

RECLAMATION


Managing Water in the West

FONSI No. 2019-01

Project No. 2017-75

Northeast Colorado Walker Recharge Project Central Colorado Water Conservancy District

Finding of No Significant Impact

Approved:  Date: April 5, 2019
Area Manager



U.S. Department of the Interior
Bureau of Reclamation
Great Plains Region
Eastern Colorado Area Office

April 2019

FINDING OF NO SIGNIFICANT IMPACT

In accordance with the National Environmental Policy Act of 1969, as amended, and the Council on Environmental Quality's Regulations for implementing the procedural provisions of the National Environmental Policy Act (40 CFR Part 1500-1508), the Bureau of Reclamation has prepared an environmental assessment (EA) for a WaterSMART grant and long-term license agreement (License) to partially fund and construct the first phase of Central Colorado Water Conservancy District's (Central) Northern Colorado Walker Recharge Project (Walker Recharge Project). The EA analyzes a No Action and Proposed Action alternatives. Based on the following, Reclamation has determined that the Proposed Action will not result in a significant impact on the human environment.

Background

Central's Walker Recharge Project is located along the South Platte River in eastern Morgan County and western Weld County in the northeast part of Colorado. It is near the small rural agricultural community of Orchard, Colorado. Central's boundaries include roughly 750 square miles of Adams, Weld, and Morgan Counties. The area includes the northeastern Denver metropolitan area, numerous smaller rural communities, and approximately 210,000 acres of irrigated lands supplied by surface diversions and groundwater pumping.

Central has two subdistricts that operate court-decreed plans for augmentation to replace depletions caused by pumping of 1,400 alluvial groundwater wells within Central's district boundaries (Case No. 02CW335 and 03CW99). The subdistricts currently have contracts to deliver up to 80,000 acre-feet per year as augmentation supply to replace depletions caused by alluvial well pumping. The alluvial wells are the primary source of water and supplement irrigation supplies when yield from surface water right is insufficient.

Purpose and Need

The primary purpose of the Walker Recharge Project is to help Central conjunctively manage its surface and groundwater supplies to increase the reliability of irrigation water supplied to agricultural producers in northeast Colorado. Conjunctive use is the practice of storing surface water in a groundwater basin in wet years and withdrawing it in dry years. Recharge operations are an effective method way to efficiently manage water supplies to match irrigation demands using alluvial aquifers for temporary storage to re-time water availability from periods of surplus supply to periods of reduced supply.

Project Alternatives

Proposed Action

Reclamation would award a \$750,000.00 federal grant funds under the WaterSMART Drought Response Program for design and construction of Phase I of the Walker Recharge Project as discussed in the EA. Reclamation would also issue a License for construction and operation of a portion of a pipeline across Reclamation lands. Phase I construction includes:

- Diverting up to 5 cubic feet per second (cfs) of surface flow from the existing Weldon Valley Ditch diversion located on the north bank of the South Platte River to a newly constructed 5-acre recharge pond or ponds northeast of the South Platte River (North Pond). A RiverScreen™ pump or similar system will be used to pump water from the Weldon Valley Ditch. More information on RiverScreen™ system can be found at <https://www.riverscreen.com>.
- Construction and operation of the 5-acre North Pond.
- Construction and operation of a 700-foot long pipeline (North Pipeline) connecting the surface diversion to the North Pond.
- Construction and operation between 4 and 6 new alluvial wells (South Wellfield) and construction and operation of a 1.5-mile pipeline (South Pipeline) on the south bank of the South Platte River. The South Pipeline would cross a tract of Reclamation lands, known as the Kinnaman Tract, purchased for Reclamation's Narrows Unit of the Pick-Sloan Missouri Basin Program. As part of the Proposed Action, Reclamation would issue up to a 25-year License to Central for construction and operation of the pipeline crossing the Kinnaman Tract.
- Construction and operation of a 10-acre recharge pond or ponds located southeast of the South Platte River (South Pond) connected to the alluvial wells.
- Construction and operation of a control building on Central's property to house electrical control systems for the South Wellfield.

The Walker Recharge Project would operate subject to the water rights and augmentation plans as filed in Colorado Water Court (Case No. 16CW3202) and is subject to a water right trial scheduled for July 2019. Phase I will divert up to 15,000 acre-feet per year from the South Platte River at rates of up to 50 cfs as described above. The total estimated costs of Phase I of the Walker Recharge Project are approximately \$7 million.

Summary of Environmental Impacts

During the environmental review process, potential effects resulting from the Proposed Action were identified, either by the public, other agencies, or Reclamation. Reclamation used potential effects to help focus the environmental review process, to structure the EA, and to identify opportunities for mitigating or avoiding adverse effects of the Proposed Action, as appropriate.

In the attached EA, Reclamation evaluated the environmental consequences associated with implementing the No Action or Proposed Action alternatives.

This Finding of No Significant Impact is based on the following:

- Up to 15,000 ac-ft of water annually would be provided to help Central conjunctively manage its surface and groundwater supplies. Recharge operations would temporarily store and re-time water from periods of surplus to periods of reduced supply.
- South Platte River Compact calls could increase in frequency from 1 to 29 days per year based on 2012-2017 hydrology under the Proposed Action assuming similar hydrology

and water demands of senior water rights. With future phases (II and III) and pumping rates up to 100 cfs, South Platte River Compacts calls could increase between 1 and 31 days under similar conditions.

