7 of the Act is required for projects in Wyoming that may lead to water depletions or have the potential to impact water quality in the Colorado River system or the Platte River system, because these actions may affect threatened and endangered species inhabiting the downstream reaches of these river systems. In general, depletions include evaporative losses and/or consumptive use of surface or groundwater within the affected basin, often characterized as diversions minus return flows. Project elements that could be associated with depletions include, but are not limited to: ponds, lakes, and reservoirs (e.g., for detention, recreation, irrigation, storage, stock watering, municipal storage, and power generation); hydrostatic testing of pipelines; wells; dust abatement; diversion structures; and water treatment facilities.

Species that may be affected in the Colorado River system include the endangered bonytail (
Gila elegans), Colorado pikeminnow (Pychochedius lucius), humpback chub (Gila cypha), and
razorback sucker (Xyrauchen texanus) and their designated critical habitats. Projects in the
Platte River system may impact the endangered interior population of the least tern (Sterna
antillarum), the endangered pallid sturgeon (Scaphirhynchus albus), the threatened piping
plover (Charadrius melodus), the threatened westem praire fringed orchid (Platanthera
praeclara), as well as the endangered whooping crane (Grus americana) and its designated
critical habitat. For more information on consultation requirements for the Platte River species,
please visit http://www.fws.gov/platteriver.

Migratory Birds: The Migratory Bird Treaty Act (16 U.S.C. 703-712), prohibits the taking of any migratory birds, their parts, nests, or eggs except as permitted by regulations, and does not require intent to be proven. Except for introduced species and some upland game birds, almost all birds occurring in the wild in the United States are protected (50 CFR 10.13). Guidance for

minimizing impacts to migratory birds for projects that include communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm.

The Bald and Golden Eagle Protection Act (16 U.S.C. 668-668d) prohibits knowingly taking, or taking with wanton disregard for the consequences of an activity, any bald or golden eagles or taking with wanton disregard for the consequences of an activity, any bald or golden eagles or taking with a parts, nests, or eggs, which includes collection, molestation, disturbance, or killing. Eagle nests are protected whether they are active or inactive. Removal or destruction of nests, or causing abandonment of a nest could constitute a violation of one or both of the above statutes. Projects affecting eagles may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

If nesting migratory birds are present on or near the project area, timing of activities is an important consideration and should be addressed in project planning. Activities that could lead to the take of migratory birds or eagles, their young, eggs, or nests, should be coordinated with our office prior to project implementation. If nest manipulation (including removal) is proposed for the project, the project proponent should contact the Migratory Bird Office in Denver at 303-236-8171 to see if a permit can be issued for the project. If a permit cannot be issued, the project may need to be modified to protect migratory birds, eagles, their young, eggs, and nests,

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment

3



Official Species List

Provided by:

Wyoming Ecological Services Field Office 5353 YELLOWSTONE ROAD, SUITE 308A CHEYENNE, WY 82009 (307) 772-2374 http://www.fws.gov/wyominges/

Consultation Tracking Number: 06E13000-2014-SLI-0184

Project Type: Water Supply / Delivery

Project Description: The Bureau of Reclamation is proposing to renew the water service contract with Douglas and Michelle Hamilton. Under the contract, Reclamation would continue to provide 94 AF from Boysen Reservoir storage to irrigate 35.4 acres of land approximately 10 miles northeast of Worland, Wyoming.

http://ecos.fws.gov/ipac, 09/22/2014 01:33 PM



Project Location Map:



 $\begin{array}{l} \textbf{Project Coordinates: MULTIPOLYGON (((-107.8734211 \ 44.1424162, -107.8734135 \ 44.1424147, -107.8734017 \ 44.1424103, -107.8734012 \ 44.1423962, -107.8733905 \ 44.1353218, -107.873392 \ 44.1353141, -107.8733964 \ 44.1353076, -107.8734029 \ 44.1353033, -107.8814106 \ 44.1353018, -107.8826674 \ 44.1353969, -107.8826751 \ 44.1353712, -107.8826816 \ 44.1353756, -107.8826859 \ 44.1353822, -107.8826873 \ 44.13539, -107.8825629 \ 44.1323812, -107.8825612 \ 44.1423812, -107.8825612 \ 44.1423888, -107.8825625 \ 44.1423991, -107.88254354 \ 44.1423947, -107.8825243 \ 44.1423981, -107.8825229 \ 44.1423894, -107.8825469 \ 44.1354095, -107.8734305 \ 44.1353419, -107.8734412 \ 44.1423763, -107.8824357 \ 44.142407, -107.8824433 \ 44.1424085, -107.8824498 \ \end{array}$

http://ecos.fws.gov/ipac, 09/22/2014 01:33 PM



United States Department of Interior Fish and Wildlife Service

Project name: Hamilton Water Service Contract Renewal

44.1424129, -107.8824541 44.1424194, -107.8824556 44.1424271, -107.8824541 44.1424347, -107.8824497 44.1424412, -107.8824432 44.1424455, -107.8824355 44.142447, -107.8734211 44.1424162)))

