

Finding of No Significant Impact

Implementation of an Amendment to the Republican River Conservation Reserve Enhancement Program Agreement with the State of Colorado

April 2012

Introduction

The United States Department of Agriculture Farm Service Agency (FSA) has prepared a Supplemental Environmental Assessment (EA) to evaluate the environmental consequences associated with implementing an Amendment to the Republican River Conservation Reserve Enhancement Program (CREP) Agreement with the State of Colorado. CREP provides financial and technical assistance to producers for ceasing active agricultural production and installing a conservation practice on enrolled land. The main goals of CREP are to reduce soil erosion, improve water quality, and enhance wildlife habitat. An EA was prepared in 2006 to address the environmental consequences of the original Republican River CREP; this EA has been prepared as a supplement to that EA.

The Amendment to Colorado's Republican River CREP Agreement would increase enrollment acreage goals by 20,000 acres (for a total goal of 55,000 acres); open enrollment to Washington and Lincoln counties (which were enrolled to the maximum extent in the Conservation Reserve Program at the time of the original CREP Agreement); increase the duration of temporary irrigation from 12 to 24 months for cover establishment; increase CREP funding by \$36 million (for a total of \$102 million); and expand incentive areas to the three mile corridor around the Arikaree River and an area north of Wray, Colorado known as the "Target Zone". In order to be eligible for CREP in Colorado, producers must permanently cease irrigation and retire the water rights associated with the enrolled acreage (no change from the original CREP Agreement). The irrigation water from the enrolled wells located within the Target Zone may be diverted and used to directly augment streamflows in the North Fork of the Republican River through a proposed Compact Compliance Pipeline. Pumping of the groundwater from this area would be limited to historical consumption (no more than 14,798 acre-feet per year) and in most years would be much less. No changes to the approved conservation practices, land eligibility requirements, or land preparation techniques are proposed under this Amendment. The Republican River CREP area covers all of Phillips and Yuma counties and those portions of Kit Carson, Lincoln, Logan, Washington, and Sedgwick counties that overlie the Ogallala Aquifer within the Republican River Basin.

The specific goals outlined in the proposed Republican River CREP Amendment are to:

- Obtain 60,000 to 75,000 acre-feet of annual water savings through the purchase of permanent water rights or cancellation of well permits through the Republican River Water Conservation District Water Activity Enterprise;
- Reduce soil erosion from 751,633 tons to 165,000 tons per year;
- Reduce annual fertilizer and pesticide application from all enrolled acres by 4,606 tons per year from 2004 levels;
- Enroll up to 500 acres of riparian buffer and wetland practices to permit natural restoration of stream and wetland hydraulic and geomorphic characteristics which meet habitat requirements of the targeted fish species;
- Reduce, by approximately 10 percent from 2004 levels, the number of groundwater wells containing nitrogen levels above United States Environmental Protection Agency standards; and
- Reduce the total use of electricity by 3.29 million kilowatt hours through reductions in groundwater pumping on all acres enrolled.

Preferred Alternative

The Preferred Alternative is the Proposed Action which is to implement an Amendment to the Republican River CREP Agreement. The proposed Amendment includes increasing the acreage enrollment goal to 55,000, opening enrollment to Washington and Lincoln counties, increasing the duration of temporary irrigation to 24 months, increase funding, and establish a Target Zone.

Reasons for Finding of No Significant Impact

In consideration of the analysis documented in the Supplemental EA and in accordance with Council on Environmental Quality regulations 1508.27, FSA has determined that the preferred alternative would not constitute a major State or Federal action affecting the human and natural environment if the Target Zone was eliminated from the preferred alternative. Therefore, the Target Zone has been removed from the preferred alternative and a Finding of No Significant Impact is being rendered. This determination is based on the following:

1. Long-term beneficial impacts and short-term localized impacts would occur with the preferred alternative. Neither of these impacts would be considered significant.
2. The preferred alternative would not affect public health or safety.
3. Unique characteristics of the geographic area (cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, and ecologically critical areas) would be preserved with implementation of the preferred alternative.
4. The potential impacts on the quality of the human environment are not considered highly controversial. Additional public involvement measures were taken for this action given the high public interest in the action. Comments received throughout the project did not indicate significant concern with the environmental analysis but rather opposition to the proposed incentive payments and eligibility requirements described in the proposed Amendment to the Republican River CREP.
5. The potential impacts on the human environment as described in the Supplemental EA are not uncertain nor do they involve unique or unknown risks.
6. The preferred alternative would not establish a precedent for future actions with significant effects or represent a decision in principle about a future consideration.
7. Cumulative impacts of the preferred alternative in combination with other recent, ongoing, or foreseeable future actions are not expected to be significant.
8. The preferred alternative would not adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places.
9. The preferred alternative would have long-term beneficial impacts to wildlife and their habitats, including endangered and threatened species under the Endangered Species Act of 1973.
10. The preferred alternative does not threaten a violation of Federal, State, or local law imposed for the protection of the environment.

Determination

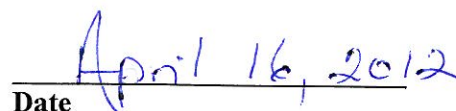
On the basis of the analysis and information contained in the Supplemental EA and this document, it is my determination that adoption of the preferred alternative without the Target Zone does not constitute a major Federal action affecting the quality of the human and natural environment. Since the proposed Amendment to the Republican River CREP has not been finalized as of the signing of this FONSI, the agency and state partners may adjust the details of the Amendment during negotiations. Unless those changes result in a significant expansion or increase of the Amendment addressed in the Supplemental EA, this FONSI is still applicable and no Environmental Impact Statement will be prepared.

APPROVED:

Signature

Date





January 14, 2008

Re: Errata Sheet on Final Environmental Assessment for Colorado's Republican River Basin CREP

Comments were received after the public comment period that warrants the preparation and distribution of an errata sheet on the above referenced EA. This sheet will become a part of the project file. The comments and FSA responses are as follows:

1. **Comment:** *The CRP program has been limited to 25% of the total agricultural land in a County because of concerns that a higher percentage would have economic consequences. Is this no longer the case?*
 - a. **Response:** Enrollment restrictions for the CRP program have not changed. The original Republican River Basin CREP proposed to enroll 35,000 acres within eight counties. The amendment assessed in this EA proposes to increase enrollment by another 35,000. This represents less than 1% of the 7.2 million acres of agricultural land within the eight counties listed in the Agreement.
2. **Comment:** *The PEA claims that a "slight beneficial impact" would be realized by the action. Dr. James Pritchett, economist at Colorado State University, has determined that each irrigated acre in Northeastern Colorado contributes \$690/acre of economic activity to the area. This does not seem to agree with the PEA. Even at the highest rate of payment (\$600/acre) it would seem that a significant impact would result and in addition, each payment would represent a different type of economic activity and would certainly have an effect on the inputs and services required by agriculture. The fact that irrigated land is worth 5 to 6 times that of pasture and dryland seems to have been ignored. Such land conversion also results in a reduction of property taxes to a County and such effects were not mentioned.*
 - a. **Response:** Since CREP is a voluntary program, it is not possible to predict what type of land (irrigated or non-irrigated) will be enrolled. Therefore the socioeconomic analysis must be generic and based on simple flow-down models which determined that the loss in net cash income, the proceeds from sales of fertilizer and chemicals, and expenditures on labor would be overcome by the total cost of the program. Property taxes and values remain the same for the duration of a CREP contract. Property assessments would begin to change after a contract has expired (approximately year 2022). The original CREP Agreement estimated lost county revenue from property taxes to be approximately \$150,000 yearly.
 - b. **Change to document:** Add the following table to page 3-9.

Base Soil Rental Rates/Acre in Colorado Counties				
	Irrigated Cropland ¹	Non- Irrigated Cropland ²	Marginal Pastureland Adjacent to Seasonal Streams or Waterbody ²	Marginal Pastureland Adjacent to Perennial Stream or Waterbody ²
Lincoln	\$115	\$21.37	\$20	\$30
Washington	\$115	\$30.07	\$22	\$34
Phillips	\$115	\$32.00	\$28	\$38
Yuma	\$115	\$26.70	\$24	\$36
Kit Carson	\$115	\$32.00	\$24	\$36
Logan	\$115	\$28.64	\$26	\$36
Sedgwick	\$115	\$32.00	\$28	\$38
<i>Source: ¹CREP proposal and ²FSA Soils Data Management System</i>				

- c. **Change to document:** Add the following paragraph to page 4-3.

Under the Republican River Basin CREP, irrigated land enrolled in the program would receive a higher annual rental rate based on its value. The total cost to implement the program would not change regardless of the type of land enrolled. CREP is a voluntary program and the exact land to be enrolled is not known, however, if more irrigated land is enrolled, it is likely that fewer producers could participate in the program.

**FINAL
SUPPLEMENTAL ENVIRONMENTAL
ASSESSMENT**

**REPUBLICAN RIVER CONSERVATION RESERVE
ENHANCEMENT PROGRAM**



**Farm Service Agency
United States Department of Agriculture
November 2010**

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Cover Sheet

Proposed Action: The United States Department of Agriculture (USDA), Commodity Credit Corporation and the State of Colorado have agreed to implement an Amendment to Colorado's Republican River Conservation Reserve Enhancement Program (CREP), a component of the Conservation Reserve Program. USDA is provided the statutory authority by the provisions of the Food Security Act of 1985, as amended (16 United States Code 3830 et seq.), and the Regulations at 7 Code of Federal Regulations (CFR) 1410. The Farm Service Agency (FSA) proposes to amend the CREP Agreement with the State of Colorado. CREP is a voluntary land conservation program for agricultural landowners.

Type of Document: Supplemental Environmental Assessment

Lead Agency: USDA, FSA

Sponsoring Agency: Colorado Division of Water Resources

Cooperating Agency: None

Further Information:

State of Colorado
Attn: Kathryn Radke
Division of Water Resources
1313 Sherman Street, Room 818
Denver, CO 80203

Comments: This Supplemental Environmental Assessment was prepared in accordance with USDA FSA National Environmental Policy Act (NEPA) implementation procedures found in 7 CFR 799, as well as the NEPA of 1969, Public Law 91-190, 42 United States Code 4321-4347, 1 January 1970, as amended. A Notice of Availability was printed in newspapers in the CREP area and a public meeting was held during the public comment period.

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Changes Between the Draft Environmental Assessment and Final Environmental Assessment

The Draft Supplemental Environmental Assessment (EA) was made available for public and agency review October 6, 2010 through November 5, 2010. Based on the comments received during the comment period the following major changes were made in the Final Supplemental EA:

- Purpose and Need Statement
 - This statement has been revised in Section 1.3 and throughout the Final EA as follows:
“The purpose of the Proposed Action is to implement an Amendment to the Republican River CREP for the State of Colorado. The proposed Amendment is needed to meet the goals and objectives of the Republican River CREP, including the improvement of water quality, restoration of native vegetation, and improvement of wildlife habitat. Further, the proposed Amendment would have positive long term impacts on protected species and their habitats, as well as reducing agricultural use of the Ogallala Aquifer, restoring and enhancing wetlands, and increasing streamflows in the Republican River Basin.”
 - Assisting the State of Colorado in obtaining Republican River Compact Compliance has been removed from this statement.
- Socioeconomics, Section 4.4
 - This section was revised to better characterize the potential socioeconomic impact from implementing the proposed CREP Amendment.
- Cumulative Impacts, Section 5.1
 - Text was reworded to clarify that the planning and construction of the Compact Compliance Pipeline is not complete.
- Irreversible and Irretrievable Commitment of Resources, Section 5.2
 - Information was added to this section in regard to groundwater usage.
- Appendix A
 - The Original CREP Agreement was removed. This Appendix now only includes a copy of the proposed CREP Amendment.
- Appendix C
 - A new appendix titled “Public Involvement” was added.
 - This appendix provides details on the public meeting held on October 20, 2010, copy of the notice of availability and where it was published, copies of comments received on the Draft EA, responses to those comments, and copies of correspondence received related to the proposed Amendment.
- Executive Summary
 - Changes were made to the appropriate sections in accordance with other major changes described above.

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EXECUTIVE SUMMARY

This Supplemental Environmental Assessment (EA) has been prepared to analyze the potential environmental consequences associated with implementation of an Amendment to the Republican River Conservation Reserve Enhancement Program (CREP) in the State of Colorado. The environmental analysis process is designed to ensure that the public is involved in the process and informed about the potential environmental effects of a Federal action, and to help decision makers take environmental factors into consideration when making decisions related to an action.

This Supplemental EA has been prepared by the United States Department of Agriculture Farm Service Agency (FSA) to satisfy the requirements of the National Environmental Policy Act (NEPA) (Public Law 91-190, 42 United States Code 4321 et seq.); implementing regulations adopted by the Council on Environmental Quality (40 Code of Federal Regulations [CFR] 1500-1508); and FSA implementing regulations, Environmental Quality and Related Environmental Concerns – Compliance with NEPA (7 CFR 799).

Purpose and Need for the Proposed Action

The purpose of the Proposed Action is to implement an Amendment to the Republican River CREP for the State of Colorado. The proposed Amendment is needed to meet the goals and objectives of the Republican River CREP, including the improvement of water quality, restoration of native vegetation, and improvement of wildlife habitat. Further, the proposed Amendment would have positive long term impacts on protected species and their habitats, as well as reducing agricultural use of the Ogallala Aquifer, restoring and enhancing wetlands, and increasing streamflows in the Republican River Basin.

Proposed Action and No Action Alternative

The proposed Republican River CREP Amendment would increase the program enrollment goal by 20,000 acres for a total enrollment of 55,000 acres and open enrollment in Washington and Lincoln counties (which were enrolled to the maximum extent in the Conservation Reserve Program [CRP] at the time of the current Republican River CREP Agreement). The Amendment also proposes to increase total program funding by approximately \$36 million, increase the duration of temporary irrigation for cover establishment from 12 to 24 months, and add additional incentive areas for the purpose of increasing streamflows in the Basin.

The Supplemental EA also includes analysis of the No Action Alternative. Under the No Action Alternative the proposed Amendment would not be implemented; however, the original Republican River CREP Agreement would continue as it is currently administered. The additional benefits of expanding enrollment in CREP and opening enrollment to Washington and Lincoln counties would not be realized.

Summary of Environmental Consequences

It is expected that there would be long term positive impacts associated with implementation of the Proposed Action. A summary of the potential impacts is provided in Table ES-1.

Table ES-1. Summary of Potential Environmental Consequences

Resource	Proposed Action	No Action Alternative
Threatened and Endangered Species	Long term, positive impacts for threatened and endangered species are expected under the Proposed Action. The primary goals of CREP are to improve water quality and to restore native vegetation and wildlife habitat. There is the potential for short term negative impacts to local species during activities associated with the establishment and management of the conservation practices.	The additional benefits of increasing enrollment in CREP would not be realized under the No Action Alternative. While the original CREP would continue as it does currently, enrollment within Washington and Lincoln counties would not occur. Expiring CRP acres in these counties may be converted back to active agricultural land thereby degrading water quality and quantity and impacting wildlife habitat.
Water Resources	The retirement of well rights and removal of agricultural lands from farming would have a long term, positive impact on water resources throughout the seven county CREP area. There would be less groundwater depletion which would increase streamflows over time. Surface water quality would also improve from decreased application of agricultural chemicals, and wetlands would benefit from the newly installed conservation practices. Activities for the establishment and maintenance of practices (such as grading, leveling, etc.) could result in minor, short term impacts to nearby surface waters or wetlands from increased sedimentation in runoff.	The original Republican River CREP would continue, however the additional benefits of increasing enrollment and extending CREP in Washington and Lincoln counties would not be realized. Groundwater withdrawal for agriculture would continue, thus decreasing surface water and groundwater flow. Agricultural chemical inputs would continue to degrade water quality.
Cultural Resources	No direct impacts to architectural properties would occur under the proposed Amendment. Archaeological resources and traditional cultural properties could be affected by the installation and maintenance of conservation practices if ground disturbance is beyond what is normally disturbed by agricultural activities. Site specific environmental evaluation would identify and protect cultural resources prior to implementation of conservation practices.	No change in impacts to cultural resources would occur under the No Action Alternative if agricultural practices remain unchanged.
Socioeconomics	Implementation of the proposed Amendment would result in an additional \$36 million in CREP funding (for a total of \$102 million) within the seven county area. There would be a direct negative impact to the economy from the loss of the additional 20,000 acres of agricultural production, estimated to be approximately \$13.5 million within the entire Republican River Basin. However, this loss would be off-set by the additional CREP funding.	The original Republican River CREP Agreement would remain in place and impacts would be the same as those described in the original CREP EA. Socioeconomic impacts from the original CREP were expected to produce a slight beneficial impact to the economy from the expenditure of \$66 million in the CREP area. There would be an economic loss from decreased agricultural production, but this would be offset by the CREP funding.