- The increased water supply would be used to replace depletions caused by pumping from 1,400 groundwater wells within Central's district boundaries. Alluvial groundwater wells are the primary source of water and provide supplemental irrigation supplies when yield from surface water rights is insufficient.
- Minor temporary effects to water quality may occur during construction. However, Central would implement best management practices to minimize stormwater runoff.
- Construction of the North and South pipelines and installation of a box culvert would cross and temporarily affect Waters of the United States. Complying with the condition under United States Army Corps of Engineers Nationwide Permit (NWP) No. 12 for Utility Line Activities would minimize disturbance. NWP No. 12 limits discharges only to those that result in losses less than 1/10th acre.
- The Walker Recharge Project would have no effect to Endangered Species Act (ESA) listed species in Colorado.
- Reclamation formally consulted with the U.S. Fish and Wildlife Service on depletion effects to ESA listed species in the Platte River in Nebraska. The Service concluded that Proposed Action including future phases of the Walker Recharge Project (up to 30,000 acre-feet per year) is not likely to jeopardize the continued existence of the endangered and threaten species or critical habitat.
- Local wildlife may temporarily avoid the project area during construction activities.
- Construction activities during a severe winter could affect wintering concentrations of local wildlife including mule deer, whitetail deer and wildlife turkey.
- Up to 15 acres of shallow open water habitat (North and South Ponds) would be created under the Proposed Action and benefit waterfowl and other water dependent wildlife.
- The Proposed Action would have no effect to National Register of Historic Places-eligible properties.
- No known Indian trust assets would be affected by the Proposed Action.
- The Proposed Action will not result in disproportionate adverse effects to minority or low-income populations, or Indian Tribes.
- The Proposed Action will temporarily affect about 5 acres of soils types classified by the Natural Resource Conservation Service as prime farmland if irrigated and 2.5 acres as farmland of Statewide and local importance. None of these lands are or have historically been irrigated.
- The Proposed Action will permanently affect about 5 acres of soils types classified by the Natural Resource Conservation Service as prime farmland if irrigated and 5.0 acres classified as farmland of Statewide and local importance. None of these lands have been historically irrigated and will be used for the North and South Ponds.
- The Proposed Action will make up to 15,000 acre-feet of additional water supply available to Central which will primarily be used to augment supplies to replace depletions caused by existing alluvial well pumping including augmentation that supports existing irrigated farmland.

Environmental Commitments

The following environmental commitments will be implemented by Central:

1. Central must transport, store, and release all water in accordance with State of Colorado water law.
2. Central shall comply with all sections of the Clean Water Act, including NWP No. 12 conditions for construction of Walker Recharge Project Facilities. More information can be found at: <https://usace.contentdm.oclc.org/utis/getfile/collection/p16021coll7/id/6725>.
3. Central shall obtain a stormwater construction permit for the State of Colorado for all construction activities. The permit is required for disturbance of one acre or more of land or is part of a larger common plan. More information can be found at: <https://www.colorado.gov/pacific/cdphe/wq-construction-general-permits>.
4. Central shall continue to participate in the South Platte Water-Related Action Plan and remain in good standing to rely on the provisions of the Platte Recovery Implementation Program to provide ESA compliance for federally-listed Platte River species and critical habitat.
5. In the unlikely event that federally threatened or endangered species are encountered during construction or operation of the Walker Recharge Project, Central shall halt all construction activities and notify Reclamation. Reclamation will consult with the Service to comply with ESA. Construction activities may resume once the consultation is complete and any required protection measures have been implemented.
6. In the event of a severe winter during construction, construction activities should be limited unless Colorado Parks and Wildlife has determined that proposed activities will have negligible impacts to concentrations of local winter wildlife (including mule and whitetail deer, wild turkey, etc.).
7. In the event that an active raptor nest is identified within a ¼ mile of the Project Area during construction, Central shall review Colorado Division of Parks and Wildlife recommended buffer zones and seasonal restrictions for Colorado Raptors available at: <https://cpw.state.co.us/Documents/WildlifeSpecies/LivingWithWildlife/RaptorBufferGuidelines2008.pdf> to comply with the Migratory Bird Treaty Act.
8. Central shall comply with all provision and conditions of the license agreement for piping crossing Reclamation's Kinnaman Tract. Conditions include, but may not be limited to:
 - All activities on Kinnaman tract will be restricted to a 100-foot wide temporary construction footprint and a 50-foot width maintenance corridor along the pipeline alignment.
 - Central is required to pay crop damage for crop loss to Reclamation agricultural permittee once construction is completed. Reclamation's Grant Officer's Technical Representative will conduct on-site inspection and measurement to determine the amount of and cost of crop damage.
 - The pipeline must be buried at least 36 inches deep to allow Reclamation's permittee to plow the soil for preparation of the seed bed and to harvest any crops.
 - During construction activities, the top 12 inches of topsoil should be carefully removed and set aside, before completion of the rest of the trenching. Once the piping is laid in the trench, the layer of topsoil must be replaced and smoothed out sufficiently to plant a crop.

- Any drain tiles encountered during construction must be repair and/or replaced before the soil and/or pipe is laid on top of the drain tile. If drain tiles are encountered during construction, Reclamation inspect any repair before being buried.
 - All other surface disturbances must be repaired.
9. Central shall seed and restore all private lands disturbed during construction consistent with negotiated easements and agreements.
 10. Central or its contractor shall control noxious weeds within the 100-foot construction pipeline footprint and all other disturbed lands for three years following construction.
 11. In the unlikely event historic properties are encountered during construction activities, Central shall halt all construction and notify Reclamation, and Reclamation will complete its Section 106 obligation under the National Historic Preservation Act. Construction may resume once Reclamation's consultation with the Colorado State Historic Preservation Office and tribes is completed and any appropriate protective measures have been implemented.
 12. Any changes in the scope of Phase I (i.e. change in pipeline alignment) will require notification to Reclamation and potential additional National Environmental Policy Act compliance.

RECLAMATION

Managing Water in the West

Northeast Colorado Walker Recharge Project, Phase I Central Colorado Water Conservancy District

**Environmental Assessment
Project No. 2017-075 and 2018-070
Eastern Colorado Area Office
Great Plains Region**



**U.S. Department of the Interior
Bureau of Reclamation**

April 2019

MISSION STATEMENTS

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

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

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APPENDICES

APPENDIX A-Walker Recharge Project Map

APPENDIX B- South Platte River at Masters, Colorado and Julesburg, Colorado, Daily Flow Data

(Oct. 1, 2011- Dec. 31, 2017)

APPENDIX C-Mainstem South Platte Water Rights (Weldona Valley Ditch Diversion to Stateline)