Project Counties: Washakie, WY

http://ecos.fws.gov/ipac, 09/22/2014 01:33 PM



Endangered Species Act Species List

There are a total of 2 threatened, endangered, or candidate species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Critical habitats listed under the Has Critical Habitat column may or may not lie within your project area. See the Critical habitats within your project area section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Birds	Status	Has Critical Habitat	Condition(s)
Greater sage-grouse (Centrocercus urophasianus) Population: entire	Candidate		
Flowering Plants			
Ute ladies'-tresses (Spiranthes	Threatened		

http://ecos.fws.gov/ipac, 09/22/2014 01:33 PM

4



Critical habitats that lie within your project area

There are no critical habitats within your project area.

http://ecos.fws.gov/ipac, 09/22/2014 01:33 PM



United States Department of the Interior

FISH AND WILDLIFE SERVICE Wyoming Ecological Services Field Office 5353 YELLOWSTONE ROAD, SUITE 308A CHEYENNE, WY 82009 PHONE: (307)772-2374 FAX: (307)7772-2358

URL: www.fws.gov/wyominges/



Consultation Tracking Number: 06E13000-2014-SLI-0185
Project Name: Wade W. Jacobsen Water Service Contract Renewal

September 22, 2014

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project.

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the Environmental Conservation Online System-Information, Planning, and Conservation System (ECOS-IPaC) website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

Please feel free to contact us if you need more information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. We also encourage you to visit the Wyoming Ecological Services website at http://www.fws.gov/wyominges/Pages/Species/Species_Endangered.html for more information about species occurrence and designated critical habitat.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to use their authorities to carry out programs for the conservation of threatened and endangered

species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A biological assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a biological assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a biological assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the biological assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species, and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at: http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

We also recommend that you consider the following information when assessing impacts to federally listed species, as well as migratory birds, and other trust resources:

Colorado River and Platte River Systems: Consultation under section 7 of the Act is required for projects in Wyoming that may lead to water depletions or have the potential to impact water quality in the Colorado River system or the Platte River system, because these actions may affect threatened and endangered species inhabiting the downstream reaches of these river systems. In general, depletions include evaporative losses and/or consumptive use of surface or groundwater within the affected basin, often characterized as diversions minus return flows. Project elements that could be associated with depletions include, but are not limited to: ponds, lakes, and reservoirs (e.g., for detention, recreation, irrigation, storage, stock watering, municipal storage, and power generation); hydrostatic testing of pipelines; wells; dust abatement; diversion structures; and water treatment facilities.

Species that may be affected in the Colorado River system include the endangered bonytail (
Gila elegans), Colorado pikeminow (Psychocheilus lucius), humpback chub (Gila cypha), and
razorback sucker (Xyrauchen texanus) and their designated critical habitats. Projects in the
Platte River system may impact the endangered interior population of the least tern (Sterna
antillarum), the endangered pallid sturgeon (Scaphirhynchus albus), the threatened piping
plover (Charadrius melodus), the threatened western prairie fringed orchid (Platanthera
praeclara), as well as the endangered whooping crane (Grus americana) and its designated
critical habitat. For more information on consultation requirements for the Platte River species,
please visit http://www.fws.gov/platteriver.

Migratory Birds: The Migratory Bird Treaty Act (16 U.S.C. 703-712), prohibits the taking of any migratory birds, their parts, nests, or eggs except as permitted by regulations, and does not require intent to be proven. Except for introduced species and some upland game birds, almost all birds occurring in the wild in the United States are protected (50 CFR 10.13). Guidance for

minimizing impacts to migratory birds for projects that include communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm.

The Bald and Golden Eagle Protection Act (16 U.S.C. 668-668d) prohibits knowingly taking, or taking with wanton disregard for the consequences of an activity, any bald or golden eagles or their body parts, nests, or eggs, which includes collection, molestation, disturbance, or killing. Eagle nests are protected whether they are active or inactive. Removal or destruction of nests, or causing abandonment of a nest could constitute a violation of one or both of the above statutes. Projects affecting eagles may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

If nesting migratory birds are present on or near the project area, timing of activities is an important consideration and should be addressed in project planning. Activities that could lead to the take of migratory birds or eagles, their young, eggs, or nests, should be coordinated with our office prior to project implementation. If nest manipulation (including removal) is proposed for the project, the project proponent should contact the Migratory Bird Office in Denver at 303-236-8171 to see if a permit can be issued for the project. If a permit cannot be issued, the project may need to be modified to protect migratory birds, eagles, their young, eggs, and nests.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment

3



Official Species List

Provided by:

Wyoming Ecological Services Field Office 5353 YELLOWSTONE ROAD, SUITE 308A CHEYENNE, WY 82009 (307) 772-2374 http://www.fws.gov/wyominges/

Consultation Tracking Number: 06E13000-2014-SLI-0185

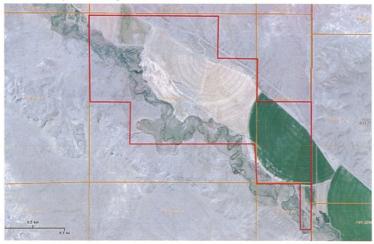
Project Type: Water Supply / Delivery

Project Description: The Bureau of Reclamation is proposing to renew the water service contract with Wade W. Jacobsen. Under the contract, Reclamation would continue to provide 750 AF from Boysen Reservoir storage to irrigate 250 acres of land approximately 8 miles southwest of Worland, Wyoming.

http://ecos.fws.gov/ipac, 09/22/2014 01:35 PM



Project Location Map:



Project Location Measurements: Area: 530.0 ac., Length: 5.2 mi

Project Coordinates: MULTIPOLYGON (((-108.1092157 43.9505634, -108.1092157 43.9505636, -108.109215 43.9505668, -108.1092143 43.9505708, -108.1092141 43.9505711, -108.1092141 43.9505712, -108.1092127 43.9505734, -108.1092101 43.9505774, -108.1092099 43.9505775, -108.1092098 43.9505777, -108.1092062 43.9505801, -108.1092037 43.9505818, -108.1092036 43.9505818, -108.1092033 43.950582, -108.1091995 43.9505827, -108.1091961 43.9505835, -108.1091958 43.9505835, -108.1091956 43.9505835, -108.0936602 43.9505217, -108.0936525 43.9505201, -108.093646 43.9505156, -108.0936417 43.950509, -108.0936403

http://ecos.fws.gov/ipac, 09/22/2014 01:35 PM





United States Department of Interior Fish and Wildlife Service

Project name: Wade W. Jacobsen Water Service Contract Renewal

43.9505012, -108.0937257 43.9469373, -108.0889393 43.9468758, -108.0889317 43.9468742, -108.0889252 43.9468697, -108.088921 43.9468631, -108.0889196 43.9468553, -108.089005 108.0825019 43.9431981, -108.0825004 43.9431905, -108.0825725 43.9322761, -108.082574 43.9322686, -108.0825783 43.9322622, -108.0825846 43.9322578, -108.0825921 43.9322562, - $108.0838516\ 43.9322291, -108.0838593\ 43.9322305, -108.0838659\ 43.9322348, -108.0838704$ 43.9322413, -108.083872 43.932249, -108.0838955 43.936144, -108.0890255 43.936144, - $108.0890328\ 43.9361454, -108.089039\ 43.9361493, -108.0890435\ 43.9361552, -108.0890454$ 43.9361623, -108.0893314 43.9395619, -108.1043033 43.9395403, -108.104311 43.9395419, -108.1043176 43.9395463, -108.1043219 43.939553, -108.1043233 43.9395608, -108.104238 43.943128, -108.1090627 43.9431557, -108.1090702 43.9431572, -108.1090767 43.9431615, -108.109081 43.9431678, -108.1090826 43.9431753, -108.1092157 43.9505631, -108.1092157 43.9505634), (-108.1091753 43.9505434, -108.109043 43.9431956, -108.1042174 43.9431679, $108.1042097\ 43.9431663, -108.1042031\ 43.9431618, -108.1041989\ 43.9431552, -108.1041975$ 43.9431474, -108.1042828 43.9395803, -108.089313 43.9396019, -108.0893058 43.9396005, -108.0892995 43.9395966, -108.089295 43.9395907, -108.0892931 43.9395836, -108.0890071 43.936184, -108.0838756 43.936184, -108.083868 43.9361825, -108.0838615 43.9361782, -108.0838572 43.9361717, -108.0838556 43.9361641, -108.0838321 43.9322695, -108.0826124 $43.9322958, -108.0825405\ 43.9431707, -108.0890256\ 43.9431897, -108.0890333\ 43.9431913, -108.0890330\ 43.9431913, -108.0890330\ 43.9431913, -108.0890330\ 43.9431913, -108.0890330\ 43.9431913, -108.0890330\ 43.9431913, -108.0890330\ 43.9431913, -108.0890330\ 43.9431913, -108.0890330\ 43.9431913, -108.0890330\ 43.9431913, -108.0890330\ 43.9431913, -108.0890330\ 43.9431913, -108.0890330\ 43.9431913, -108.0890330\ 43.9431913, -108.0890330\ 43.9431913, -108.0890330\ 43.9431913, -108.0890330\ 43.9431913, -108.0890330\ 43.9431913, -108.0890330\ 43.9431913, -108.089030\ 43.9431913, -108.08$ 108.0890398 43.9431957, -108.0890441 43.9432024, -108.0890455 43.9432102, -108.0889601 43.9468361, -108.0937465 43.9468976, -108.0937541 43.9468992, -108.0937606 43.9469037, - $108.0937648\ 43.9469103, -108.0937662\ 43.9469181, -108.0936808\ 43.9504818, -108.1091753$ 43.9505434)))