Table ES-1. Summary of Potential Environmental Consequences

<i>Resource</i>	<i>Proposed Action</i>	<i>No Action Alternative</i>
Environmental Justice	The counties associated with the proposed Amendment are neither areas of concentrated minority populations nor impoverished areas. Therefore no disproportionate impacts to such groups would occur should the Amendment be implemented.	There would be no change to Environmental Justice under the No Action Alternative.

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ACRONYMS AND ABBREVIATIONS

BEA	Bureau of Economic Analysis	RRWCD	Republican River Water Conservation District
CDLE	Colorado Department of Labor and Employment	SDWR	Safe Drinking Water Regulations
CDWR	Colorado Division of Water Resources	SEIS	Supplemental Environmental Impact Statement
CEQ	Council on Environmental Quality	SHPO	State Historic Preservation Office
CFR	Code of Federal Regulations	TCPs	Traditional Cultural Properties
CPs	Conservation Practices	USACE	United States Army Corps of Engineers
CREP	Conservation Reserve Enhancement Program	USCB	United States Census Bureau
CRP	Conservation Reserve Program	USDA	United States Department of Agriculture
EA	Environmental Assessment	USEPA	United States Environmental Protection Agency
EO	Executive Order	USFWS	United State Fish and Wildlife Service
ESA	Endangered Species Act	USGS	United States Geological Survey
FSA	Farm Service Agency		
IMPLAN	Impact Analysis for Planning		
NEPA	National Environmental Policy Act		
NOA	Notice of Availability		
NRCS	Natural Resources Conservation Service		
OAHP	Office of Archaeology and Historic Preservation		

1.0 INTRODUCTION

The United States Department of Agriculture (USDA) Farm Service Agency (FSA) proposes to implement an Amendment to the Republican River Conservation Reserve Enhancement Program (CREP) in the State of Colorado. This Supplemental Environmental Assessment (EA) has been prepared to analyze the potential environmental consequences associated with implementation of the Proposed Action or No Action Alternative.

1.1 BACKGROUND

1.1.1 Conservation Reserve Program

The FSA administers the Conservation Reserve Program (CRP), the Federal government's largest private land environmental improvement program. CRP is a voluntary program that supports the implementation of long term conservation measures designed to improve the quality of ground and surface waters, control soil erosion, and enhance wildlife habitat on environmentally sensitive agricultural land. The environmental impact of CRP was studied in the 2010 Supplemental Environmental Impact Statement (SEIS) (USDA 2010). The Final SEIS was published on June 18, 2010 and provides FSA decision makers with programmatic level analyses that provide a context for state specific Programmatic EAs.

1.1.2 Conservation Reserve Enhancement Program

The CREP was established in 1997 under the authority of CRP to address agriculture related environmental issues by establishing conservation practices (CPs) on agricultural lands using funding from State, Tribal, and Federal governments as well as non-government sources. CREP addresses high priority conservation issues in defined geographic areas such as watersheds. Producers who enroll their eligible lands in CREP receive financial and technical assistance for establishing CPs on their land as well as annual rental payments. Once eligible lands are identified, site-specific environmental reviews and consultation with and permitting from other Federal agencies are completed as appropriate. Eligible land criteria are set forth by the Farm Security and Rural Investment Act of 2008 (Farm Bill) and detailed in the FSA Handbook: *Agricultural Resource Conservation Program for State and County Offices*. Participants are also required to prepare a conservation plan that details the establishment and maintenance of CPs to ensure the goals of CREP are met throughout the life of the contract.

1.1.3 Current Republican River CREP Agreement

The Republican River CREP was proposed in 2005 (USDA 2005) and a Programmatic EA, *Final Programmatic Environmental Assessment for the Republican River Basin and High Plains Region Conservation Reserve Enhancement Program Agreements for Colorado*, which evaluated the impacts of the program, was completed in May 2006 (USDA 2006).

The Republican River Basin spans parts of eastern Colorado, western Kansas, and western Nebraska (Figure 1.1-1). The Colorado portion of the basin lies in Colorado's northern high plains, a semi-arid region that receives on average fewer than 20 inches of rainfall annually.

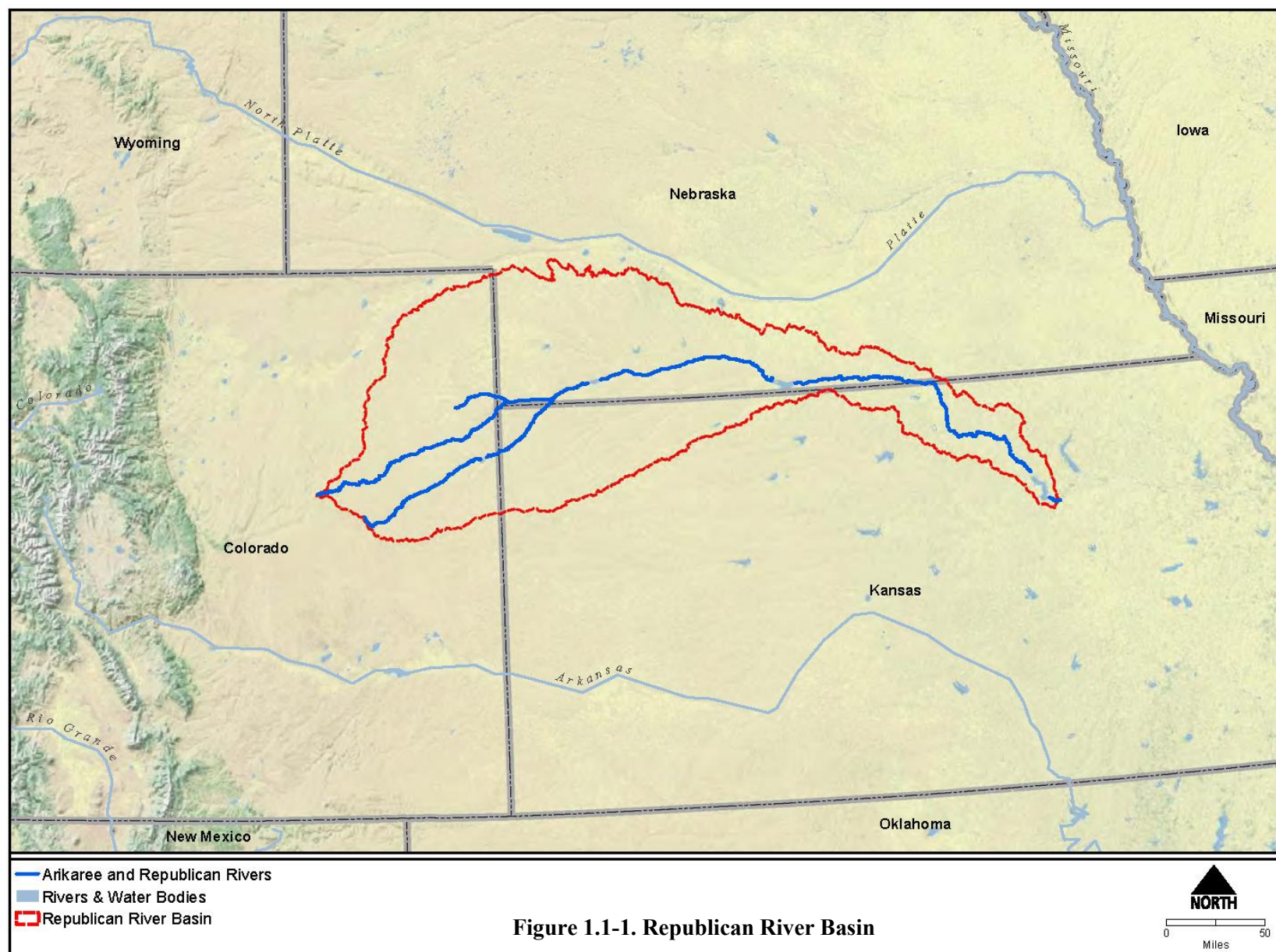


Figure 1.1-1. Republican River Basin

The Republican River Basin is a major contributor to the Ogallala Aquifer, which has been identified as a national concern regarding water quantity and quality. Over 4,000 wells within the Republican River Basin in Colorado tap into the Ogallala Aquifer, supplying the basin's cropland, livestock, municipal, domestic, and commercial entities. Cattle feedlots and ranching, crops (corn and winter wheat), and hogs are the dominant agricultural trends in the Republican River Basin and are a source of nutrients and sediments within the basin. Republican River Basin native habitat can be broadly categorized into three complex types: plains forest riparian and wetlands, sandsage prairie, and loess prairie. The basin has 560,000 irrigated acres of cropland in Colorado.

The original Republican River CREP had an enrollment goal of 35,000 acres and included all of Phillips and Yuma counties and those portions of Kit Carson, Logan, and Sedgwick counties that overlie the Ogallala Aquifer within the Republican River Basin (Figure 1.1-2). All participants enrolling eligible irrigated cropland within the Republican River CREP must agree to permanently retire the water associated with the land being enrolled. The primary objectives of the original Republican River CREP were to:

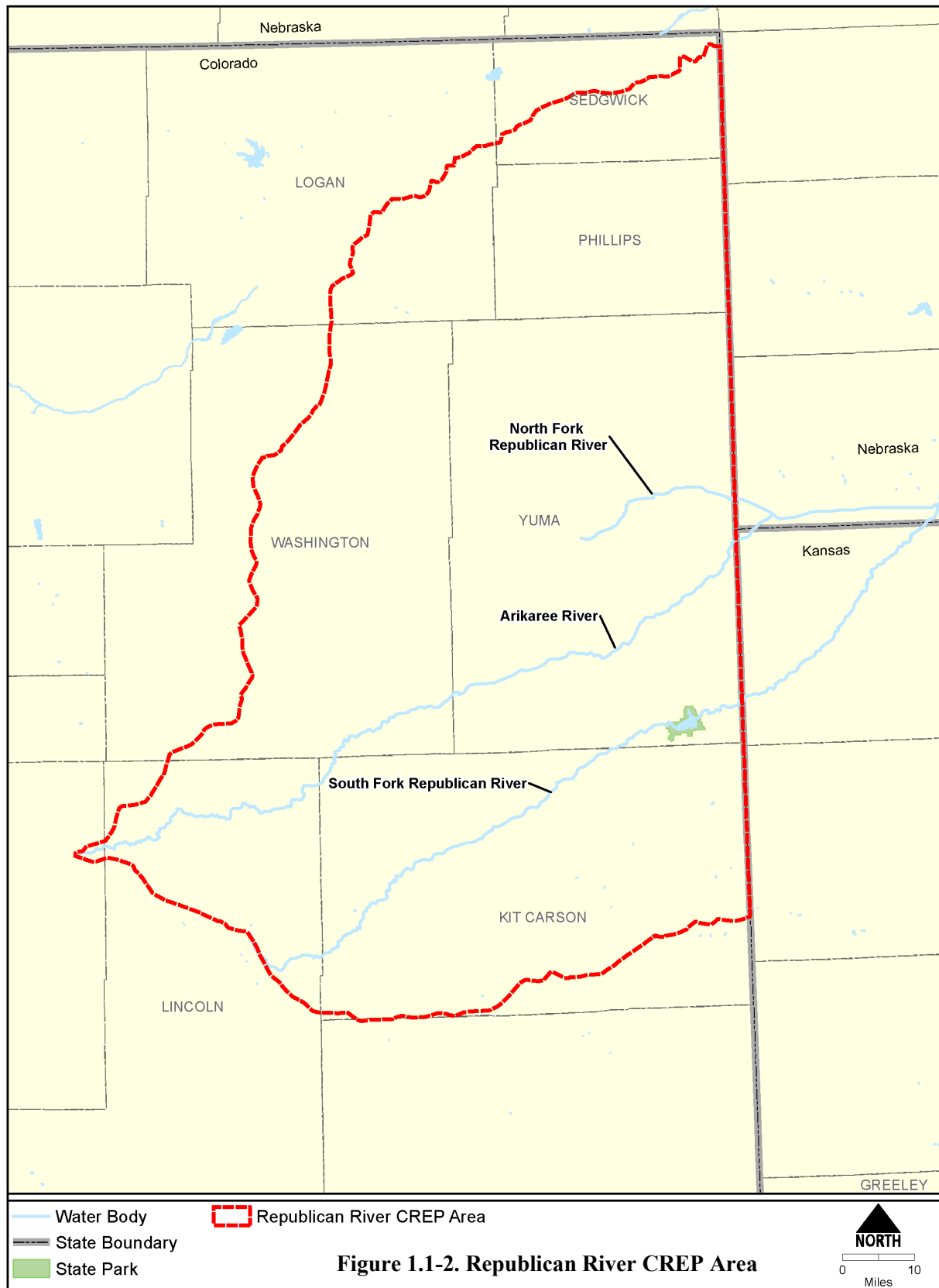
- Reduce soil erosion;
- Reduce fertilizer and pesticide application;
- Establish native grassland;
- Restore and enhance degraded wetlands;
- Restore and enhance riparian habitat;
- Reduce agricultural use of the Ogallala Aquifer;
- Increase streamflow in all streams associated with the Basin;
- Reduce energy consumption; and
- Reduce percentage of groundwater test wells containing nitrogen levels above United States Environmental Protection Agency (USEPA) standards.

As of 2009, there were 19,555 acres enrolled in CREP within the Republican River Basin (Table 1.1-1).

Table 1.1-1. Current Enrollment Irrigated Acreage in CRP and CREP by County

County	Total Cropland Acres	Cumulative CRP Acres	CREP Acres
Kit Carson	849,670	239,235	10,427
Logan	570,050	132,899	0
Phillips	387,974	48,174	982
Sedgwick	184,784	20,471	0
Yuma	703,827	120,888	8,146
Total	4,042,808	939,772	19,555

Source: USDA 2007 and 2009



1.1.4 Republican River Compact

In 1942, Colorado, Nebraska, and Kansas entered into a compact to allocate the waters of the Republican River Basin above the junction of the Republican and Smoky Hill Rivers in Kansas. There are six major purposes of the Compact: (1) to provide for the most efficient use of the waters of the Republican River Basin for multiple purposes; (2) to provide for an equitable division of such waters; (3) to remove all causes, present, and future, which might lead to controversies; (4) to promote interstate comity; (5) to recognize that the most efficient utilization of the waters within the Basin is for beneficial consumptive use; and (6) to promote joint actions by the States and the United States in the efficient use of water and the control of destructive floods.

In 2002, the States of Kansas, Nebraska, and Colorado entered into a Final Settlement Stipulation to resolve pending litigation regarding claims that Colorado and Nebraska had violated the Republican River Compact. In 2004, the Republican River Water Conservation District (RRWCD) was established, and includes the area in Colorado of Phillips and Yuma counties, and those portions of Kit Carson, Lincoln, Logan, Sedgwick, and Washington counties within the Republican River Basin. The RRWCD was established for the purpose of cooperating with and assisting the State of Colorado to carry out the State's duty to comply with the Compact and was given powers to carry out this purpose.

The RRWCD Water Activity Enterprise is in the process of planning the construction of a 12.7 mile pipeline to deliver water from wells located 8 to 15 miles north of the North Fork of the Republican River to that same stream at the Colorado/Nebraska State line. The water pumped through the pipeline will be groundwater currently being used for irrigation. The groundwater delivered to the stream, less any losses due to evaporation, will offset stream depletions in order to comply with Colorado's Compact Allocations. The RRWCD Water Activity Enterprise has acquired the permanent water rights of 62 well permits to change the use of the wells from irrigation to allow them to be used for augmentation of the stream in the North Fork of the Republican River. In making that change, the future pumping of the wells will be limited to 14,798 acre-feet annually (RRWCD 2009). The proposed construction of the Compact Compliance Pipeline is not a part of CREP, but is considered a cumulative action since it occurs within the same geographic area as CREP and some wells within the CREP area could be used to supply water to the pipeline. The final decision on whether or not to implement the CREP Amendment would not affect proposed construction or future operation of the pipeline. The pipeline will be further addressed in Chapter 5.0 of this EA.

1.2 THE PROPOSED ACTION

The proposed Republican River CREP Amendment (herein referred to as the Amendment, Appendix A) would increase the program enrollment goal by 20,000 acres for a total enrollment of 55,000 acres and open enrollment in parts of Washington and Lincoln counties (which were enrolled to the maximum extent in CRP at the time of the original Republican River CREP Agreement). The Amendment also proposes to increase total program funding by approximately \$36 million, increase the duration of

temporary irrigation for cover establishment from 12 to 24 months, and add additional incentive areas for the purpose of increasing streamflows in the Basin.

1.3 PURPOSE AND NEED

The purpose of the Proposed Action is to implement an Amendment to the Republican River CREP for the State of Colorado. The proposed Amendment is needed to meet the goals and objectives of the Republican River CREP, including the improvement of water quality, restoration of native vegetation, and improvement of wildlife habitat. Further, the proposed Amendment would have positive long term impacts on protected species and their habitats, as well as reducing agricultural use of the Ogallala Aquifer, restoring and enhancing wetlands, and increasing streamflows in the Republican River Basin.