APPENDIX D- ESA Section 7 Consultation Documents

ACRONYMS

ACOE	U.S. Army Corps of Engineers
CDWR	Colorado Division of Water Resources
CWCB	Colorado Water Conservation Board
Central	Central Colorado Water Conservancy District
cfs	cubic feet per second
EA	environmental assessment
ESA	Endangered Species Act of 1973
GMS	Groundwater Management Subdistrict
ITA	Indian Trust Assets
License	license agreement
NRHP	National Register of Historic Places
Narrows Unit	Narrows Unit of the Pick-Sloan Missouri Basin Program
NWP	Nationwide Permit
PBO	programmatic biological opinion
Project Area	Walker Recharge Project Area
Reclamation	Bureau of Reclamation
Service	U.S. Fish and Wildlife Service
SPWRAP	South Platte Water-related Action Plan
USGS	U.S. Geological Survey
Walker Recharge Project	Northeast Colorado Walker Recharge Project
WaterSMART	Water, Sustain and Manage America's Resources for Tomorrow
WAS	Well Augmentation Subdistrict
WOTUS	Waters of the United States

Chapter 1 – Purpose and Need

1.1 Introduction

This environmental assessment (EA) has been prepared to evaluate potential environmental impacts associated with the Northeast Colorado Walker Recharge Project (Walker Recharge Project) located in Morgan and Weld Counties, Colorado. The Central Colorado Water Conservancy District (Central) submitted a 2017 grant application requesting partial funding from the Bureau of Reclamation's (Reclamation) WaterSMART (Water, Sustain and Manage America's Resources for Tomorrow) Drought Response Program's to assist in design and construction of Phase I of the Walker Recharge Unit along the South Platte River in Morgan County, Colorado (see Walker Recharge Project Map included as Appendix A). Phase I includes a section of pipeline that would cross Reclamation owned lands in the Narrows Unit of the Pick-Sloan Missouri Basin Program (Narrows Unit). The Narrows Unit was authorized by Congress as a participating project of the Pick-Sloan Missouri Basin Program in 1994, reauthorized in 1970, but never constructed (Reclamation 2013).

1.2 Purpose and Need

The primary purpose of the Walker Recharge Project is to help Central conjunctively manage its surface and groundwater supplies to increase the reliability of irrigation water supplied to agricultural producers in northeast Colorado. Conjunctive use is the practice of storing surface water in a groundwater basin in wet years and withdrawing it in dry years. Recharge operations are an effective method way to efficiently manage water supplies to match irrigation demands using alluvial aquifers for temporary storage to re-time water availability from periods when there is surplus supply to periods when there is a reduced supply.

1.2 Background

The proposed Walker Recharge Project is located along the South Platte River Basin in eastern Morgan and western Weld Counties. Figure 1 shows the general location of the Walker Recharge Project and Central's district boundaries in Northeastern Colorado. Central's boundaries include roughly 750 square miles of Adams, Weld, and Morgan Counties. The area includes the northeastern Denver metropolitan area, numerous smaller rural communities, and approximately 210,000 acres of irrigated lands supplied by surface diversions and groundwater pumping.

Central has two subdistricts that operate court-decreed plans for augmentation to replace depletions caused by pumping of about 1,400 alluvial groundwater wells within Central's district boundaries (Case No. 02CW335 and 03CW99). The Groundwater Management Subdistrict (GMS) and Well Augmentation Subdistrict (WAS) currently have contracts to deliver up to 80,000 acre-feet per year as augmentation supply to replace depletions caused by alluvial well pumping. The alluvial wells are the primary source of water for many farms and provide supplemental supplies to other farms when the yield from surface water rights are insufficient.