Project Counties: Washakie, WY

http://ecos.fws.gov/ipac, 09/22/2014 01:35 PM



Endangered Species Act Species List

There are a total of 2 threatened, endangered, or candidate species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Critical habitats listed under the Has Critical Habitat column may or may not lie within your project area. See the Critical habitats within your project area section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Birds	Status	Has Critical Habitat	Condition(s)
Greater sage-grouse (Centrocercus urophasianus) Population: entire	Candidate		
Flowering Plants			
Ute ladies'-tresses (Spiranthes diluvialis)	Threatened		

http://ecos.fws.gov/ipac, 09/22/2014 01:35 PM



Critical habitats that lie within your project area

There are no critical habitats within your project area.

http://ecos.fws.gov/ipac, 09/22/2014 01:35 PM

ATTACHMENT B

ENVIRONMENTAL COMMITMENTS

The proposed action of renewing water service contracts consisted only of financial and administrative changes. Reclamation has not identified unacceptable adverse environmental effects associated with renewing the water service contracts with the Contractors. Therefore, no environmental commitments are necessary.

ATTACHMENT C

LAWS, REGULATIONS, and EXECUTIVE ORDERS ASSOCIATED WITH THE DOUGLAS S. and MICHELLE C HAMILTON and WADE W. JACOBSEN WATER SERVICE CONTRACT RENEWALS

- 1. **Fish and Wildlife Coordination Act of 1958** The objective of this Act is to provide that wildlife conservation receives equal consideration and is coordinated with other features of water resource development programs. Reclamation will consult and coordinate its programs with the U.S. Fish and Wildlife Service.
- 2. **Endangered Species Act of 1973 (P.L. 93-205)** Section 7 of this Act requires Reclamation to ensure that all federally associated Reclamation activities within the United States do not have adverse impacts on the continued existence of threatened or endangered species or on designated critical habitats. Reclamation will consult with the U.S. Fish and Wildlife Service to determine potential impacts a project may have on protected species.
- 3. National Historic Preservation Act of 1966 (P.L. 89-665), as amended (P.L. 95-515) An evaluation will be conducted prior to any construction activities to determine whether a proposed action will affect sites or structures listed in or eligible for listing in the National Register of Historic Places (National Register). If any are found, it is then determined whether the project effects are adverse.
- 4. **Presidential Memorandum "Government-to-Government Relations with Native American Tribal Governments." April 29, 1994.** Clarifies the responsibility to ensure that the federal government operates within a government-to-government relationship with federally recognized Native American tribes.
- 5. **Reclamation Project Act of 1939** This Act was developed to provide the United States reclamation projects a feasible and comprehensive plan to establish economical repayment obligations to pay construction charges.
- 6. Administration of Contracts Under Section 9, Reclamation Project Act of 1939 (Reclamation Act of 1956) Provides for long-term contract renewal under terms and conditions mutually agreeable to the parties involved.
- 7. **Executive Order 11988** requires each Federal agency to determine whether the proposed action will occur in a flood plain, consider alternatives, and if no practical alternative is found, it requires minimizing harm, notifying the public why the action

- must be located in the flood plain, and provides for public review and comment. (RI 376) (43 CFR 6030) (RI 215.13)
- 8. **Executive Order 11990** protection of wetlands, provides for a process to improve and coordinate Federal plans, functions, programs, and resource use in a manner to attain beneficial use without impacting on wetlands by requiring the agency head to find that there are no practical alternatives to such construction and that the proposed action includes all practical measures to minimize impacts to wetlands. (RI 376)
- 9. Executive Order 12898 "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations." Requires each Federal agency (specifically in EISs) to "provide full and fair discussion of significant environmental impacts and shall inform decision-makers and the public of reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment" (40 CFR §1502.1).
- 10, Secretarial Order 3226 "Evaluating Climate Change Impacts in Management Planning" dated January 19, 2001. This SO ensures that climate change impacts are taken into account in connection with Departmental planning and decision making.