1.4 REGULATORY COMPLIANCE

This Supplemental EA has been prepared to satisfy the requirements of the National Environmental Policy Act (NEPA) (Public Law 91-190, 42 United States Code 4321 et seq.); implementing regulations adopted by the Council on Environmental Quality (CEQ) (40 Code of Federal Regulations [CFR] 1500-1508); and FSA implementing regulations, Environmental Quality and Related Environmental Concerns – Compliance with NEPA (7 CFR 799). The intent of NEPA is to protect, restore, and enhance the human environment through well-informed Federal decisions. A variety of laws, regulations, and Executive Orders (EOs) apply to actions undertaken by Federal agencies and form the basis of the analysis presented in this Supplemental EA.

1.5 PUBLIC AND AGENCY INVOLVEMENT

In accordance with NEPA, a Federal agency must coordinate with other Federal and state agencies with an interest in the Proposed Action or resources potentially affected by that action as well as concerned public. The proposed Amendment to the Republican River CREP was developed in coordination with several Federal and state agencies and stakeholders (see Chapter 8.0 and Appendix B). In addition, given the high public interest in CREP and other conservation programs in the Republican River Basin, a public meeting was held during the public comment period for this Supplemental EA. A public meeting is not required for this level of NEPA analysis; however, FSA and the State of Colorado felt it was appropriate for this particular project. The Supplemental EA was made available to the public and interested agencies via the internet. In addition, paper copies were available for review in the FSA county offices. Appendix C provides additional information on public involvement activities for this project and copies of comments received.

1.6 ORGANIZATION OF EA

This Supplemental EA assesses the potential impacts of the Proposed Action and the No Action Alternative on potentially affected environmental and economic resources.

- Chapter 1.0 provides background information relevant to the Proposed Action, and discusses its purpose and need.

- Chapter 2.0 describes the Proposed Action and alternatives.
- Chapter 3.0 describes the baseline conditions (i.e., the conditions against which potential impacts of the Proposed Action and alternatives are measured) for each of the potentially affected resources.
- Chapter 4.0 describes potential environmental consequences on these resources.
- Chapter 5.0 describes potential cumulative impacts and irreversible and irretrievable resource commitments.
- Chapter 6.0 discusses mitigation measures utilized to reduce or eliminate impacts to protected resources.
- Chapter 7.0 lists the preparers of this document.
- Chapter 8.0 contains a list of the persons and agencies contacted during the preparation of this document; and
- Chapter 9.0 contains references.
- Appendix A contains a copy of the proposed CREP Amendment.
- Appendix B contains copies of letters sent to interested parties and agencies.
- Appendix C provides Public Involvement information, materials, and comments received.

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2.0 DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

2.1 PROPOSED ACTION

FSA proposes to implement an Amendment to Colorado's Republican River CREP by increasing the enrollment goal, increasing program funding, increasing the allowance of temporary irrigation, and adding additional incentive areas. No changes in the CPs available to participants, land eligibility requirements, or land preparation techniques are proposed. Only those activities proposed in the CREP Amendment, the impacts of which have not been analyzed in the original Republican River CREP EA (USDA 2006) or the CRP SEIS (USDA 2010), are addressed in this Supplemental EA. Table 2.1-1 provides a summary of the original Republican River CREP and the proposed Amendment. The main components of the proposed Amendment are described further in Sections 2.1.1 through 2.1.4.

Table 2.1-1. Summary of Components of the Republican River CREP Agreement and its Proposed Amendment

	<i>Republican River CREP Agreement</i>	<i>Proposed Amendment</i>
Acreage	35,000	Increase 20,000 (55,000 total)
Geographic Area	Phillips, Yuma, Kit Carson, Logan, Sedgwick counties	Addition of Washington and Lincoln counties
Conservation Practices	<ul style="list-style-type: none"> • CP2, Native Grasses • CP4D, Vegetation Planting (short grass) • CP4D, Vegetation Planting (tall grass) • CP4D, Vegetation Planting (pivot corners) • CP22, Riparian Buffers • CP23, Wetland Restoration • CP 23A, Playa Lakes Restoration 	No Change
Funding	\$66,295,000 14 or 15 year contracts	Increase \$36,205,000 (total \$102,500,00) 14 or 15 year contracts
Temporary Irrigation	Allowed for 12 months for cover establishment	Increase duration to 24 months for cover establishment
Incentive Areas	North Fork and South Fork of Republican River	Addition of Arikaree River, and an area north of Wray (Target Zone)

Similar to the original CREP Agreement, the primary goals and objectives of the proposed Amendment are to:

- Obtain 60,000 to 75,000 acre-feet of annual water savings through the purchase of permanent water rights or cancellation of well permits through the RRWCD Water Activity Enterprise;
- Reduce soil erosion from 751,633 tons to 165,000 tons per year;
- Reduce annual fertilizer and pesticide application from all enrolled acres by 4,606 tons per year from 2004 levels;

- Enroll up to 500 acres of riparian buffer and wetland practices to permit natural restoration of stream and wetland hydraulic and geomorphic characteristics which meet habitat requirements of the targeted fish species;
- Reduce, by approximately 10 percent from 2004 levels, the number of groundwater wells containing nitrogen levels above USEPA standards; and
- Reduce the total use of electricity by 3.29 million kilowatt hours through reductions in groundwater pumping on all acres enrolled.

2.1.1 Acreage and Geographic Area

The proposed Amendment would increase the enrollment goal by 20,000 acres for a total of 55,000 acres. This enrollment would significantly reduce the amount of irrigation water consumptive use and reduce agricultural chemicals and sediment from entering waters of the State from agricultural lands and transportation corridors. Like with the original CREP Agreement, the establishment of permanent vegetative covers would reduce ground and surface water use and reduce non-point sources of contaminants (i.e., the application of fertilizers and pesticides) thereby enhancing associated wildlife habitat, both terrestrial and aquatic, and conserving energy. Enrollment goals have been determined as follows:

- CP22, CP23, CP23A – up to 500 acres.
- CP2 and CP4D – up to 54,500 acres.

Like with the original CREP Agreement, irrigated cropland would only be eligible for enrollment in the Republican River CREP when producers submit a completed and signed State certification agreement which certifies that the producer will cease applying irrigation water on all irrigated cropland acres accepted for enrollment. Center-pivot corners (non-irrigated dryland cropland) may be enrolled with adjacent enrolled irrigated cropland (no more than 5,000 acres total in CREP area).

County limitations prohibit a county from enrolling more than 25 percent of its cropland in CRP or CREP without county approval (see CRP SEIS for additional information on county limitations and exceptions, USDA 2010). At the time of the original CREP Agreement, Washington and Lincoln counties were enrolled to the maximum extent in CRP and were not eligible for enrollment in CREP. Since implementation of the original CREP Agreement, CRP acres in Washington and Lincoln counties have expired or will be expiring in the near future making them eligible for enrollment in CREP under the proposed Amendment.

2.1.2 Funding

Under the proposed Amendment, Republican River CREP funding would increase by approximately \$36,205,000 for a total of \$102,500,000 (Federal and non-Federal sources), assuming all 55,000 acres are enrolled. Producers would enter into 14 or 15 year contracts to receive financial assistance in the form of

one-time cost-share payment for the installation of CPs, annual per acre rental payments, and bonus or incentive payments where applicable.

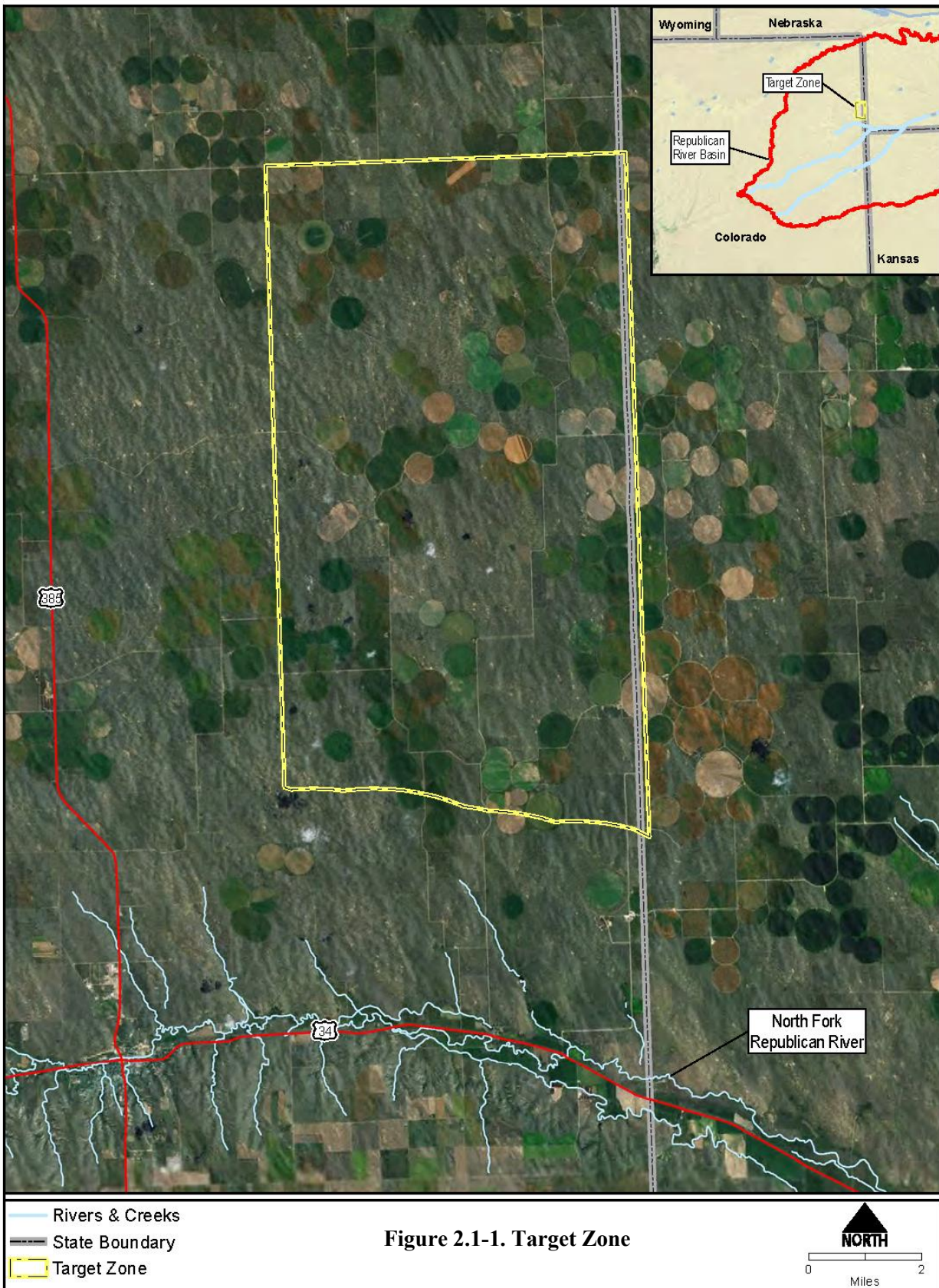
2.1.3 Temporary Irrigation

Under the Amendment, participants would be allowed to apply no more than ½ acre foot of irrigation water per acre to enrolled land during the first 24 months of the contract. Temporary irrigation would only be allowed when necessary to establish the vegetative conservation cover as outlined in an approved conservation plan.

2.1.4 Incentive Areas

All producers enrolling land in the Republican River CREP are eligible for annual non-federal payments per acre enrolled (Direct State Partner Payment, herein referred to as an incentive or bonus payment). Producers enrolling land within designated incentive areas are eligible for *higher* annual incentive payments than those outside the incentive areas. Incentive payments for the North and South Fork of the Republican River were available in the original CREP. The proposed Amendment adds the following incentive areas: a three-mile corridor of the Arikaree River and an area north of Wray, referred to in the proposed Amendment as a “Target Zone” (Figure 2.1-1).

The incentive areas in the proposed Amendment have been added for the specific purpose of increasing streamflows in the Basin. Retirement of lands from irrigation within the incentive areas along the three rivers would increase streamflows by leaving water in the river systems. Within the area north of Wray, water may be pumped directly through a pipeline to the North Fork of the Republican River to increase streamflows. The amount of water to be pumped should not exceed a maximum of 14,798 acre-feet/year (historical consumption) and most years would be less. The planning, construction, and future operation of the pipeline are not part of the CREP (see Chapter 5.0, Cumulative Impacts).



2.2 NO ACTION ALTERNATIVE

Under the No Action Alternative, the original Republican River CREP would remain in place and the increase in acres eligible for enrollment proposed by its Amendment would not be made available to producers. Washington and Lincoln counties would remain ineligible for CREP. Under the No Action Alternative, the remaining 15,445 acres of the original Republican River CREP enrollment goal could still be enrolled in the five CREP counties (see Section 1.1.3). The impacts of the original Republican River CREP were assessed in the *Final Programmatic Environmental Assessment for the Republican River Basin and High Plains Region Conservation Reserve Enhancement Program Agreements for Colorado* (USDA 2006).

2.3 RESOURCES ELIMINATED FROM ANALYSIS

CEQ regulations (40 CFR §1501.7) state that the lead agency shall identify and eliminate from detailed study the issues which are not important or which have been covered by prior environmental review, narrowing the discussion of these issues in the document to a brief presentation of why they would not have a dramatic effect on the human or natural environment. Because the Proposed Action is an Amendment to an existing CREP Agreement, the environmental impacts of which have been analyzed previously, the scope of this analysis will be limited to those resources that are potentially impacted by the changes proposed in the Amendment. Resources that have been eliminated from further analysis include: biological resources (with the exception of threatened and endangered species); soils; recreation; traffic and transportation; noise; air quality; human health and safety; coastal zones; and other formally classified lands.

The analysis of impacts to biological resources in this document will be limited to Federally threatened and endangered species and their designated critical habitats. Both vegetation and wildlife were described on a regional level that included Washington and Lincoln counties, in the original Republican River CREP EA (USDA 2006). The potential impacts to those resources were found to be positive in the long term. Making more acres available for enrollment is not expected to change that conclusion.

Soils were also assessed on a regional level in the original Republican River CREP EA (USDA 2006). Positive impacts are expected to result from establishing CPs, which would stabilize soils and reduce soil erosion. Making more acres available for enrollment is not expected to change that conclusion.

The analysis of potential impacts to recreation was, like biological resources and soils, considered on a regional level, which included Washington and Lincoln counties. Also like these resources, the proposed Amendment is expected to have long term positive effects on recreation by improving habitat for both terrestrial and aquatic species, thus improving opportunities for hunting, fishing, and wildlife observation.

Other resource areas eliminated from analysis in the original Republican River CREP EA are also eliminated in this Supplemental EA because the Proposed Action has limited to no potential to impact those resources. Those resource areas include: traffic and transportation; noise; air quality; human health and safety; coastal zones; and other formally classified lands.

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3.0 AFFECTED ENVIRONMENT

This chapter provides a description of the existing environmental conditions that have the potential to be affected from implementation of the Proposed Action. The existing environment will serve as the baseline against which impacts of the Proposed Action will be measured (Chapter 4). Resource areas potentially impacted by the Proposed Action and covered in this EA include:

- Threatened and Endangered Species
- Water Resources
- Cultural Resources
- Socioeconomics
- Environmental Justice

Many resource areas were described on a regional level in the original Republican River CREP EA (USDA 2006). Washington and Lincoln counties are located within the same geographic region and the affected environment would not significantly change with the addition of these two counties. Therefore, discussions of those resources in this document are kept brief and refer to the original analysis.

3.1 THREATENED AND ENDANGERED SPECIES

Threatened and endangered species are those that are protected by the Endangered Species Act (ESA). Critical habitat is designated as that habitat necessary for the recovery of threatened and endangered species, and like these species, is protected by the ESA. The United States Fish and Wildlife Service (USFWS) is the lead agency for enforcing the policies of the ESA and for designating threatened and endangered species and their critical habitat.

Table 3.1-1 lists those Federally threatened and endangered animal species with the potential to occur within all of Lincoln and Washington counties and their potential to occur within the CREP area. No Critical Habitat for these species has been designated by the USFWS in Washington or Lincoln counties.



Black footed ferret, photo courtesy of USFWS

Table 3.1-1. Threatened and Endangered Species in Lincoln and Washington Counties

Species	Status	Lincoln County	Washington County	Potential Occurrence in CREP Area
Black footed ferret <i>Mustela nigripes</i>	E	X	X	Yes
Piping Plover <i>Charadrius melodus</i>	T	X	X	No
Least Tern ¹ <i>Sterna antillarum</i>	E	X	X	Yes
Whooping Crane ² <i>Grus americana</i>	E	X	X	No
Pallid sturgeon <i>Scaphirhynchus albus</i>	E	X	X	No
Western prairie fringed orchid <i>Platanthera praeclara</i>	E	X	X	No

Notes:

E = endangered T= threatened

¹ Only the interior population (including Colorado) of the Least Tern is considered Endangered.