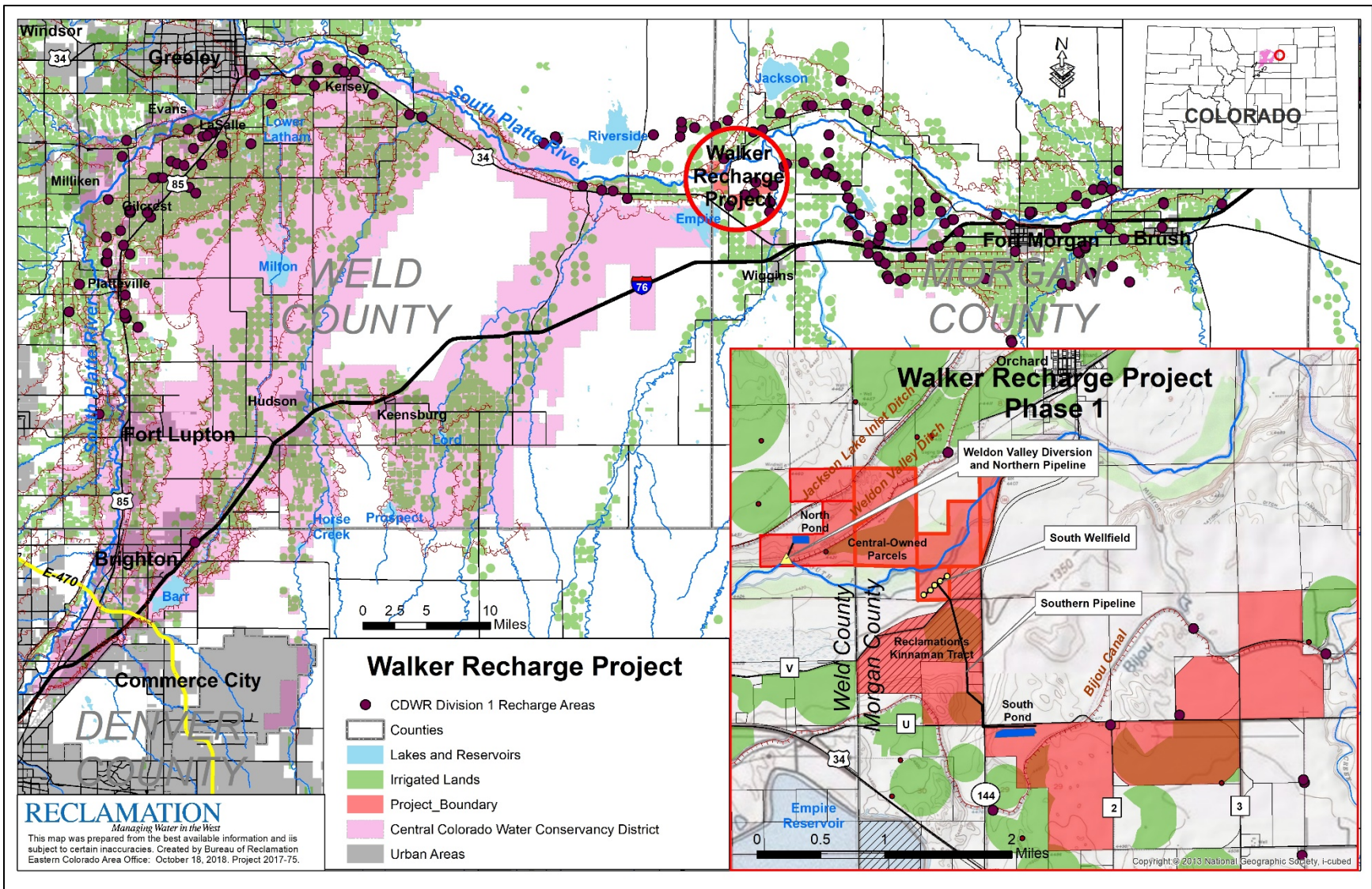


Figure 1-Walker Recharge Project Area

2.0 ALTERNATIVES

2.1 No Action Alternative

Under the No Action Alternative, Reclamation would not provide federal funding to assist in design and construction of the Walker Recharge Project. A \$750,000.00 WaterSMART Drought Response Program grant would not be awarded, and Central would need to seek additional funding sources to construct Phase I of the Walker Recharge Project. It is assumed that Reclamation would also deny Central's license agreement request for a pipeline across Reclamation's Narrows Unit lands associated with the Walker Recharge Project.

2.2 Proposed Action

Reclamation would award a \$750,000.00 federal grant funds under the WaterSMART Drought Response Program for design and construction of Phase I of the Walker Recharge Project as previously shown in Figure 1 and Appendix A. Reclamation would also issue a 25-Year license agreement (License) authorizing construction and operation of a portion of a pipeline across Reclamation's Narrows Unit lands. Construction and operations of the Walker Recharge Project are discussed below. The total estimated costs associated with Phase I of the Walker Recharge Project are about \$7 million.

2.2.1 Phase I Construction Activities

Construction of Phase I facilities include the following:

- Diverting up to 5 cubic feet per second (cfs) of surface flow from the existing Weldon Valley Ditch diversion located on the north bank of the South Platte River to a constructed 5-acre recharge pond or ponds on northeast of the South Platte River (North Pond). A RiverScreen™ pump or similar system will be used to pump water from the Weldon Valley Ditch. More information on RiverScreen™ system can be found at <https://www.riverscreen.com>.
- Construction and operation of the 5-acre North Pond.
- Construction and operation of a 700-foot long pipeline (North Pipeline) connecting the surface diversion to the North Pond.
- Construction and operation of between 1 and 6 new alluvial wells (South Wellfield) and construction and operation of a 1.5-mile pipeline (South Pipeline) on the south bank of the South Platte River. The South Pipeline would cross at tract of Reclamation lands purchased for Reclamation's Narrows Unit (also known as the Kinnaman Tract).
- Construction and operation of a 10-acre recharge pond or ponds located southeast of the South Platte River (South Pond) connected to the alluvial wells.
- Construction and operation of a control building on Central's property to house electrical control systems for the South Wellfield.

The North and South Ponds will require excavation and removal of a few feet of soil across the entire footprint of each pond. The exact amount will be determined by site conditions. It is anticipated that all the excavated soil can be used to construct berms for each pond following natural contours. Pipelines will be built using cut-and-cover construction methods at sufficient frost depths. Approximately 1/3 of the 1.5-mile (2,700 ft) South Pipeline would cross the Kinnaman Tract and would require Reclamation's approval through issuance of a License. The License would authorize a 100-foot wide construction corridor width and a twenty-five-year renewable 50-foot wide operation and maintenance corridor through the Kinnaman Tract. Central would also obtain similar easements or agreements for other portions of the South Pipeline and the South Pond on private lands.

The North Pipeline and North Pond would be constructed on property owned by Central and Central would obtain a 100 ft-wide construction easement or agreements on either side of the Southern Pipeline and a 50 ft-wide permanent easement would be retained for operation and maintenance activities.

2.2.2 Phase I Operations

The Walker Recharge Project would operate subject to the water rights and augmentation plan as filed in Colorado Water Court (Case No. 16CW3202). A water right trial is scheduled for July 2019. Opposers to the application may participate in the trial and the final court decree may differ from the application. The Walker Recharge Project would need to operate subject to the water rights decree with a November 15, 2016 appropriation date. Phase I of the Walker Recharge Project would divert up to 50 cfs from the South Platte River using an existing diversion structure and alluvial wells when the water rights associated with Case No. 16CW3202 are in priority. Central estimates up to 15,000 ac-ft per year could be recharged under Phase I when Central's water rights are in priority.

The Walker Project would be operated to develop recharge accretions (amounts of water that are considered credit because they are stored for later use) for use in Central's GMS and WAS augmentation plans. Accretions to the South Platte River would occur after water has been diverted from the river, delivered into recharge ponds, and then percolated into the alluvial aquifer to coincide with delayed effects of the alluvial groundwater well pumping. This would allow water diverted to recharge during times of abundance (when water rights may be in priority) to be re-timed to create increased supplies during droughts (when water rights may be out of priority).

Once constructed, Central would maintain a new pump structure in the Weldon Valley Ditch, alluvial wells, well pumps, recharge ponds, pipelines and other associated features. Reclamation's License would authorize pipeline crossing of Reclamation's Kinnaman Tract. The License would include standard and special conditions requiring Central to restore and revegetate all disturbed lands. The License's conditions and environmental commitments are discussed in Chapters 3 and 5.

3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This chapter describes the affected environment and discloses direct, indirect and cumulative environmental consequences of the No Action and Proposed Actions. It focuses on these resources: Water resources and hydrology, water quality, aquatic resources, recreation, threatened and endangered species, socioeconomics, and cultural resources. Cumulative impacts related to present and reasonably foreseeable future actions are also discussed at the end of each resource section.

3.1 Reasonably Foreseeable Future Actions

Reasonably foreseeable future actions are actions that may affect project impacts of a proposal and are not remote or speculative and relative to the time frame evaluated in the NEPA document. They include both federal and non-federal actions. This EA considers the following as reasonably foreseeable future actions:

3.1.1. Platte River Recovery Implementation Program

In 1997, the States of Colorado, Wyoming and Nebraska, and the United States Department of the Interior formed the Platte River Recovery Implementation Program to develop a shared approach to managing the Platte River to assist in recovery of four federally-listed species protected under the Endangered Species Act (ESA) of 1973. The four species include the interior least tern, pallid sturgeon, piping plover and whooping crane. The program focuses on creating and maintaining habitats on the Platte River. Additional discussion on each species is included in Chapter 3. More information on the Platte River Recovery Implementation Program can be found at available at: <https://platteriverprogram.org/>.