² Not seen in Colorado since 2002

Source: Colorado Division of Wildlife 2010, USFWS 2010

Black footed ferrets (*Mustela nigripes*) are associated with mixed and short grass prairies consisting of short and tall grasses, forbs, sedges, and an open canopy of oak species. Ferrets depend almost exclusively on prairie dogs as a food source and use its burrows for shelter and denning (USFWS 2010). Any actions that kill prairie dogs or alter their habitat could prove detrimental to black footed ferrets occupying prairie dog towns.

Piping Plovers (*Charadrius melodus*) in the Great Plains make their nests on open, sparsely vegetated sand or gravel beaches adjacent to alkali wetlands, and on beaches, sand bars, and dredged material islands of major river systems. The piping plover occurs most commonly in the Arkansas and South Platte River drainages (USFWS 2010), which are outside the limits of the Republican River CREP in Washington and Lincoln counties.

Interior Least Terns (*Sterna antillarum*) nest on barren beaches of sand, gravel or shells, on dry mudflats and salt-encrusted soils (salt flats), and at sand and gravel pits along rivers. A shallow, constant supply of water that serves as a source of fish and crustaceans is an essential component of tern nesting habitat (USFWS 2009). When suitable nest habitat is not available on the open river channel, least terns will nest on the sandy beach zone of sandpits immediately adjacent to the river (USGS 2006).

Whooping Cranes (*Grus Americana*) stop on wetlands, river bottoms, and agricultural lands along their migration route. The only remaining wild flock of endangered Whooping Cranes depends on the Platte River as a rest stop during its multi-week migration between Texas and Canada (National Wildlife Federation 2007); however, whooping cranes have not been documented in Colorado since 2002 (Colorado Division Wildlife 2010). The Platte River is outside of the limits of the Republican River CREP in Washington and Lincoln counties.

Pallid sturgeons (*Scaphirhynchus albus*) require large, turbid, free-flowing rivers with rocky or sandy substrates. Pallid sturgeons occur in the Missouri and Mississippi Rivers outside Colorado, but water

reductions in the North Platte, South Platte and Laramie River Basins may affect the species. These areas are outside the Republican River CREP area in Washington and Lincoln counties (USFWS 1993).

Western prairie fringed orchid (*Platanthera praeclara*) occur most often in mesic to wet unplowed tallgrass prairies and meadows but have been found in old fields and roadside ditches. This orchid does not occur in Colorado, but reduced flows in the North Platte, South Platte, and Laramie River Basins may affect the species. These areas are outside the Republican River CREP area in Washington and Lincoln counties (USFWS 2010).

3.2 WATER RESOURCES

For this analysis, water resources include groundwater, surface water, water quality, and wetlands. The Clean Water Act, the Safe Drinking Water Act, and the Water Quality Act are the primary Federal laws that protect the nation's waters including lakes, rivers, aquifers, and wetlands. In addition, the states of Colorado, Kansas, and Nebraska are party to the Republican River Compact, which governs the use of waters of the Republican River and its tributaries.

3.2.1 Groundwater

The predominant source of groundwater supply within the Republican River Basin is the Ogallala Aquifer. The Ogallala Aquifer is the most intensively used aquifer in the United States for irrigation, public supply, and self-supplied industry, producing almost two-times more water than any other United States aquifer. Groundwater withdrawals from the aquifer in the year 2000 accounted for about 20 percent of total groundwater withdrawn in the United States. Most (97 percent) of the water withdrawn is used for irrigation (USGS 2009). Table 3.2-1 provides the irrigated cropland acres within the counties contained in the Republican River CREP area and the most current data on the amount of water applied for irrigation. The data shown in the table is for the entire county, not just the CREP area. These data were compiled from the *Estimated Use of Water in the United States*, a series of reports that are compiled by United States Geological Survey (USGS) every five years (2005 is the most current data available). Over 1.4 million acre-feet of water (surface water and groundwater) was used for irrigation in all of the CREP counties in 2005.

Table 3.2-1 Annual Irrigation in Republican River CREP Counties (2005)

County	Irrigated Cropland Acres	Annual Irrigation (acre-feet)		
		Groundwater	Surface Water	Total
Kit Carson	162,850	314,525	470	314,995
Lincoln	4,650	3,730	1,759	5,489
Logan	103,750	3,394	315,410	318,804
Phillips	66,860	113,829	123	113,952
Sedgwick	48,130	63,299	47,068	110,368
Washington	48,470	125,781	6,866	132,647
Yuma	268,640	427,110	10,048	437,158
Total	703,350	1,051,668	381,745	1,433,413

Source: USGS 2005

The Ogallala Aquifer has been identified as a national concern regarding water quantity. Wells within Colorado not only irrigate over 2 million acres of cropland, but also provide municipal, domestic, commercial, and livestock water supply (CDWR 2009). Large capacity wells drilled between the 1950s through the 1970s have decreased the amount of storage in the Ogallala Aquifer in Colorado. The aquifer is over-allocated, and groundwater withdrawals have exceeded recharge since the early 1960s (State of Colorado 2005). Table 3.2-2 provides the number of completed wells through 2009 in each CREP county as well as the number of those wells with irrigation designated as the major use.

Table 3.2-2 Completed Wells in CREP Counties (2009)

County	Total Number of Completed Wells	Irrigation Designated as Major Use
Kit Carson	3,050	959
Lincoln	2,024	132
Logan	4,355	644
Phillips	1,107	438
Sedgwick	966	384
Washington	2,558	396
Yuma	5,832	1,767
Total	19,892	4,720

Source: CDWR 2009

After litigation between the States of Colorado, Kansas, and Nebraska, the States entered into a settlement agreement in 2002, which was approved by the United States Supreme Court that impacts to surface water from groundwater consumption would be counted against a States' allocation under the Compact. From 2004 to 2008, Colorado beneficially consumed an average of approximately 9,300 acre-feet per year more than allocated to the State under the Republican River Compact. However, the over-use has been decreasing each year since 2004 and was just under 6,000 acre-feet in 2008 (CDWR 2008). A major concern regarding the over-use of groundwater is the subsequent impact on surface streamflows.

3.2.2 Surface Water

Colorado's northern high plains lie in a semi-arid region east of the Rocky Mountains and receive on average fewer than 20 annual inches of precipitation (NRCS 2008). The Republican River Basin drains approximately seven percent of the state's area in northeastern Colorado. Water supplies in the basin come from the Republican River and its tributaries. Intensive groundwater pumping for agriculture and

prolonged drought have contributed to a reduction in surface water streamflow in all of the streams and tributaries within the Basin. Studies indicate that Colorado groundwater depletions reduce Republican River streamflow to neighboring states by approximately 150 additional acre-feet every year (State of Colorado 2005). Over 380,000 acre-feet of surface water was used for irrigation purposes within the CREP counties in 2005 (see Table 3.2-1).

3.2.3 Water Quality

The Ogallala Aquifer has been identified as a national concern regarding water quality. Well drilling, an increase in irrigated crop production, and a prolonged drought have all contributed to localized reduced groundwater quality. In general, groundwater in the Ogallala Aquifer currently meets Federal and State guidelines for drinking-water quality; however, irrigation contributes to recharge in this semiarid area. The quality of water recharging the aquifer has been altered or degraded from the increased input of agricultural chemicals and natural salt deposits to the water table. Concentrations of dissolved solids, nitrate, pesticides, and other constituents are elevated at the water table, reflecting cropland application of agricultural chemicals (USGS 2009).

Nearly ten percent of monitoring wells sampled throughout the Republican River Basin from 1992-2001 under the Colorado Agricultural Chemicals and Groundwater Protection Act failed to meet USEPA drinking water standards for nitrogen content (State of Colorado 2005). A survey completed by the USGS of groundwater quality found that of the Ogallala survey wells tested, eight percent had at least one pesticide compound detected, six percent had at least one volatile organic compound detected, four percent exceeded the dissolved-solids Safe Drinking Water Regulations (SDWR), and one percent exceeded the sulfate SDWR (USGS 2007). Furthermore, naturally occurring heavy metals exceeded guidelines in localized areas of the aquifer. The maximum contaminant levels for arsenic, iron, uranium, and radon were also exceeded (USGS 2007).

3.2.4 Wetlands

Wetlands are broadly considered “waters of the United States” and are defined by the United States Army Corps of Engineers (USACE) as areas that are inundated and saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions (USACE 1987).

Generally, wetlands in northeastern Colorado typically consist of riparian wetlands and playa lakes. Riparian wetlands are associated with moving water and are seasonally flooded. They generally occur as complexes of forested, scrub shrub and emergent wetlands that are interspersed with uplands.

Playa lakes are shallow, depressional wetlands that hold water following rainstorms but eventually dry up, resulting in temporary or seasonal wetlands. They are generally round and average about 17 acres in size. Open water or wet meadow communities can occur in and around playa lakes. Because of their isolated nature, playa lakes are not currently regulated by the USACE.

3.3 CULTURAL RESOURCES

Cultural resources consist of prehistoric and historic sites, structures, districts, artifacts, or any other physical evidence of human activities considered important to a culture, subculture, or community for scientific, traditional, religious, or other reasons. Cultural resources can be divided into three major categories: archaeological resources (prehistoric and historic), architectural resources, and traditional cultural properties (TCPs). Archaeological resources are locations and objects from past human activities. Architectural resources are those standing structures that are usually over 50 years of age and are of significant historic or aesthetic importance to be considered for inclusion in the National Register of Historic Places (National Register). TCPs hold importance or significance to American Indians or other ethnic groups in the persistence of traditional culture.

Archaeological and architectural resources were described for Kit Carson, Logan, Phillips, Sedgewick, and Yuma counties in the original CREP EA. Therefore, only architectural resources within the CREP area in Washington and Lincoln counties are described in this document (there are no known archaeological resources). TCPs were described in the original CREP EA for the entire state and will not be discussed further in this Supplemental EA (USDA 2006). Table 3.3-1 lists the properties on the National Register within the CREP area in Washington and Lincoln counties (OAHF 2010).

Table 3.3-1. Properties and Distinctive Features of Lincoln and Washington Counties

<i>Name</i>	<i>Location</i>	<i>Distinctive Features</i>
Lincoln County		
Martin Homestead	Genoa	1899, original sod house and large frame barn, both typical in design, materials and workmanship for their place and period of construction. The fourth generation of the Martin family continues to work the farm.
World's Wonder View Tower	Genoa	1926, began as a commercial and recreation center designed to profit from the needs of rail and highway travelers. This type of tourist facility, once found on every major highway, is now a rare resource.
Washington County		
Akron Gymnasium	Akron	1938, large multi-use auditorium/gymnasium is an important record of the federal relief programs administered during the Great Depression. The gymnasium with its striking domed concrete roof and skylights remains a notable modern landmark in Akron.
Akron Public Library	Akron	1931, one-story brick library features an interesting oblique entry. The building was constructed solely with local funding during the years of the Great Depression and continues to serve the community.
Washington County Courthouse	Akron	1910, courthouse constructed by prominent Denver architect John J. Huddart.
Hoopes Drug Store	Otis	1892, wood frame commercial building which contributed to the commercial success of this high plains agricultural community.
Otis Commercial District	Otis	Located in the 100 block of S. Washington and 102 N. Washington. The historic economic base of the Colorado High Plains is agricultural, and this commercial district served the surrounding farm and ranch families.
Otis Municipal Waterworks System	Otis	1919, first water system independent of the railroad in the town. The Water Tower, 110 feet, is the tallest structure in town and serves as a local landmark. Built by Chicago Bridge and Iron Works.
Schliesfsky's Dime Store	Otis	Date unknown. The second floor of this simple frame building functioned as the first meeting hall in Otis.

Source: OAHF 2010

3.4 SOCIOECONOMICS

For this analysis, socioeconomics includes investigations of farm and non-farm employment and income, and farm production expenses. The region of influence is limited to the Colorado counties within the Republican River Basin. Five of these counties (Kit Carson, Logan, Phillips, Sedgewick, and Yuma) were addressed in the original CREP EA (USDA 2006); however, the increase in acreage enrollment and funding would apply to the entire CREP area. Sources for data reported in this section include an *Economic Impact Analysis for Reduced Irrigated Acreage in Four River Basins in Colorado* (used data from the 2002 Agricultural Census) (Thorvaldson and Pritchett 2006); the 2007 Agricultural Census data provided by the National Agricultural Statistics Service (USDA 2007); the Colorado Department of Labor and Employment (CDLE 2010); and Bureau of Economic Analysis (BEA 2008). The most current available data was used from each source.

3.4.1 Non-Farm Employment and Income

In 2008, there were 35,582 jobs within the CREP counties (BEA 2008). Table 3.4-1 provides a breakdown of farm and non-farm employment by county. The total aggregate non-farm employment income for the basin was over \$1 billion and farm employment income was over \$326 million in 2008 (BEA 2008). The unemployment rate within the basin in 2009 ranged from 3.5 to 5.4 percent (CDLE 2010).

Table 3.4-1. Employment in CREP counties

<i>County</i>	<i>Total Employment (number of jobs)</i>	<i>Farm Employment (number of jobs)</i>	<i>Non-Farm Employment (number of jobs)</i>
Kit Carson	5,038	916	4,122
Lincoln	3,410	573	2,837
Logan	13,210	1,295	11,915
Phillips	2,606	417	2,189
Sedgewick	1,545	297	1,248
Washington	2,898	1,048	1,850
Yuma	6,875	1,560	5,315
Total	35,582	6,106	29,476

Source: BEA 2008

3.4.2 Farm Employment, Income, and Production Expenses

Agriculture has been a major influence on both past trends and present conditions in almost every socioeconomic aspect in the Republican River Basin. The total land area of the basin is over 8 million acres, with approximately 90 percent of the land area in farms and ranches (Thorvaldson and Pritchett 2006). Within the basin in 2007, there were 5,301 hired farm workers on 4,870 farms accounting for a payroll of \$58.5 million (USDA 2007). Average annual wage for the agricultural industry in Colorado was \$28,600 in 2009 (based on an average weekly wage of \$550 [CDLE 2010]).

The value of irrigated crop sales within the basin totaled over \$360 million in 2002. Corn grain represented the highest percentage of sales (\$206 million, 56%) followed by hay (\$75 million, 20%) (Thorvaldson and Pritchett 2006). In 2007, total farm production expenses exceeded \$1.6 billion within

the CREP counties. The purchase of fertilizer, lime, soil conditioners, and chemicals accounted for approximately \$123 million (USDA 2007).

3.5 ENVIRONMENTAL JUSTICE

EO 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, requires a Federal agency to “make achieving environmental justice part of its mission by identifying and addressing as appropriate, disproportionately high human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations.” A minority population can be defined by race, by ethnicity, or by a combination of the two classifications.

According to CEQ, a minority population can be described as being composed of the following groups: American Indian or Alaska Native, Asian or Pacific Islander, Black, not of Hispanic origin, or Hispanic and exceeding 50 percent of the population in an area or the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population (CEQ 1997). The United States Census Bureau (USCB) defines ethnicity as either being of Hispanic origin or not being of Hispanic origin. Hispanic origin is further defined as “a person of Cuban, Mexican, Puerto Rican, South or Central America, or other Spanish culture or origin regardless of race” (USCB 2001).

Each year the USCB defines the national poverty thresholds, which are measured in terms of household income and are dependent upon the number of persons within the household. Individuals falling below the poverty threshold are considered low-income individuals. USCB census tracts where at least 20 percent of the residents are considered poor are known as poverty areas (USCB 1995). When the percentage of residents considered poor is greater than 40 percent, the census tract is considered an extreme poverty area.

The region of influence is limited to Washington and Lincoln counties. The remaining counties within the Republican River CREP area were analyzed in the original CREP EA (USDA 2006). At the time this document was developed, the 2010 United States Census was underway. This section describes information, as available, from the 2010 Census. Where 2010 data was not available, the discussion focuses on 2000 Census data.

3.5.1 Demographic Profile

The total population within Washington and Lincoln counties in 2009 was 9,589 persons, which was an approximately 14.8 percent decrease from the population in 2000 (USCB 2010). The total population in 2000 for the two counties was 11,013 (USCB 2010). These two counties experienced a larger decrease in population compared to the other counties within the Republican River CREP area (the other counties as a whole experienced only a 2.5 percent decrease in population) (USCB 2010).

There are no identified urban areas within Lincoln or Washington counties; all residents reside in what is considered a rural area. Within Lincoln County, 780 persons resided on farms (12.8 percent of the

population) while 1,137 persons resided on farms in Washington County (23 percent of the population) (USCB 2000).