3.1.2 Walker Recharge Project-Future Phases

Future phases of the Walker Recharge Project are expected to include development of additional surface diversions, wellfields, pipelines and recharge ponds. Upon completion, it is anticipated that the Walker Recharge Project would be able to divert and recharge up to 30,000 ac-ft per year at rates up to 100 cfs from the South Platte River. The additional recharge ponds could be located up to three miles away from the South Platte River.

In November 2018, voters in Central's District passed a bond issue worth \$48.7 million that included funding for the Walker Recharge Project. Reclamation's WaterSmart grant program would also fund a portion of Phase I (\$750,000). Central also received grants and loans from Colorado Water Conservation Board (CWCB). Construction and operation of Walker Recharge Project's future phases would follow Phase I and would be subject to the final court decree when issued for Case No. 16CW3202. Appendix A includes a planning map that shows potential future phases of the Walker Recharge Project. The additional well fields, pipelines and recharge ponds shown are speculative, but the proposed 30,000 ac-ft of recharge is considered the

reasonably foreseeable future condition of federal and non-federal actions for ESA Section 7 consultation purposes for evaluating depletion effects associated with Platte River Recovery Implementation Program. The Section 7 consultation process is discussed in greater detail in the Threatened and Endangered Species section of this Chapter.

3.2 Water Resources

The South Platte River originates in high Rocky Mountain streams along the Continental Divide in the northern portion of the Front Range. As the South Platte River emerges from the Rocky Mountains southwest of Denver, it travels north through the Denver Metropolitan Area and continues northwards toward Greeley, Colorado. From Greeley, the river flows eastward through the Project Area and then turns northeasterly toward Sterling and Julesburg as the area transitions into a rural, agricultural setting. The South Platte River then continues to flow easterly through Nebraska and where it joins the North Platte River to form the Platte River.

Within the general Project Area, there are three irrigation reservoirs: Riverside, Empire, and Jackson Lake, all filled from diversion from the South Platte River upstream of the Walker Recharge Project. Center-pivot irrigation is the dominant practice on irrigated lands downstream of the Walker Recharge Project.

3.2.1 Hydrology

Flows from the South Platte River Basin are highly variable, with approximately 1.4 million ac-ft of annual native flow (CWCB 2015). About 400,000 ac-ft from the Colorado River Basin and 100,000 ac-ft from the Arkansas River Basin are imported to the South Platte River by trans-mountain diversions to supplemental native agricultural and municipal water supplies. South Platte River streamflow data has been measured at the South Platte at Fort Morgan gage (United States Geological Survey (USGS) 06759500) since 1943 and is about 25 miles downstream of the Project Area. Figure 2 illustrates the wide range of variable flows at the Fort Morgan gage.

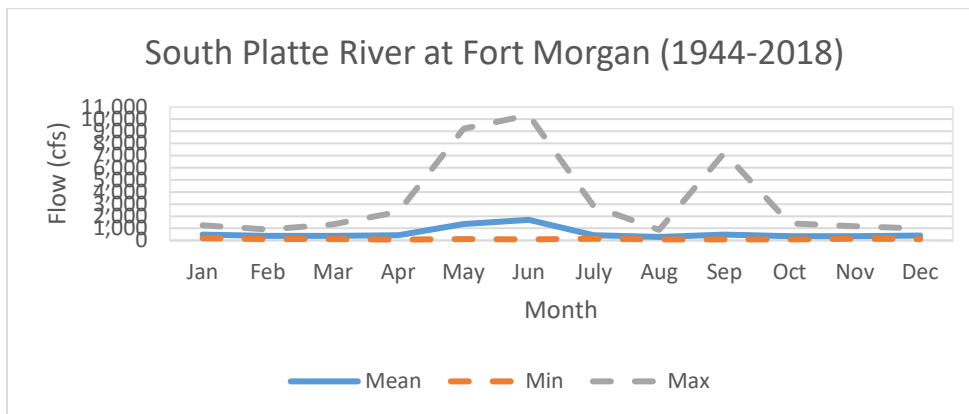


Figure 2-South Platte River Streamflow (1943-2018).

Figure 3 shows the location of the Fort Morgan gage, as well as, the South Platte River at Masters, Colorado (PLAMASCO) gage upstream and the Platte River near Weldona, Colorado (PLAWELCO) gage downstream of the Walker Recharge Project.

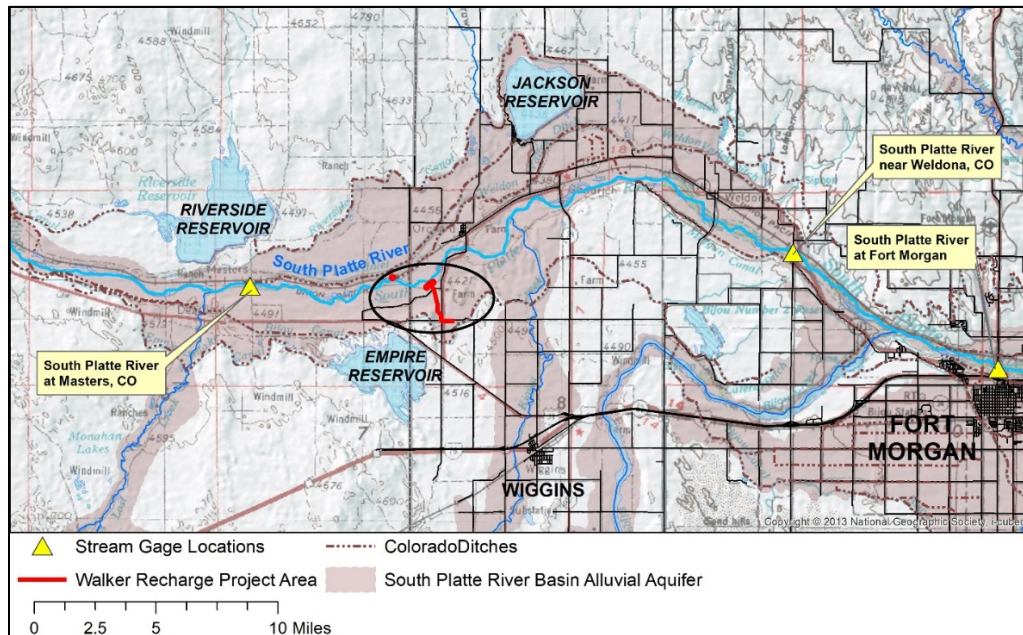


Figure 3-Stream Gages near the Walker Recharge Project

Daily streamflow data for all three gage locations was obtained from CWDR (2019) and included the overlapping time period of August 2011 through September 30, 2017. Monthly flows at each gage are summarized in Table 1. The South Platte River at Julesburg, Colorado (PLAJUCCO) is used as a measuring point for the South Platte River Compact and is also shown in Table 1.

Table 1-South Platte River Average Monthly Flows (August 2011 through September 2017).

Stream Gage		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Flow (cfs)	PLAMASCO (at Masters)	558	381	455	749	3,367	3,788	762	420	1,074	597	394	577
	PLAWELCO (near Weldona)	830	677	547	784	3,088	3,475	708	441	1,215	639	549	687
	USGS 06759500 (at Fort Morgan)	934	662	432	669	3,165	3,380	594	326	1,495	654	612	758
	PLAJUCCO at Julesburg	982	789	344	469	2,757	3,518	516	221	1,014	496	497	715

3.2.2 Water Rights

Water rights in Colorado are adjudicated in Colorado Water Court and are administered by the Colorado Division of Water Resources (CDWR) under the “1st in time, 1st in right” Prior Appropriations Doctrine. Water rights grant the owner to put native flows to beneficial uses according to availability. When there is not enough native flow to meet all the water rights, CWDR administers a “call” to ensure that calling senior water rights owners receive enough flow

to meet their decrees before junior water rights holders. The South Platte River Basin has a long history of water management with over 18,600 decreed points of diversion (CWI 2013). The era of irrigation development in the South Platte River Basin began in the early 1860s and the first large scale irrigation project was initiated by the Union Colony near Greeley in 1870.

The South Platte River Compact of 1923 establishes Colorado's and Nebraska's rights to use water in the South Platte River. Colorado has the right to fully use water in the South Platte River between October 15 and April 1. Between April 1 and October 15, if the mean daily flow at Julesburg drops below 120 cfs and water is needed for beneficial use in Nebraska, water rights in Colorado in the lower section of the South Platte River with priority dates junior to June 14, 1897, are curtailed (Colorado Foundation for Water Education 2010). Appendix B includes the dates when active calls were placed on the South Platte River between October 2011 and December 2017.

Many groundwater wells were also drilled in the South Platte alluvium to supplement the limited water supplies. However, to continue pumping, well owners must replace water to the South Platte River to satisfy their out-of-priority depletions to protect senior water rights and maintain water deliveries to Nebraska. To accomplish this replacement, well owners have turned in part to the South Platte River Compact's October 15 to April 1 period for storing, recharging and exchanging water into the underground aquifer. Return flows from these wintertime recharge operations flow back into the river during the irrigation season to protect senior water rights and the South Platte River Compact.

Downstream diversions with senior water rights are included in Appendix C. Also, additional information about South Platte River Basin water rights and water availability can be found in a 2015 water surface availability analysis report completed as part of the South Platte Basin Implementation Plan for the South Platte Basin/Metro Basin Roundtables (HDR et al 2015).

3.3.3 Effects of the Proposed Action

The Proposed Action would provide up to 15,000 ac-ft feet of water annually to help Central conjunctively manage its surface and groundwater supplies. Recharge operations would temporarily store and re-time water from periods of surplus to periods of reduce supply and Central would continue to supply augmentation sources through its GMS and WAS.

The 2015 water availability analysis (HDR et al, 2015) estimated that in 9 of the 14 years (2000-2013), less than 60,000 ac-ft was available per year. Two of the years showed no water available. Under the Proposed Action, the amount of available water for future development would be reduced by up to 15,000 ac-ft per year and future phases of the Walker Recharge Project could reduce water availability by another 15,000 ac-ft.

Central's water right application requests a November 15, 2016, date of appropriation for augmentation, recharge, replacement, exchange, irrigation, recreation, industrial and commercial, municipal and domestic uses. It also claims the right to divert, re-divert, store and totally

consume the water being appropriated and use the same to extinction. Case No. 16CW3202 is currently scheduled for trial in late July of 2019 and the Proposed Action would be operate subject to the water rights decree. Phase I would divert up to 15,000 ac-ft per year at a maximum rate of 50 cfs. Future phase could divert up to an additional 15,000 ac-ft per year (also at a maximum rate of 50 cfs).

The proposed water right is very junior and limited to the South Platte River and its alluvium. Pumping and diversions would only occur when there is enough water to satisfy downstream senior water rights because the South Platte River is over-appropriated. In the summer, the South Platte River is generally controlled by water rights with 1860s to early 1900s water right priorities.

Under the Proposed Action, the frequency of senior water rights calls and CDWR’s administration of the river would likely increase and “free river” condition would be expected to decrease. Appendix B displays the days active calls occurred on the South Platte River downstream of the Walker Recharge Project at the Weldona and Julesburg stream gages (CDNR 2018). Table 2 below summarizes the days with active calls from Oct 1, 2011 through December 31, 2017, from the Weldon Valley Ditch Diversion to the Stateline. The number South Platte River Compact (1897) calls is also included.

Table 2-CDWR Administer Water Rights Calls Downstream of Walker Recharge Project (2011-2017).