Demographically the population of Washington and Lincoln counties is approximately 94 percent White; 3.2 percent Black or African American; 1.05 percent American Indian or Alaska Native; 0.5 percent Asian; 0.05 percent Native Hawaiian or Pacific Islander; 1.15 percent reporting two or more races; and 9.75 percent Hispanic (USCB 2010). The region of influence is not a location of a concentrated minority population.

In 2008, there were 60,684 farm operators running 36,500 farms in Colorado. In Lincoln and Washington counties there were 2,446 farm operators of which: 29 were Hispanic; 1 was Black or African American; and 17 were American Indian or Alaska Native (USDA 2007). Minority operators accounted for 1.9 percent of all the farm operators in Washington and Lincoln counties.

3.5.2 Income and Poverty

In 2008, median household income ranged between \$35,350 in Sedgwick County at the lower end to \$43,560 in Yuma County at the higher end within the Republican River CREP area (USCB 2010). Lincoln County and Washington County were in the middle of this range, with a median household income of \$40,384 and \$38,982, respectively (USCB 2010).

The household poverty rate in Washington County was 12.4 percent while Lincoln County had a slightly higher poverty rate of 16.8 percent in 2008 (USCB 2010). Neither county within the region of influence would be considered an impoverished area.

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4.0 ENVIRONMENTAL CONSEQUENCES

This chapter presents an analysis of the potential impacts on various components of the environment that could result from the Proposed Action of implementing an Amendment to the Republican River CREP Agreement. This chapter discusses the potential impacts associated with the Proposed Action (Preferred Alternative) and the No Action Alternative.

- **Proposed Action (Preferred Alternative):** implement the proposed Amendment to the Republican River CREP Agreement increasing total enrollment acres, increasing funding, increasing temporary irrigation, and adding new incentive areas.
- **No Action Alternative:** continuation of current Republican River CREP Agreement as analyzed in the original EA (USDA 2006).

The proposed Amendment does not change approved CPs or eligibility requirements. Areas approved for enrollment must be determined as a State Conservation Priority Area by the CRP Program Manager, and located in a county whose enrollment is not limited by the total county cropland limit (refer to CRP SEIS for additional information on county limitations or eligibility requirements, USDA 2010). The potential impacts associated with installation and maintenance of CPs have been addressed in the CRP SEIS (USDA 2010) and specifically in the Republican River Basin in the original CREP EA (USDA 2006). The proposed Amendment would not change these impacts. Short term, localized, negative impacts can occur during installation and maintenance of the CPs from activities such as grading, leveling, shaping, etc.; however, these impacts and associated ground disturbance would be similar to disturbance already occurring from active agricultural production.

4.1 THREATENED AND ENDANGERED SPECIES

Impacts to threatened and endangered species would be considered significant if implementation of the proposed Amendment resulted in incidental take, which includes disturbance, of a protected species.

4.1.1 Proposed Action (Preferred Alternative)

The proposed Amendment would have positive long term impacts on protected species and their habitats. The primary goals of CREP are to improve water quality and to restore native vegetation and wildlife habitat. Restoring native grasses and prairie habitat in Washington and Lincoln counties would promote and improve Black-footed ferret habitat in the CREP area. Restoring riparian buffers and wetlands and improving water quality would result in beneficial impacts to the Interior Least Tern which uses wetlands and beach areas for nesting and foraging.

As described in the CRP SEIS and the original Republican River CREP (USDA 2010 and 2006), there is potential for short term negative impacts to protected species during activities related to establishment and maintenance of the CPs including grading, leveling, filling, and construction of support features such as bridges and fences. Ground disturbing activities could impact habitat or create a disturbance if a species is nearby. Site specific environmental evaluations would continue to be performed prior to enrollment in

CREP. These evaluations would determine the presence or potential presence of a protected species and identify if informal consultation with Colorado's Ecological Services Office of the USFWS would be required. Informal consultation would provide necessary mitigation measures to eliminate or reduce potential impacts. If informal consultation determines an impact to protected species is likely, CREP would not be implemented at that location.

4.1.2 No Action Alternative

Under this alternative the Republican River CREP would continue as it is currently administered. The additional benefits to threatened and endangered species resulting from the increased acreage and making lands in Washington and Lincoln counties eligible for enrollment would not be realized. Lands that would have been eligible would remain in agricultural production or could be enrolled in another conservation program. Expiring CRP acres in Washington and Lincoln counties could be converted back to active agricultural land. The continued use of land for agriculture or the conversion of land to another type of agricultural production would increase susceptibility for additional loss of habitat for protected species. Runoff of agricultural chemicals and sediment would continue to degrade water quality thereby affecting marine species habitat.

4.2 WATER RESOURCES

Impacts to water resources would be considered significant if implementation of the Proposed Amendment resulted in violating laws or regulations established to protect water resources.

4.2.1 Proposed Action (Preferred Alternative)

Implementing the Proposed Action (the Amendment) would result in ceasing active agricultural production on up to 55,000 acres of mostly irrigated land within the CREP area (an increase of 20,000 acres with the proposed Amendment). Enrolling land in CREP and installing CPs (vegetation planting, native grasses, and restoring wetlands and riparian habitat) would decrease groundwater withdrawal, reduce the application of agricultural chemicals in the CREP area, and reduce erosion and sedimentation, ultimately increasing groundwater storage and streamflows, improving surface water quality, and improving wetland habitat. The Amendment would have long term beneficial impacts to water resources within the Republican River Basin and areas downstream. The Amendment would not result in the violation of laws or regulations established to protect water resources.

Groundwater

For enrollment in CREP, a well-right holder volunteers to permanently retire his irrigation right in exchange for compensation in the form of cost share, annual rental payments, and other incentive payments where applicable (domestic use of the water by the holder is preserved). Retirement of lands under CREP that use groundwater for irrigation would augment streamflows by naturally allowing groundwater to resume flowing to streams or by directly putting water in the river through a pipeline (for lands within the "Target Zone").

The proposed Amendment seeks 60,000 to 75,000 acre-feet of annual water savings through the retirement of irrigation water throughout the CREP area. The savings would represent approximately six times the current storage in Bonny Reservoir (11,273 acre-feet as of September 2010, United States Bureau of Reclamation 2010). In 2005, over 1.4 million acre-feet of water was used for irrigation in the CREP counties, of which over 1 million acre-feet were from groundwater wells. Up to 75,000 acre-feet of savings as planned in the CREP Amendment goals would represent a five percent reduction of the total irrigation applied in 2005 and seven percent of the groundwater irrigation (see Table 3.2-1). Enrolling land into CREP and ceasing groundwater irrigation would allow for natural groundwater flow to resume to the rivers of the Basin rather than consuming the groundwater for irrigation.

The RRWCD retired 19,965 acres of irrigated cropland through 2009 with an estimated average water savings of approximately 23,260 acre-feet per year (RRWCD and CDWR 2009), approximately 1.2 acre-feet of water savings per acre retired. The amount of groundwater used for irrigation varies depending on the type of crop, soil condition, season, and hydrological and climatic conditions. However, using the estimated average noted above as a conservative assumption, retiring an additional 20,000 acres of irrigated cropland with the proposed Amendment could result in approximately 24,000 acre-feet per year of additional water savings. Potential water savings for full enrollment of CREP (55,000 acres) could result in 66,000 acre-feet per year of water savings. Depending on the actual cropland retired, the water savings could be more than this estimate. The proposed Amendment would allow for ½ acre-foot of water to be applied during the first 24 months to support cover establishment. The temporary irrigation would slightly reduce the overall water savings during this timeframe.

Within the “Target Zone” north of Wray, some of the groundwater withdrawal historically consumed by irrigation would be used to directly increase streamflows through a pipeline. The amount of groundwater that would be directly placed in the stream would be determined on an annual basis dependent on the amount of water needed for compliance with the Republican River Compact. Groundwater diversion would not exceed 14,798 acre-feet per year as determined by the historical use in this area and most times would be less. Diverting the maximum amount of groundwater would reduce the overall estimated water savings to approximately 51,000 acre-feet per year. It is anticipated that the actual amount of groundwater diverted would typically be less than 14,798 acre-feet per year. Colorado’s over-use has been decreasing each year since 2004 and was approximately 6,000 acre-feet in 2008 (CDWR 2008).

Surface Water

The surface waters of the Republican River Basin suffer from low water levels from surface water diversions for irrigation, extensive groundwater pumping for irrigation, and prolonged drought. Retirement of lands irrigated directly by surface water would allow the water to remain in the river, directly improving streamflows. The retirement of well rights under CREP would allow for the surface waters to replenish over time from reduced groundwater pumping. There would be a lagged effect between reduced groundwater pumping, subsequent replenishment of the Ogallala Aquifer, and increased streamflows in waters of the Republican River Basin. Due to the large area of the basin, groundwater use occurs far from streams and reversal of the groundwater depletion may take many years to improve

streamflows. Even ceasing all groundwater consumption in the Colorado portion of the Basin would not result in increasing streamflows for a significant period of time.

The addition of a “Target Zone” north of Wray and three river systems with higher incentive payments would promote enrollment in CREP in those areas determined most advantageous for increasing streamflows in the Republican River due to their more reliable water supplies. Within the “Target Zone” north of Wray, some of the groundwater withdrawal historically used for irrigation would be used to directly increase streamflows in the North Fork of the Republican River. While some of this water would be lost to evaporation, the diversion would ultimately increase surface water quantity thereby improving local and downstream habitats for aquatic species.

Water Quality

The proposed Amendment would improve overall water quality. The decrease in irrigation would increase water storage in the aquifer thereby decreasing the concentration of naturally occurring heavy metals. Increased streamflows would dilute existing contamination and improve overall surface water quality. The decrease in active agricultural production would result in a decreased input of agricultural chemicals to nearby surface waters and groundwater sources. In addition, establishing long term grasslands and native vegetation would stabilize soils, decreasing erosion and sedimentation which improves local and downstream water quality.

Wetlands

Implementation of CPs such as wetland restoration, playa lakes restoration, and increasing riparian buffers is expected to restore or enhance wetlands and riparian habitat. The positive impacts of restoring wetlands and riparian areas would have corresponding positive impacts on biological resources including increasing vegetation diversity and habitat for protected species, which use and live in these areas. Activities associated with installing CPs such as vegetation clearing and soil disturbance could result in temporary and minor localized negative impacts to water quality and increased sedimentation from runoff (see CRP SEIS and original Republican River CREP for further details, USDA 2010 and 2006). As with the current CREP procedures, a site specific environmental evaluation would be performed prior to enrollment in the program. The evaluation would identify jurisdictional wetlands and establish any necessary mitigation measures to ensure their protection.

4.2.2 No Action Alternative

Under the No Action Alternative, the current Republican River CREP would continue. The additional benefits of increasing enrollment acreage and opening CREP to eligible irrigated cropland in Washington and Lincoln counties would not be realized. Expiring CRP acres in those counties may be converted back to active agricultural production thereby further degrading water quality from the application of agricultural chemicals and increased erosion and sedimentation from exposed soils. Irrigation would continue to negatively deplete groundwater sources and reduce streamflows in the Republican River and its tributaries.

4.3 CULTURAL RESOURCES

An impact to cultural resources would be significant if the proposed activity resulted in any of the following:

- The destruction or alteration of all or a contributing part of any National Register-eligible cultural or historic property without prior consultation with the State Historic Preservation Office (SHPO);
- The isolation of an eligible cultural resource from its surrounding environment;
- The introduction of visual, audible, or atmospheric elements that are out of character with a National Register-eligible site or would alter its setting; or
- The neglect and subsequent deterioration of a National Register-eligible site.

4.3.1 Proposed Action (Preferred Alternative)

The Proposed Action would not result in adverse impacts to cultural resources. The installation of approved CPs and reduction of agricultural production within Lincoln and Washington counties would not directly alter or affect any architectural resources on the National Register since these practices do not include the removal or modification of structures. However, if a listed or eligible property is within the immediate vicinity of a site proposed for CREP enrollment, consultation with the SHPO should occur during the site-specific evaluation prior to installation of the CPs to ensure the property is protected.

Though there are no known archaeological resources within Washington and Lincoln counties, the state is rich in archeological history. Any actions that are ground disturbing beyond what is normal for agricultural production would have the potential to impact archeological resources. This would include such practices as excavation and earth moving for installation of firebreaks, associated fencing, and roads, as well as the construction of levees, dikes, or dams in wetland restoration areas. If an archaeological resource is discovered during installation of a practice, installation would cease and the SHPO would be contacted.

4.3.2 No Action Alternative

Under the No Action Alternative the Republican River CREP would continue to be administered as is current practice. The installation of CPs is not expected to impact architectural properties. Any archeological resources discovered during CP installation would require SHPO consultation.

4.4 SOCIOECONOMICS

Significance of an impact to socioeconomics varies depending on the setting of the Proposed Action, but 40 CFR 1508.8 states that effects may include those that induce changes in the pattern of land use, population density, or growth rate. Under CEQ regulations, a socioeconomic impact, in and of itself, does not indicate that preparation of an Environmental Impact Statement is warranted.

4.4.1 Proposed Action (Preferred Alternative)

Implementation of the Proposed Action would result in an additional \$36 million in CREP funding (for a total of \$102 million). While there would be a direct negative impact to the economy from the loss of agricultural production (estimated to be approximately \$13.5 million for the additional 20,000 acres proposed for enrollment within the entire Republican River Basin), the proposed increase in funding would offset this loss. The economic loss would be spread throughout the entire seven-county CREP area.

An *Economic Impact Analysis for Reduced Irrigated Acreage in Four River Basins in Colorado* was completed in 2006 (Thorvaldson and Pritchett 2006). That analysis employed IMPLAN (IMPact Analysis for PLANning) input-output modeling software to determine the direct, indirect, and induced effects from reducing irrigated agricultural production within four river basins in Colorado, including the Republican River Basin. Direct, indirect, and induced effects are defined as:

- *Direct effects* represent the change in final demand for the industry impacted: decreased production of irrigated crops would result in decreased revenue flow from the sale of those crops.
- *Indirect effects* are the changes to inter-industry purchases as they respond to the new demands of the directly-affected industries: as irrigated agriculture decreases its demand for inputs provided by other industries (i.e., fertilizer, seed, chemicals, etc.), these support industries would also experience a decrease in revenue flows.
- *Induced effects* reflect changes in household spending as household income increases or decreases due to the change in production: a decrease in the production of irrigated crops leads to a decrease in the amount of labor required for production. Income loss and decreased employment leads to a reduction in spending in the local economy.

The *total effect* is the sum of direct, indirect, and induced effects. Based on an assessment completed under the Statewide Water Supply Initiative, the economic analysis assumed the loss of 20,000 acres of irrigated cropland within the Republican River Basin, identical to that proposed under the Amendment. The results of the model predicted that the loss of these acres would result in a total negative economic impact of over \$13.5 million, of which \$10.7 million would be direct effects, \$2.1 million would be indirect effects, and \$687,539 would be induced effects. The population density plays a role in how severely the total economic impacts would be felt, for example, in a more rural, less populated environment, the loss of economic activity would have a greater effect on individuals. Table 4.4-1 provides the breakdown of the predicted economic impact from the loss of 20,000 acres of irrigated agricultural production within the Republican River Basin. Table 4.4-2 provides a further analysis of the total economic impact relative to the economic output of the basin. As shown, the impact would represent 2.08 percent of irrigated crop sales (based on 2002 data). The last column shows the impact per acre lost, which can also be interpreted as the economic activity generated by one acre of irrigated crops in the basin.

Table 4.4-1. Predicted Economic Impacts from IMPLAN

<i>Area</i>	<i>Total Impact</i>	<i>Direct Impact</i>	<i>Indirect Impact</i>	<i>Induced Impact</i>	<i>Per Capita Impact¹</i>
Republican River Basin	-\$13,550,801	-\$10,748,980	-\$2,114,282	-\$687,539	-\$239

Note:

¹ Based on a 2002 population estimate of 56,768. The Economic Impact Analysis utilized data from the 2002 Agricultural Census.

Source: Thorvaldson and Pritchett 2006

Table 4.4-2. Output Impacts Relative to Total Output and Agricultural Output

<i>Area</i>	<i>Total Output (million \$)</i>	<i>Total Economic Impact (million \$)</i>	<i>Impact as % of Total Output</i>	<i>Impact as % of Irrigated Crop Sales</i>	<i>Economic Activity per Acre</i>
Republican River Basin	\$3,116.60	-\$13.55	0.43	2.08	\$678

Source: Thorvaldson and Pritchett 2006

The induced impact (-\$687,539) would include employment and income impacts from reduced agricultural production. While reduced labor would represent some portion of this impact, it is not known the exact portion. Using the entire induced impact amount as a conservative calculation, this would represent approximately 24 jobs at the prevailing annual wage of \$28,600 (CDLE 2010). This would represent less than one percent of the farm workers identified during the 2007 census for the CREP area.

It should be noted that the IMPLAN model results are instantaneous rather than dynamic, meaning that substitution effects are not taken into account, thus the impacts are a snapshot of economic activity and likely represent a short term, worst case scenario. New lines of business could potentially be generated or migrate into the area over time in response to the reduced irrigated agriculture. Along these same lines, the model does not take into consideration sources of income that could result from removing these acres from agricultural production, such as CREP or other conservation programs in which producers can receive payments for eligible acres taken out of agricultural production.

The addition of \$36 million in the form of cost-share, annual rental payments, and incentive payments would offset some of these negative impacts and could result in a beneficial impact for the individual enrolling in CREP. Since the intent of CREP is to enroll marginal agricultural land, current production expenses may exceed financial gains and enrollment in CREP may represent a better financial decision for an individual. However, government payments to an individual farmer do not generate economic activity the way agricultural production does; there are little to no jobs created, agricultural support services are not utilized, and no investment opportunities for the local area are created. There would likely be a shift in economic activity as less activity would occur within the agricultural support industry while more activity could occur in other economic sectors or outside of the local region. If the loss of active agricultural production is concentrated in certain areas dependent on agriculture for economic stability, such as the "Target Zone", the negative economic impact would have more detrimental effects on the local economy. Enrollment in CREP is voluntary and the number of acres to be enrolled and their exact location cannot be predicted. County limitations are in place to restrict enrollment in CREP or CRP to no

more than 25 percent of a county's cropland (see Final CRP SEIS for impact discussion on county limitations, USDA 2010). While there would be negative economic impacts from the loss of an additional 20,000 acres of agricultural land, these impacts would be spread across the seven county CREP area and offset by the proposed increase in CREP funding.

4.4.2 No Action Alternative

Under the No Action Alternative, the proposed Amendment to the Republican River CREP would not be implemented. The current Republican River CREP Agreement would remain in place and impacts would be the same as those described in the original CREP EA (USDA 2006). Socioeconomic impacts from the CREP were expected to produce a slight beneficial impact to the economy from the expenditure of \$66 million in the CREP area. Although the loss of active agricultural land would reduce local revenues from the sale of agricultural crops, reduce agricultural employment and sales of chemical inputs, this loss would be balanced by indirect impacts as producers spent these payments within the local economy for goods and services.

4.5 ENVIRONMENTAL JUSTICE

Environmental justice is achieved when everyone, regardless of race, culture, or income, enjoys the same degree of protection from environmental and health hazards and has equal access to the decision-making process. Significant environmental justice impacts would result if access to decision-making documents was denied or if any adverse environmental effects occurred that would disproportionately affect minority or low-income populations.

4.5.1 Proposed Action (Preferred Alternative)

The counties associated with the proposed Amendment are neither areas of concentrated minority populations nor impoverished areas. Therefore no disproportionate impacts to such groups would occur should the Amendment be implemented. The decision-making document (this EA) was made available to all interested parties and the public via the Internet and within local FSA offices.

4.5.2 No Action Alternative

Under the No Action Alternative, the proposed Amendment to the Republican River CREP would not be implemented. The current Republican River CREP Agreement would remain in place and impacts would be the same as those described in the original CREP EA (USDA 2006). No disproportionate impacts to minority populations or impoverished areas were anticipated.

5.0 CUMULATIVE IMPACTS AND IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

5.1 CUMULATIVE IMPACTS

CEQ regulations stipulate that the cumulative impacts analysis within an EA should consider the potential environmental impacts resulting from “the incremental impacts of the action when added to past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions” (40 CFR 1508.7). Recent CEQ guidance in considering cumulative impacts involves defining the scope of the other actions and their interrelationship with the Proposed Action. The scope must consider geographical and temporal overlaps among the Proposed Action and other actions. It must also evaluate the nature of interactions among these actions.

Cumulative impacts are most likely to arise when a relationship or synergism exists between the Proposed Action and other actions expected to occur in a similar location or during a similar time period. Actions overlapping with or in proximity to the Proposed Action would be expected to have more potential for a relationship than those more geographically separated.

The affected environment for cumulative impacts in this Supplemental EA includes those counties where lands are eligible for enrollment in CREP. The potential cumulative impacts from implementing CREP in Kit Carson, Logan, Phillips, Sedgwick, and Yuma counties in conjunction with other USDA programs, namely CRP, Wildlife Habitat Incentives Program, Environmental Quality Incentives Program, and Wetlands Reserve Program, and state conservation programs and initiatives were analyzed in the original EA (USDA 2006). The incremental contribution of impacts from CREP in combination with the impacts of these other programs was determined to result in overall positive impacts to water, earth, biological resources, and recreational resources. Lincoln and Washington counties are located in the same geographical region as the other five counties and cumulative impacts from CREP when combined with the other conservation programs are expected to be the same.

Since the original CREP EA was prepared in 2006, the construction of a Compact Compliance Pipeline has been proposed. This pipeline has the potential for cumulative impacts when combined with the proposed Amendment. Potential cumulative impacts could occur in water resources, natural resources, and socioeconomics as described below.

The environmental impacts from the Compact Compliance Pipeline were addressed in a Feasibility Study (GEI Consultants 2008) and a Natural Resources Assessment (ERO Resources Corp 2008). Potential natural resource impacts associated with construction of the pipeline were determined to be minor and temporary in nature (ERO Resources Corp 2008). Adherence to environmental regulations and permit requirements during the construction activities would protect natural resources from significant impacts. The goal of the pipeline project is to increase streamflow within the Republican River by diverting irrigation water. The cumulative impact of the pipeline in conjunction with CREP, specifically the permanent retirement of groundwater withdrawal for irrigation, would have a greater increase in

streamflows while improving surface water quality as well as reducing agricultural chemical migration into the aquifer. Retiring irrigated acreage and delivering some of the water previously consumed by crops directly to the stream would assist the state in achieving and maintaining long term Compact compliance while protecting the socioeconomic status of the Basin. The RRWCD Water Activity Enterprise plans to purchase existing groundwater rights (and in some cases has already begun to do so) to supply water to the pipeline. Estimated cost for the water rights is approximately \$40-50 million. The proposed CREP Amendment would increase total CREP funds to approximately \$102 million within the seven-county area. Provisions for additional incentive payments within certain high priority areas and the “Target Zone” would help to alleviate the negative economic impact of removing agricultural production within a concentrated area.

5.2 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

Irreversible and irretrievable commitments are related to the use of nonrenewable resources and the effect that the use of these resources has on future generations. Irreversible effects primarily result from the use or destruction of a specific resource that cannot be replaced within a reasonable time frame. Irretrievable resource commitments involve the loss in value of an affected resource that cannot be restored as a result of the action. The overall impacts from implementing the CREP Amendment are anticipated to be positive and no irretrievable commitments are expected. However, using groundwater to increase streamflows in the North Fork of the Republican River through a pipeline would be an irreversible commitment of that water. The amount of water to be used for this purpose would be limited to the amount currently consumed for irrigation purposes and in most cases would be much less than the historic use.

6.0 MITIGATION MEASURES

The purpose of mitigation is to avoid, minimize, or eliminate significant negative impacts on affected resources. CEQ regulations (40 CFR 1508.20) state that mitigation includes:

- Avoiding the impact altogether by not taking a certain action or parts of an action.
- Minimizing impacts by limiting the degree or magnitude of the action and its implementation.
- Rectifying the impact by repairing, rehabilitating, or restoring the affected environment.
- Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.
- Compensating for the impact by replacing or providing substitute resources or environments.

CEQ regulations state that all relevant reasonable mitigation measures that could avoid or minimize significant impacts should be identified, even if they are outside the jurisdiction of the lead agency or the cooperating agencies. This serves to alert agencies or officials who can implement these extra measures, and will encourage them to do so. The lead agency for this Proposed Action is FSA.

There are no expected long term significant negative impacts associated with implementation of the Proposed Amendment. Prior to installation of CPs, producers must complete site specific environmental evaluations which would reveal any protected resources on the property. In those site specific instances where a wetland, threatened or endangered species, or a cultural resource may be present, consultation with the appropriate lead agency would identify specific mitigation measures required to eliminate or reduce the negative impacts to an acceptable level. In addition, each producer must prepare an approved site specific conservation plan to ensure protection of all valuable resources for the duration of the contract (14 or 15 years).

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7.0 LIST OF PREPARERS

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8.0 PERSONS AND AGENCIES CONTACTED

USDA Farm Service Agency

Colorado Division of Water Resources

Other Federal Agencies, State Agencies, and Interested Parties

Arikaree Ground Water Management District

Burlington Conservation District

Centennial Conservation District

Central Yuma Ground Water Management District

Colorado Department of Natural Resources

Colorado Division of Wildlife

Colorado Farm Bureau

Colorado Historical Society

Colorado NRCS State Office

Colorado Rocky Mountain Bird Observatory

Cope Conservation District

Flagler Conservation District

Frenchman Ground Water Management District

Haxtun Conservation District

High Plains Conservation District

Kit Carson County Commissioner

Lincoln County Commissioner

Logan County Commissioner

Marks Butte Ground Water Management District

Phillips County Commissioner

Plains Ground Water Management District

Sandhills Ground Water Management District

Sedgwick County Commissioner

Sedgwick County Conservation District

The Nature Conservancy

USFWS, Region 6

USFWS, Colorado Field Office

USDA Colorado Farm Service Agency

Washington Conservation District

Washington County Commissioner

Washington-Yuma Ground Water Management District

Yuma Conservation District

Yuma County Commissioner

Yuma County Conservation District

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APPENDIX A – PROPOSED REPUBLICAN RIVER CREP AMENDMENT

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APPENDIX B – AGENCY CORRESPONDENCE

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APPENDIX C – PUBIC INVOLVEMENT

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APPENDIX C: PUBLIC INVOLVEMENT

Public involvement is a key component of the NEPA process. In accordance with CEQ requirements, the public and other interested parties were provided several opportunities to comment on the Draft Supplemental EA and the proposed Amendment prior to an FSA decision. A 30-day public comment period for the Draft Supplemental EA was held October 7, 2010 to November 5, 2010. The comment period was announced to the public via the publication of a Notice of Availability (NOA) in local newspapers. A public meeting is not required for this level of NEPA analysis; however, given the high public interest in the proposed Republican River CREP Amendment, FSA and the State of Colorado hosted a public meeting during the public comment period to solicit public and agency comments on the Draft Supplemental EA. Comments on the Draft Supplemental EA were received and incorporated into the Final Supplemental EA as appropriate. In addition, several comments were received on the proposed CREP Amendment itself. Each of these components is discussed in the following sections.

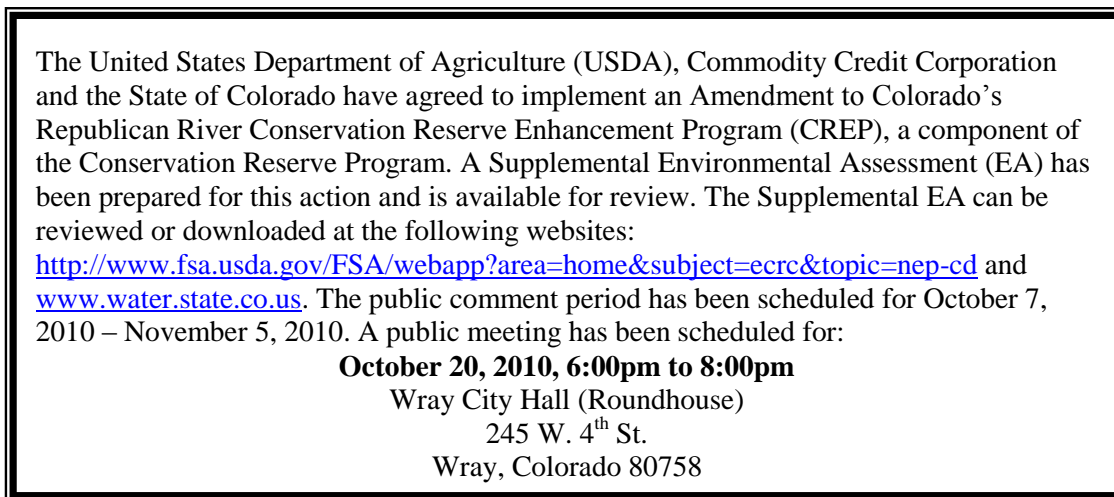
C.1 NOTICE OF AVAILABILITY

The NOA of the Draft Supplemental EA and an invitation to a public meeting was published in 10 local newspapers at the beginning of the public comment period (October 6 or 7) for one week. The Draft Supplemental EA was available via the World Wide Web at two different websites (Colorado Division of Water Resources and FSA) and also in each of the seven FSA county offices in the CREP area. Table C-1 provides a list of the newspapers where the NOA was advertised. Figure C-1 provides a copy of the NOA.

Table C-1 Newspaper Advertisements

The Wray Gazette	The Otis Telegraph
The Yuma Pioneer	The Haxtun Herald
The Holyoke Enterprise	The Julesburg Advocate
The Burlington Record	The Stratton Spotlight
Akron News Reporter	The Flagler News

Figure C-1 Copy of NOA



C.2 PUBLIC MEETING

A public meeting was held on October 20, 2010 at the Wray City Hall (The Roundhouse) from 6:00pm to 8:00pm and was attended by 28 individuals. A presentation was given that provided a brief overview of the findings of the Draft Supplemental EA and then the floor was open for public comment. At that time, five individuals provided verbal comments for the public record. Participants were also able to provide a written comment using a comment form during the meeting or the form could be mailed in at a later time. A handout providing an overview of the proposed Amendment in comparison to the original Republican River CREP and a summary of the environmental consequences was also available at the meeting. These materials are provided in Figures C-2 and C-3.

C.3 COMMENTS

In total, five individuals provided written comments on the Draft Supplemental EA during the public comment period (individuals that provided verbal comments at the public meeting also provided their comments in writing). One of these individuals asked that their comment be retracted and it was removed from the record. The remaining four individuals' comments were broken down into separate issues/topics. Comments received at the public meeting and during the public comment period primarily consisted of opposition to the proposed Amendment itself, notably the designated Target Zone in an area north of Wray, Colorado and the proposed incentive payments for this area. Several comments related to water resources were also received. The numbers of comments by topic are summarized in Table C-2.

Table C-2 Number of Public Comments by Topic

Topic	Number of Comments
Water Resources	13
Target Zone	11
Socioeconomics	9
Compact Compliance Pipeline	4
Threatened and Endangered Species	2
No Action Alternative	2
Republican River Compact Compliance	1
Funding	1
Irreversible and Irretrievable Commitment of Resources	1
Mitigation Measures	1
Appendix	1
Persons and Agencies Contacted	1
Cultural Resources	1
Environmental Justice	1
Unclassified	1
Total	50

Table C-3 provides the comments received specifically on the Draft Supplemental EA during the public comment period. This table also provides FSA responses to those comments and how they are addressed in the Final Supplemental EA. In addition to these specific comments on the Draft Supplemental EA, several letters and petitions were sent to the National FSA office in opposition to the proposed CREP Amendment itself (specifically the Target Zone and proposed incentive payments in this zone). These letters are also included in this appendix for reference.

Figure C-2. Public Meeting Materials – Handout (Page 1)


Supplemental Environmental Assessment for Republican River Conservation Reserve Enhancement Program

The environmental analysis process is designed to ensure the public is involved in the process and informed about the potential environmental effects of a Federal action and to help decision makers take environmental factors into consideration when making decisions related to an action.

We want to hear from you!
Please mail comments to:

State of Colorado
Attn: Kathryn Radke
Division of Water Resources
1313 Sherman Street,
Room 818
Denver, CO 80203

A Supplemental Environmental Assessment (EA) has been prepared to analyze the potential environmental consequences associated with implementation of an Amendment to the Republican River Conservation Reserve Enhancement Program (CREP) in the State of Colorado.



The Proposed Amendment is needed to meet the goals and objectives of the Republican River CREP, including the improvement of water quality, restoration of native vegetation, and improvement of wildlife habitat. Further, the Proposed Amendment would have positive long term impacts on protected species and their habitats, as well as reducing agricultural use of the Ogallala Aquifer, restoring and enhancing wetlands, and increasing streamflows in the Republican River Basin.

The Proposed Amendment would increase enrollment acreage, open enrollment to Washington and Lincoln counties, increase funding, increase duration for temporary irrigation, and add additional incentive areas.