Year	Total Active Calls Downstream of Walker Recharge Project (Jan 1-Dec 31) (365 Days)			South Platte Compact Calls (Apr 1-Oct 15) (197 Days)	
	Number of Calls	Days of Active Calls	Percent	South Platte Compact Call Days	Percent of Days
2011 (Oct-Dec)	0	0	0%	0	0%
2012	622	261	71%	196	99%
2013	520	262	72%	167	85%
2014	51	93	25%	93	47%
2015	11	135	37%	91	46%
2016	136	132	36%	81	41%
2017 (Jan-Sep)	242	165	77%	139	71%
Avg.	264	175	53%	128	65%

Decreed water rights on the South Platte River from the Weldon Valley Ditch (River Mile 141.2) downstream to South Platte River Compact’s measuring point near Julesburg, Colorado (River Mile 2.61) was used to evaluate the Proposed Action’s effect on water rights. The South Platte Support System (SPSS) lists 304 diversion structures and 511 associated water rights from Weldon Valley Ditch Diversion to the Colorado-Nebraska Stateline (CDNR 2018) (see Appendix C). Eighty-five of these water rights are either conditional or no longer active.

Table 3 predicts the days Proposed Action diversion of 50 and 100 cfs could produce a South Platte River Compact call that curtails or prevents Walker Recharge Project diversions. Any diversions causing South Platte River flows at the Julesburg, Colorado, stream gage to drop below 120 cfs at the Julesburg gage between April 1st and October 15th are assumed to trigger a South Platte River Compact Call. The South Platte River Compact is predicted to reduce Walker Recharge Project proposed diversion between 1 and 29 days under Phase I (up to 50 cfs), and between 1 and 31 days under future phases (up to 100 cfs) assuming enough South Platte River flows to satisfy water rights senior to Central’s water right application. Appendix B includes the daily flows at both the Masters, Colorado and Julesburg, Colorado, gages.

Table 3-Potential Increases in South Platte Compact Calls during Walker Recharge Pumping

Year	South Platte Compact Calls (Apr 1-Oct 15)				
	Days of Calls			Percentage of Days w/ Calls	
	Historic Calls	Increase w/ 50 cfs Diversion (Days)	Increase w/ 100 cfs Diversion (Days)	Proposed Action	Cummulative (w/Phase II & III)
2012	196	1	1	100%	100%
2013	167	2	2	86%	86%
2014	93	2	10	48%	52%
2015	91	6	14	49%	53%
2016	81	28	29	55%	56%
2017	134	29	31	83%	84%
2018	143	22	28	84%	87%

Recharge credits generated by the Walker Recharge Project would primarily be used to augment groundwater rights claimed in Central’s water rights application (16CW3202), as well as a source for augmentation and replacement in Central’s existing decreed augmentation plans or future augmentation plans, or other augmentation plans.

3.4 Water Quality and Waters of the United States

3.4.1 Water Quality

The Colorado Water Plan as shown in Appendix E (TSD Consulting Inc. 2015) provides information on water quality and watershed health of the South Platte Watershed. The South Platte Basin was delineated into 18 eight-digit hydrologic units codes. On average, South Platte River Basin water is used seven times successively before it leaves the state (HDR et al 2015). A major challenge in the South Platte Basin relates to adequacy of the water quality for domestic and municipal uses.

Generally, water quality in the South Platte River Basin tends to degrade in the downstream direction, especially from the Denver Metro Area to the Stateline (HDR et al 2015). Total

dissolved solids increase from about 220 mg/l to 1250 mg/l and nitrate concentrations increase from about 0.2 mg/l at Chatfield Reservoir to 2.7 mg/l at Sterling, Colorado.

Stormwater discharges associated with construction activities require a storm water construction permit from the State of Colorado for any construction activity that disturbs 1 acre or more of land or is part of a larger common plan of development. The permit requires the development and implementation of a Storm Water Management Plan. The purpose of the Storm Water Management Plan is to identify possible pollutant sources that may contribute pollutants to storm water and identify Best Management Practices that, when implemented, will reduce or eliminate any possible water quality impacts. Applications must be made at least 10 days prior to the start of construction activities. Additional information is available at:

<https://www.colorado.gov/pacific/cdphe/wq-construction-general-permits>.

3.4.3 Waters of the United States

For purposes of this EA, Reclamation relied on the 1986/1988 definition of Waters of the United States (WOTUS) as defined in 40 CFR 230.3(s). Within the Walker Recharge (Project Area), the South Platte River and adjacent waters includes wetlands, ponds, lakes, oxbows, impoundments, and similar waters. WOTUS also includes waters within the 100-year floodplain of the South Platte River located within 4,000 feet of the ordinary high-water mark of a water and determined to have significant nexus to the South Platte River.

Clean Water Act Section 404 requires a permit before dredge or fill material may be discharged into WOTUS, unless the activity is exempt (e.g. certain farming and forestry activities). The U.S. Army Corps of Engineers (ACOE) administers the day-to-day program, including individual and general permit decisions, jurisdictional determinations, and enforcement activities.

In 2017, Central drilled multiple test wells along the south bank of the river to evaluate the feasibility of pumping adjacent to the river to facilitate recharge of the alluvial aquifer. The wells were permitted by CDWR, cased and capped, and vary in depth from 10 to 79 feet in depth. An access road across the secondary drainage channel was constructed sometime prior to the 2017 well drilling activities and three 29-inch corrugated metal pipe culverts in compacted fill dirt for vehicle access across the secondary channel.

3.4.4 Effects of the Proposed Action

Several factors impact the water quality of recently recharged groundwater beneath irrigated cropland, including land-management practices involving chemical use and water use, natural reservoirs of nitrate in the subsoil, storage of chemicals in the unsaturated zone, chemical transit times in the unsaturated zone, and climate (USGS 2009). TDS levels (measure of inorganic compounds found dissolved in water such as salts, heavy metals, and some organic material helps indicate quality of water) are likely to decrease during periods of high runoff, when water may be available for the Walker Recharge Project. Typically, recharge diversions remove water from the stream during times when there are high flows and return the recharge return flows to the river to times when there is less flow in the river.

Assessment of water quality impacts for this EA focuses on construction activities associated with the Walker Recharge Project. Phase I construction activities include installation of five or six metered wells with pumps capable of pumping 4 to 6 cfs along the south river bank and installation of a RiverScreen™-type pump in the Weldon Valley Ditch each to provide up to 15,000 ac-ft of recharge per year.

Well manifolds (arrangement of piping or valves designed to control, distribute, and monitor water movement in the pipes) along the south bank of the river would range from 18 to 36-inch in diameter and the supply collection pipeline would be sized to accommodate up to 100 cfs (36-48-inch in diameter). A concrete box culvert with wing walls would also be constructed to replace corrugated metal pipe culverts across the secondary channel. A conceptual wellfield plan is shown in Figure 4.