	Current CREP	Proposed Amendment
Acreage	35,000	Increase 20,000 (55,000 acres total)
Geographic Area	Phillips, Yuma, Kit Carson, Logan, and Sedgwick	Addition of Washington and Lincoln
Conservation Practices	CP2, CP4D, CP22, CP 23, CP 23A	No change
Funding	\$66,295,000	Increase \$36,205,000 (total of \$102, 500,000)
Temporary Irrigation	Allowed for 12 months	Increase duration to 24 months
Incentive Areas	North and South Fork of Republican River	Arikaree River and area north of Wray




Figure C-2. Public Meeting Materials – Handout (Page 2)


The Supplemental EA includes an analysis of the proposed Amendment to the Republican River CREP (the Proposed Action) as well as a No Action Alternative. Under the No Action Alternative, the Republican River CREP would continue as it is currently administered. The environmental impacts of the current CREP were analyzed in an EA prepared in 2006, *Final Programmatic Environmental Assessment for the Republican River Basin and High Plains Region Conservation Reserve Enhancement Program Agreements for Colorado*. A summary of the potential environmental impacts of the Proposed Action (the Amendment) and the No Action is provided below.

Resource	Proposed Action	No Action
Threatened and Endangered Species	<ul style="list-style-type: none"> •Long-term positive impacts to protected species from habitat restoration and improvement; and improved water quality and quantity •Short-term negative impacts during activities associated with CP installation and management 	<ul style="list-style-type: none"> •Additional beneficial impacts from increasing enrollment and expanding CREP area would not be realized •Continued beneficial impacts to protected species and their habitats
Water Resources	<ul style="list-style-type: none"> •Long-term improvement to water quality •Reduced groundwater withdrawal •Increased surface water flow •Short-term negative impacts to water quality during activities associated with CP installation and management 	<ul style="list-style-type: none"> •Additional beneficial impacts from increasing enrollment and extending CREP area would not be realized •Continued beneficial impacts to water quality and quantity from current CREP
Cultural Resources	<ul style="list-style-type: none"> •Impacts to archaeological resources would not occur with site-specific environmental evaluation •Impacts to architectural resources would not occur 	<ul style="list-style-type: none"> •No change in impacts to cultural resources from continuation of current CREP •Site-specific environmental evaluation would still be required prior to implementation of CREP
Socioeconomics	<ul style="list-style-type: none"> •Direct negative economic impact from loss of agricultural production, however, this loss would be offset by CREP funding •Additional \$36 million in CREP funding (for a total of \$102 million) 	<ul style="list-style-type: none"> •CREP funding would remain at \$66 million •CREP would not be expanded to Washington and Lincoln counties
Environmental Justice	No disproportionate impacts expected	No disproportionate impacts expected

Figure C-3. Public Meeting Materials – Comment Form

COMMENT SHEET

Supplemental EA for Republican River CREP Amendment



Thank you for providing your comments on the Supplemental Environmental Assessment (EA) to address the proposed Amendment to the Republican River Conservation Reserve Enhancement Program (CREP). Please provide us with your comments no later than **November 5, 2010**. Comments may be submitted at the meeting or via U.S. Postal Service to the address below.

Over for more space →

Optional Information - Please Print

Name: _____
 Zip Code: _____
 Affiliation: _____

Please give this form to one of the representatives here at the meeting or mail to:

**State of Colorado
Attn: Kathryn Radke
Division of Water Resources
1313 Sherman Street, Room 818
Denver, CO 80203**

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Table C-2 Public Comments on the Draft Supplemental EA

Comment Number	Comment	Nature of Comment	FSA Response
1	<p>I think the Supplemental Environmental Assessment is very confusing. It leaves the impression that the proposed CREP Amendment target zone provisions and incentives will change Colorado's compliance with the Republican River Compact. The Supplemental Environmental Assessment states:</p> <p>"Retirement of lands under CREP that use groundwater for irrigation would augment streamflows by naturally allowing groundwater to resume flowing to streams or by directly putting water in the river through a pipeline (for lands within the "Target Zone")."</p> <p>The CREP target zone provisions will not change the stream flow in the basin. The water rights for the wells in the target zone have already been purchased by the RRWCD.</p>	Target Zone	No change to the EA required. Not all water rights within the Target Zone have been purchased. The EA does not state that implementing this Amendment will bring Colorado into compliance, but rather retiring irrigation water would assist in obtaining compliance.
2	<p>If the target zone provisions are removed from the proposed CREP Amendment it will not change the fact that the water has already been purchased. The contract for the purchase of the water rights from the majority of wells in the target zone has been signed. The well owners in the basin have been assessed increased fees, paid as property tax, of \$14.50 per acre. Colorado's testimony at the arbitration on July 12-14, 2010 stated: "To date approximately \$51 million dollars has been paid to acquire existing ground water rights and easements for the project and to proceed with engineering design."</p>	Target Zone	No change to the EA required. Purchase of water rights and construction costs for the pipeline project is not part of the CREP or this EA. Compact arbitration is also a separate issue that is not part of the CREP or this EA.
3	<p>The target zone incentives will not result in water being retired. The well owners in the target zone have already sold their water rights to the RRWCD, so they can't retire them. The following statement is misleading because the water in the target zone has already been purchased. The Supplemental EA states: "The addition of a "Target Zone" north of Wray...would promote enrollment in CREP in those areas determined most advantageous for increasing streamflows in the Republican River due to their more reliable water supplies. Within the "Target Zone" north of Wray, some of the groundwater withdrawal historically used for irrigation would be used to directly increase streamflows in the North Fork of the Republican River."</p>	Target Zone	No change to the EA required. Not all water rights within the Target Zone have been purchased. Diverting irrigation water to the pipeline would directly supply the North Fork of the Republican River with water, thereby increasing streamflows.

Table C-2 Public Comments on the Draft Supplemental EA

Comment Number	Comment	Nature of Comment	FSA Response
4	<p>The target zone incentives are extremely unfair. Well owners outside the target zone must cancel their well permits to be eligible for CREP and therefore cannot sell their water rights for a premium price. The well owners within the target zone didn't cancel their permits; they sold the water rights for a premium price. The "Target Zone" provisions of the amendment do nothing to further the goals and objectives of the CREP. The Supplemental EA states: "The proposed Amendment is needed to meet the goals and objectives of the Republican River CREP, including the improvement of water quality, restoration of native vegetation, and improvement of wildlife habitat."</p> <p>"The planning and construction of the Compact Compliance Pipeline is not a part of CREP, but is considered a cumulative action since it occurs within the same geographic area as CREP and some wells within the CREP area could be used to supply water to the pipeline."</p> <p>"The planning, construction, and future operation of the pipeline is not part of the CREP"</p>	Target Zone	No change to the EA required. The opposition to the incentive payments has been provided to CDWR and RRWCD for consideration in the final CREP Amendment.
5	<p>The "Target Zone" incentives will not change the fact that the water rights have already been purchased by the RRWCD. The economic impact occurred when the RRWCD purchased the water. The highest value paid for water in the county can hardly be considered a negative impact to the land owners. The impact to the community will be the same if the "target zone" provisions are removed from the amendment. The Supplemental EA states: "Provisions for additional incentive payments within certain high priority areas and the "Target Zone" would help to alleviate the negative economic impact of removing agricultural production within a concentrated area."</p>	Target Zone	No change to the EA required. Comment pertains to actions not included in the CREP Amendment.
6	<p>The Compact Compliance Pipeline is a proposed solution to the state of Colorado's compliance with the Republican river Compact. The planning of the Compact Compliance Pipeline is not completed. The Compact Compliance Pipeline Proposal has been rejected by the state of Kansas. I think the following statement is misleading: "Since the original CREP EA was prepared, the planned construction of the Compact Compliance Pipeline has occurred".</p>	Compact Compliance Pipeline	Statement will be reworded to: "Since the original CREP EA was prepared, the construction of a Compact Compliance Pipeline has been proposed."

Table C-2 Public Comments on the Draft Supplemental EA

Comment Number	Comment	Nature of Comment	FSA Response
7	The State of Colorado first submitted the CCP Proposal to the Republican River Compact Administration in March 2008. In April and August of 2009, Kansas and Nebraska voted against the CCP. Colorado then invoked non-binding arbitration and on October 7, 2010, the Arbitrator sided with Kansas. "The Decision is in favor of the state of Kansas and against the state of Colorado, with recommendations for further action by the States."	Compact Compliance Pipeline	No change to the EA required. The pipeline and any litigation associated with it are not part of the CREP.
8	I think the Supplemental EA is misleading as to whether the CREP Amendment will really aid the Republican River Compact compliance. The Supplemental EA statement, that the proposed CREP Amendment would also help Colorado comply with the Republican River Compact, is the opposite of what Mr. Slattery said on 10/14/2010. The Supplemental EA states: "...The proposed Amendment would also help the State of Colorado to comply with the provisions of the Republican River Compact." On October 14, 2010, Republican River Water Conservation District Engineer Jim Slattery, made a presentation to the board of the Republican River Water Conservation District. Mr. Slattery provided the attached chart and concluded that even if every well in the Republican River Basin is retired – the state of Colorado will still not be in compliance by 2033.	Republican River Compact Compliance	The purpose and need statement will be reworded to remove reference to helping Colorado comply with the compact.
9	Never heard of a black footed ferret in Republican River Basin. Delete statement. Also, interior least tern would not diminish if EQIP were not implemented.	Threatened and Endangered Species	No change to the EA required. See complete Threatened and Endangered species section for full discussion and table of species with a potential to occur in the CREP area. The analysis provides a table of species listed within the basin in accordance with USFWS documentation. The table is further clarified by noting which of these species is likely to occur within the CREP area. CREP is voluntary and predicting land to be enrolled is not feasible. This analysis is a conservative approach to ensure protection of species potentially in the area.
10	No Action – Lincoln and Washington could be included by an amendment to the Farm Bill.	No Action Alternative	No change to the EA required. Comment has been provided to CDWR and FSA for consideration.

Table C-2 Public Comments on the Draft Supplemental EA

Comment Number	Comment	Nature of Comment	FSA Response
11	Yuma Conservation District has run water quality samples all across the district and have not found one sample of water degrading. The amendment is conveying the thought that our water quality is bad and getting worse and that is not true.	Water Resources	No change to the EA required. Water quality in the document is presented for the Ogallala aquifer in general.
12	If Amendment is approved there would be \$102 M in money we do not have. When the amendment states that the loss from agriculture would be offset by CREP money is a false statement and needs to be reconsidered. We must use debt free money to put in the economy to generate earnings, growth, and new tax revenue that people earn instead of borrowing to pay. CREP does not do that and that is why I am against the amendment for another \$36M dollars. The amendment on economics is poor conceived and not realistic in places	Socioeconomics	The socioeconomic analysis has been revised to better reflect results in the economic impact study (Thorvaldson and Pritchett 2006).
13	Shows the total CREP acres in CO of 19,555 acres. The first CREP funding was 66,295,000 dollars to enroll 35,000 acres in CREP. That has not happened. The RRWCD has several million unobligated in the bank and they are 15,000 acres short of the goal. Plus they have 1 million dollars of aWCP funds sitting unobligated. CO should not get any more CREP funding until they fulfill the first CREP funding. The RRWCD should target quick response wells within three miles of the river and that should be a part of the amendment. The RRWCD tried to target wells close to the river in the first CREP but they got very little response and will not get hardly any response with the 36,205,000 (page 21) in the future. The first CREP has done very little to meet compact compliance but did help on consumptive use.	Funding	No change to the EA required. Comment provided to CDWR and RRWCD. This is an issue that would need to be addressed in the actual Amendment, not the EA.
14	Incentive areas – I along with the support of the vast majority of the Republican citizens think that target zone completely out of the amendment	Target Zone	No change to the EA required. Comment provided to CDWR and RRWCD. This is an issue that would need to be addressed in the actual Amendment, not the EA.
15	Amendment needs to qualify how CO is going to reduce by 10% from 2004 levels wells that exceed EPA standards	Water Resources	No change to the EA required. Comment provided to CDWR and RRWCD. This is an issue that would need to be addressed in the actual Amendment, not the EA.

Table C-2 Public Comments on the Draft Supplemental EA

Comment Number	Comment	Nature of Comment	FSA Response
16	Incentive areas – line 14 should not be in an incentive area as referred to a target zone. The targeted zone is using the water they have sold it to the RRWCD, they are not capping the wells and the permits are not being returned to the states but given to RRWCD. Those 58 wells having already received a bonus of millions by getting much more than market price and those wells do not contribute water to the river because they are too far removed from the river. The pipeline from those wells is not a given yet. There are several steps that need taken yet with KS before the pipeline is constructed. The targeted area north of Wray would receive \$189/ac or \$1,260 per year while the neighbor one half mile away would only receive \$100 or 6.67 per year who is not in the targeted area. yet both examples are far beyond the three miles. These previous examples were taken from page 131, paragraph 1. This is not fair. Nobody on the Republican basin will support this except the RRWCD. Strike the targeted CREP from the amendment.	Target Zone	No change to EA required. The target zone is included in this section since additional incentives have been proposed for acres enrolled from this area. The fairness of the proposed incentives is not an issue for the EA.
17	No Action – paragraph needs some clarification on line 3 and 4. There would be acres available for producer because there is still over 25,000 acres yet to be enrolled from the first CREP	No Action Alternative	Will clarify statement.
18	The whole page lists species of the black footed ferrets, piping plovers, interior least terns, whooping crane, pallid sturgeon and other plants and animals are not listed as protected or endangered in Republican basin. Delete this paragraph	Threatened and Endangered Species	No change to EA required. This page provides a table of species listed within the basin in accordance with USFWS documentation. The table is further clarified by noting which of these species is likely to occur within the CREP area. CREP is voluntary and predicting land to be enrolled is not feasible. This analysis is a conservative approach to ensure protection of species potentially in the area.
19	Remove words targeted	Target Zone	No change to EA required. Only water within the target zone would be used in the pipeline (up to the historical consumption rate). This clarification needs to remain in the document.
20	If CREP were approved at 55,000 acres the 55,000 would not increase water storage in the basin because 55,000 acres in CREP is far insufficient to increase water storage	Water Resources	Will reword the sentence as follows: “The decrease in irrigation would increase the amount of water left in the aquifer....”

Table C-2 Public Comments on the Draft Supplemental EA

Comment Number	Comment	Nature of Comment	FSA Response
21	Putting the CREP into production agriculture would impact water quality erosion and sedimentation very little. But put that land into production agreement would improve the economy greatly more than CREP or CRP	Water Resources	No change to EA required. Agricultural production does increase chemical inputs and increase erosion potential from exposed soils. These conditions contribute to the degradation of water quality to some degree. This section is discussing water resources, not socioeconomics.
22	Removing 20,000 acres would have a negative impact on the local economy but the 36 million would more than cover the cost of agriculture production. Go back to my previous statement by using debt dollars which come from the government which takes dollars from the economy, these dollars produce no wealth but uses existing wealth from other areas of the economy to pay for this CREP. This is wrong thinking. By keeping this land in production You are adding to the economy instead of taking from the existing economy.	Socioeconomics	Socioeconomics analysis has been revised to better reflect findings in the Economic Impact Study (Thorvaldson and Pritchett 2006).
23	Although the loss of agriculture land reduces agricultural employment and sales of chemical impacts the amendment does not include the sale of crops production. That is a bad omission of fact.	Socioeconomics	This statement refers to impacts from the No Action Alternative (not the proposed Amendment). Socioeconomic analysis has been revised to better reflect results of Thorvaldson and Pritchett, however, the Draft EA did show that the economic loss would represent a 2% reduction in crop sales.
24	By using water from Ogallala to supply a pipeline is an irreversible and irretrievable resource that once it is used at any level up to almost 1,000 acre feet that water is gone forever and will never be restored. That water will only serve compact compliance for a short period of time and when its gone then what does CO do to meet compact compliance. The RRWCD is only thinking short term which is going to cause a disaster down the road.	Irreversible and Irretrievable Commitment of Resources	Information will be added to this section to discuss the irreversible loss of groundwater from CREP acres used in the pipeline.
25	Line 6 and the RRWCD can rectify and in line 9 provide the water needed by the pipeline by clean up the invasions trees like the salt bush and Russian Olive on all three of the sub-a=basin and clean up the channel on the south fork, of silt and some 500 acres of cattails plus the salt bush and Russian Olive. There are over 2500 acres of canopy cover of trees on all three of the sub basins and they consume some 10000 acre feet of water. By bringing back grasses and forbs instead of the two varieties of trees to be eliminated and subtracting the water use of the new grasses and forbs we could increase stream flow by some three to 35 hundred feet of water. I can assure that wildlife would increase because wildlife does not like salt bush as a habitat.	Mitigation Measures	No change to EA required. This section discusses required mitigation measures if the proposed action or any of its alternatives are found to have a <i>significant</i> impact on the environment. The findings of the EA did not result in <i>significant</i> impacts and no mitigation measures are required.

Table C-2 Public Comments on the Draft Supplemental EA

Comment Number	Comment	Nature of Comment	FSA Response
26	List of federal, state, and interested parties. I believe this list if what was contacted on the first CREP application in 2006 but only some of these were contacted about the amendment. This list is probably not accurate.	Persons and Agencies Contacted	No change to EA required. This is the list of persons and agencies that received an invitation to the public meeting and an announcement that the Draft EA was available for review on the World Wide Web (copy of letter provided in Appendix B of Draft EA). This list is accurate.
27	Eliminate all of page 126 from the amendment. This list is the support group on the first CREP application. Many on that list are opposed to the CREP amendment especially the target zone. Include the list of people objecting to the CREP amendment and target zone in the amendment	Appendix	The original 2005 CREP Agreement is being removed as an appendix to this EA.
28	The proposed Republican River CREP Amendment would increase the program enrollment goal by 20,000 acres for a total enrollment of 55,000 acres and open enrollment in Washington and Lincoln counties (which were enrolled to the maximum extent in the Conservation Reserve Program [CRP] at the time of the current Republican River CREP Agreement). The Amendment also proposes to increase total program funding by approximately \$36 million; increase the duration of temporary irrigation for cover establishment from 12 to 24 months; add additional incentive areas for the purpose of increasing streamflows in the Basin; and add incentives for the Target Zone. The incentives associated with the Target Zone described in Figure 2.1-1 . The incentives will cost an estimated \$15 million. Furthermore, the water can not be counted towards increasing streamflows in the Basin because the water from 62 wells in the Target Zone has already been sold	Target Zone	No change to EA required. Enrollment in CREP is voluntary and specific acres (or wells) that are eligible for enrollment or will be enrolled cannot be predicted. This statement implies specific acres have already been identified. Changes to enrollment eligibility are not proposed in this EA.

Table C-2 Public Comments on the Draft Supplemental EA

Comment Number	Comment	Nature of Comment	FSA Response
29	The RRWCD Water Activity Enterprise is in the process of planning the construction of a 12.7 mile pipeline to deliver water from wells located 8 to 15 miles north of the North Fork of the Republican River to that same stream at the Colorado/Nebraska State line. The water pumped through the pipeline will be groundwater currently being used for irrigation in the basin. The groundwater delivered to the stream, less any losses due to modeling will and offset stream depletions in order to comply with Colorado's Compact Allocations. The RRWCD Water Activity Enterprise has acquired the permanent water rights of 62 well permits to change the use of the wells from irrigation to allow them to be used for augmentation of the stream in the North Fork of the Republican River. In making that change, the future pumping of the wells will be limited to 14,798 acre-feet annually (RRWCD 2009). The planning and construction of the Compact Compliance Pipeline is not a part of CREP, but will be is considered a cumulative action since it occurs within the same geographic area as CREP. and sSome wells within the CREP area could be used to supply water to the pipeline. A "no action" on the CREP Amendment will not stop action on the Compact Compliance Pipeline. The pipeline will be further addressed in Chapter 5.0 of this EA.	Compact Compliance Pipeline	Changes accepted.
30	1.2 THE PROPOSED ACTION The proposed Republican River CREP Amendment (herein referred to as the Amendment) would increase the program enrollment goal by 20,000 acres for a total enrollment of 55,000 acres and open enrollment in parts of Washington and Lincoln counties (which were enrolled to the maximum extent in CRP at the time of the original Republican River CREP Agreement). The Amendment also proposes to increase total program funding by approximately \$36 million; increase the duration of temporary irrigation for cover establishment from 12 to 24 months; and add additional incentive areas for the purpose of increasing streamflows in the Basin; and incentives for the Target Zone. The incentives associated with the Target Zone" described in Figure 2.1-1 will cost an estimated \$15 million. The sale of water from 62 wells in the Target Zone has already occurred and cannot be counted toward increasing streamflows in the Basin due to this Amendment..	Target Zone	No change to the EA required. The EA does not breakdown how the increase in funding will be applied within the CREP area. Enrollment in CREP is voluntary and specific acres (or wells) that are eligible for enrollment or will be enrolled cannot be predicted. This statement implies specific acres have already been identified. Changes to enrollment eligibility are not proposed under this EA.

Table C-2 Public Comments on the Draft Supplemental EA

Comment Number	Comment	Nature of Comment	FSA Response
31	<p>The Target Zone incentive area (Figure 2.1-1) in the proposed Amendment was added at the request of the RRWCD have been. The estimated cost of the incentives in the Target Zone as described in Figure 2.1-1 is \$15 million. The water cannot be counted toward increasing streamflows in the Basin because the water rights were sold. The other incentive areas have been added for the specific purpose of increasing streamflows in the Basin. Retirement of lands from irrigation within the incentive areas along the three rivers would augment streamflows by leaving water in the river systems. Within the area north of Wray, water may be pumped directly through a pipeline to the North Fork of the Republican River to increase streamflows. The amount of water to be pumped should not exceed a maximum of 14,798 acre-feet/year (historical consumption) and most years would be less. Even ceasing all groundwater consumption in the Colorado portion of the Basin would not result in increasing streamflows for a significant period of time, as reflected in a presentation by RRWCD Engineer Jim Slattery (see Attachment A). The planning, construction, and future operation of the pipeline is not part of the CREP (see Chapter 5.0, Cumulative Impacts).</p>	Water Resources	<p>No change to the EA required. Cannot predict the exact acres (or wells) that will be enrolled in CREP.</p> <p>This insertion is a discussion of impacts and is covered in the Section 4.4 of the EA.</p>
32	<p>Groundwater For enrollment in CREP, a well-right holder volunteers to permanently retire his irrigation right in exchange for compensation in the form of cost share, annual rental payments, and other incentive payments where applicable (domestic use of the water by the holder is preserved). Retirement of lands under CREP that use groundwater for irrigation would augment streamflows by naturally allowing groundwater to resume flowing to streams or by directly putting water in the river through a pipeline (for lands within the “Target Zone”). The water from 62 wells within the Target Zone cannot be retired because the water rights were sold. Even ceasing all groundwater consumption in the Colorado portion of the Basin would not result in increasing streamflows for a significant period of time, as reflected in a presentation by RRWCD Engineer Jim Slattery (see Attachment A).</p>	Water Resources	<p>No change to the EA required. Enrollment in CREP is voluntary and specific acres (or wells) that are eligible for enrollment or will be enrolled cannot be predicted. This statement implies specific acres have already been identified.</p> <p>The information concerning ceasing groundwater consumption provided in this insertion is documented in the Draft EA on p 4-3, line 37. It is not necessary to repeat here.</p>

Table C-2 Public Comments on the Draft Supplemental EA

Comment Number	Comment	Nature of Comment	FSA Response
33	<p>Enrolling land into CREP and ceasing groundwater irrigation would allow for natural groundwater flow to resume to the rivers of the Basin rather than consuming the groundwater for irrigation. Even ceasing all groundwater consumption in the Colorado portion of the Basin would not result in increasing streamflows for a significant period of time, as reflected in a presentation by RRWCD Engineer Jim Slattery (see Attachment A).</p> <p>The temporary irrigation would slightly reduce the overall water savings during this timeframe. The proposed Draft Amendment 2 is only for 20,000 additional acres. The water savings attributed to the initial 35,000 acres will happen whether this Amendment is enacted or not. The water from the 62 wells in the Target Zone was purchased by RRWCD. The water from these wells will not be retired under any provisions of this CREP Amendment and cannot be counted toward any water savings due to this Amendment. Within the “Target Zone” north of Wray, some of the groundwater withdrawal historically consumed by irrigation would be used to directly increase streamflows through a pipeline. However, because the water from 62 wells in the Target Zone described in Figure 2.1-1, has already been purchased that water cannot be counted toward increasing streamflows in the Basin due to this Amendment.</p>	Water Resources	<p>No change to the EA required. See comment above.</p> <p>No change to the EA required. This section provides the analysis of the Proposed Amendment, not the No Action Alternative. That analysis is provided in Section 4.4.2 (p 4-4).</p> <p>See response above, CREP is voluntary and specific acres (or wells) that are eligible for enrollment or will be enrolled cannot be predicted. Changes to enrollment eligibility are not proposed in this EA.</p>
34	<p>Surface Water It has been stated, not proven, that the surface waters of the Republican River Basin suffer from low water levels from surface water diversions for irrigation, extensive groundwater pumping for irrigation, and prolonged drought. Retirement of lands irrigated directly by surface water would allow the water to remain in the river, directly improving streamflows. The retirement of well rights under CREP would allow for the surface waters to replenish over time from reduced groundwater pumping. Even ceasing all groundwater consumption in the Colorado portion of the Basin would not result in increasing streamflows for a significant period of time, as reflected in a presentation by RRWCD Engineer Jim Slattery (see Attachment A).</p>	Water Resources	<p>No change to the EA required. The lagged effect between ceasing irrigation and subsequent replenishment in the aquifer and associated surface waters is already documented in this section (p 4-3, line 35).</p>

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35	Even ceasing all groundwater consumption in the Colorado portion of the Basin would not result in increasing streamflows for a significant period of time as reflected in a presentation by RRWCD Engineer Jim Slattery (see Attachment A). The addition of a “Target Zone” north of Wray and three river systems with higher incentive payments would promote enrollment in CREP in those areas determined most advantageous for increasing streamflows in the Republican River due to their more reliable water supplies. The incentives within the “Target Zone” will cost an estimated \$15 million will not lead to increased streamflows because the water rights from the 62 wells have already been sold. Some of the groundwater withdrawal historically used for irrigation would be used to directly increase streamflows in the North Fork of the Republican River. While some of this water would be lost to evaporation, the diversion would ultimately increase surface water quantity thereby improving local and downstream habitats for aquatic species. The proposed CREP Amendment will not change the effects on downstream habitats for aquatic species because the water has been purchased by the RRWCD. These changes will be the same whether or not the CREP Amendment is enacted.	Water Resources	No change to the EA required. This section is addressing water resources, not socioeconomics. See response above, CREP is voluntary and specific acres (or wells) that are eligible for enrollment or will be enrolled cannot be predicted. Changes to enrollment eligibility are not proposed in this EA.
36	While removing 20,000 acres from agricultural production would have a negative impact on the local economy (up to \$13.5 million for the entire basin), the addition of \$36 million in the form of cost-share, annual rental payments, and incentive payments would more than account for this loss. There would likely be a shift in economic activity as less activity would occur within the agricultural support industry while more activity would occur in other economic sectors. The loss of the acres in the Target Zone occurred on June 19, 2009 when the water from these acres was sold. This loss to the landowners was offset by a payment of \$49.1 million for the water rights. If the loss of these acres is concentrated in certain areas, such as the “Target Zone”, the negative economic impact would have more detrimental effects on the local economy. This Environmental Assessment has not identified the other economic sectors affected or whether these sectors would be in the Basin.	Target Zone	No change to the EA required. See response above, CREP is voluntary and specific acres (or wells) that are eligible for enrollment or will be enrolled cannot be predicted. Changes to enrollment eligibility are not proposed in this EA. The socioeconomic section has been revised to provide additional information on the results of the economic impact study done for the basin.

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37	Since the original CREP EA was prepared, the planned construction of the Compact Compliance Pipeline has occurred. This pipeline has the potential for cumulative impacts when combined with the proposed Amendment. Potential cumulative impacts could occur in water resources, natural resources, and socioeconomics as described below. A no action on the CREP Amendment will not stop action on the Compact Compliance Pipeline.	Compact Compliance Pipeline	No change to the EA required. The proposed CREP Amendment and the construction of the pipeline are separate actions, thus the pipeline is included as a cumulative action.
38	surface water quality as well as reducing agricultural chemical migration into the aquifer. Even ceasing all groundwater consumption in the Colorado portion of the Basin would not result in increasing streamflows for a significant period of time, as reflected in a presentation by RRWCD Engineer Jim Slattery (see Attachment A). Retiring irrigated acreage and delivering some of the water previously consumed by crops directly to the stream would assist the state in achieving and maintaining long term Compact compliance while protecting the socioeconomic status of the Basin. The RRWCD Water Activity Enterprise plans to purchase existing groundwater rights (and in some cases has already begun to do so) to supply water to the pipeline. Estimated cost for the water rights is approximately \$40-50 million. The RRWCD has already purchased the water rights from 62 wells in the Target Zone for \$49.1 million and that water cannot be counted towards increased streamflows. The proposed CREP Amendment would increase total program funds to approximately \$102 million within the seven-county area. Provisions for additional incentive payments within certain high priority areas and the “Target Zone” would help to alleviate the negative economic impact of removing agricultural production within a concentrated area. The “Target Zone” incentives, estimated to cost \$15 million, provide no benefit to the Compact compliance. This EA has not identified the negative economic sector impacts or whether these sectors would be in the Basin.	Water Resources	No change to the EA required. This information has already been documented in the appropriate section of the EA. Changes to enrollment eligibility are not proposed in this EA. Enrollment is voluntary and specific acres (or wells) to be enrolled cannot be predicted.

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39	It is reasonable to show that a 1300 acre irrigated farm will provide one family with a sustainable income. This would be loss of 42 families in an area that is already struggling to maintain its population base. The goods and services they buy would negatively affect the community infrastructures, especially the support businesses, schools and medical facilities.	Socioeconomics	No change to EA required. Enrollment in CREP is voluntary and predicting specific farms that would enroll is not possible. The Republican River CREP is available over a 7-county area and the economic impact of this loss of agriculture would be spread over the entire basin. In addition, enrollment in CREP or CRP is limited to 25% of the total county cropland (county limitations are addressed in the Final CRP SEIS).
40	If the retirement to CREP contributes to the loss of 42 families then it is reasonable to expect a reduction of school age children. The average family in the US has 1.8 children, which means a reduction of 75 students. This is another unintended consequence the communities will have to deal with.	Socioeconomics	No change to EA required. See response above, impacts to economy and community services would be spread across a 7-county area.
41	Power companies in the Republican River basin would lose on the average \$7500 to \$7800 revenue per well. Using an average of 130 acres per well the loss of 430 electric power units for a total negative income of (\$3,225,000) to (\$3,335,400). This loss of revenue to the power companies would require organizational structure changes that most likely would increase energy costs to its remaining customer base.	Socioeconomics	See response above.
42	Yuma Conservation District's (Pathways Project) shows the economic impact irrigation had in Yuma and Washington Counties. For more information please contact the Yuma Conservation District. www.vumaconservation.org or call 970-848-5605 and ask for Bethleen McCall, District Conservationist.	Socioeconomics	Socioeconomic analysis has been revised to include more information on the results of the Thorvaldson and Pritchett 2006 Economic Impact Study.
43	The last comment is that the CREP payments for land retirement do not create any new wealth.	Socioeconomics	No change to EA required.
44	ES – 1 the purpose of the CREP amendment states “reducing ag use of Ogallala: this would be true if the wells were retired but in the targeted zone the wells are not going to be retired and in fact they are going to be pumped into the river and the water will be gone forever versus if it is applied to growing crops the excess recharges the aquifer. States “increasing stream flows” when in actually over the long term it will decrease the aquifer as once the water is pumped and placed in the river it is gone forever and will eventually decrease the level of the aquifer.	Water Resources	No change to EA required. Statement in EA is still correct, enrolling in CREP would reduce <i>agricultural</i> use of Ogallala. Pumping of the water (no more than historical use) is only proposed for the Target Zone. The CREP area encompasses a 7-county area.

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45	ES – 2 Groundwater withdrawal does not have to continue the RRWCB owns the water and can retire the wells today or at any time instead of allowing the water to be utilized and the current landowners could be require by current laws and rules to reclaim the land to grassland. They do not have to be enrolled in CREP to reclaim land the soil conservation rules require the land to be maintained in non blowing status.	Water Resources	No change to EA required. CREP is voluntary, enrollment of specific acres (or wells) cannot be predicted.
46	As for Cultural resources the land being returned to grazing is more cultural than idle lands and the history of the great plains was grasslands grazed by buffalo which cattle use similarly.	Cultural Resources	No change to EA required. In NEPA documents, cultural resources consist of prehistoric and historic sites, structures, districts, artifacts, or any other physical evidence of human activities considered important to a culture, subculture, or community for scientific, traditional, religious, or other reasons.
47	As for Socio economic – 36 million federal funds infused into the local economy only helps if it is truly spent in the local economy where the land is taken out of production not as passive income spent buying more land and goods in other areas.	Socioeconomic	No change to EA required. NEPA document cannot predict how payments would be spent by CREP participant.
48	As to envior justice we have an aging population in rural America and with full land retirement as passive rent income then the active ag production decreases and we do not engage younger generations as ag producers as there is less land for them to attempt to farm/ranch.	Environmental Justice	No change to EA required. Environmental justice concerns concentrated minority populations and impoverished areas.
49	1-3 the River is the outflow of the Ogallala and the Republican River is a groundwater river not a major surface water river.	Water Resources	No change to EA required. This statement is not written in the EA.
50	1-6 1.4 the intent of NEPA is to protect, restore and enhance the human environment through well informed federal decisions – this proposal goes directly against the claim of NEPA and CREP programs.		No change to EA required.

[insert scanned letters/petitions]

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