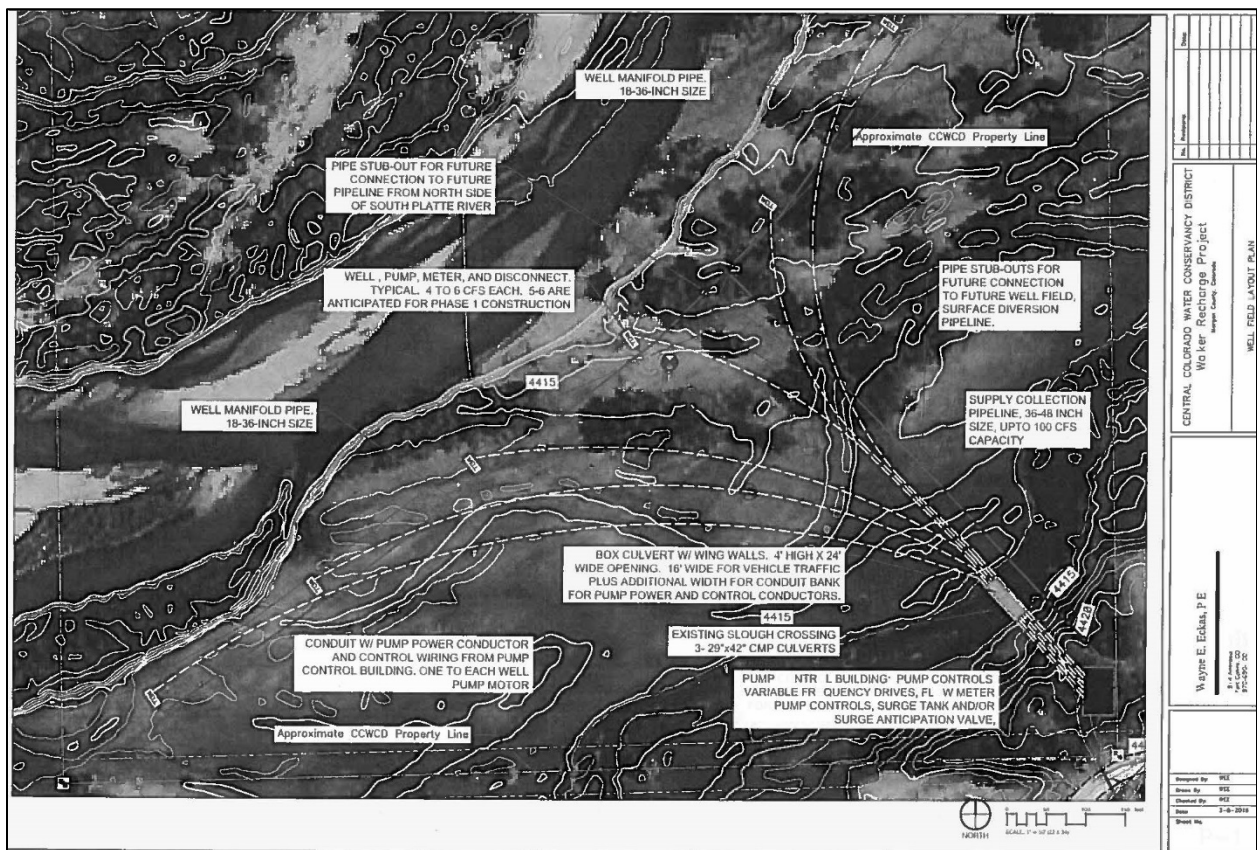


Figure 4-Walker Recharge Project-Wellfield Plan, Phase I

Future wellfields would be added and connected to the supply collection line, as needed, for the future phases to increase recharge rates to 100 cfs to provide up to 30,000 ac-ft of augmentation. All wells would be permitted by CDWR and maintained and service throughout the life of the Walker Recharge Project. Central retained Savage and Savage, Inc. (2017d and 2017e) to complete a wetlands inventory and identify any other WOTUS within the footprint of the Walker Recharge Project. A wetlands determination was conducted in accordance with ACOE Wetlands Delineation Manual and Interim Supplemental (ACOE 1987 and 2008).

The site of the river consists primarily of mesic uplands with scattered cottonwood trees near the river bank (Savage 2017d). The predominate hydrologic feature is a secondary drainage channel that flows from west to east parallel to the South Platte River. The river bank is elevated from 1-10 feet above the braided river channel with moderate (1:2) to vertical cut banks. The secondary channel is a primary waterway and was concluded to be WOTUS. In addition, a 1 to 2 feet-wide wetland fringe along the secondary channel and an adjacent wet meadow area were delineated as wetlands.

The Weldon Valley Ditch site (aka Smith Recharge Area) located north of the South Platte River consists of an open mesic meadow between the river and the Weldon Valley Ditch. A few Russian olives are scattered along the eastern boundary. The site does not contain alluvial topographic or geomorphic features (relict floodways, depressions, or channels) and is largely flat, and slopes gently south towards the South Platte River. The site is currently used for range cattle. The investigation determined that there are not WOTUS or jurisdictional wetlands within this area (Savage 2017e).

Predicted rates of recharge from the constructed ponds will be fairly rapid and along fast paths where water from land use is likely to reach the water table in months or decades. The Proposed Action is predicted to have no long-term measurable effect on water quality.

Pipeline crossings and installation of the box culvert over the secondary channel on the south side of the river would occur within WOTUS. The ACOE's Nationwide permit (NWP) No. 12, Utility Line Activities includes construction and operation and maintenance activities proposed for the Walker Recharge Project. Materials resulting from trenching excavation may be temporarily side cast in WOTUS for no more than three months, provided the material is not placed in such a manner that is dispersed by currents or other forces. The trench cannot be constructed or back filled in such a manner as to drain WOTUS and any exposed slopes and stream banks must be stabilized immediately upon completion of the utility line crossings of each waterbody. Access roads constructed above pre-construction contours and elevations in WOTUS must be properly bridged or culverted to maintain surface flows. NWP No. 12 requires pre-construction notification to ACOE if:

- 1) pipelines and conduits in WOTUS exceed 500 ft,
- 2) pipelines or conduits run parallel to or along a streambed that is within a jurisdictional area,
- 3) discharges result in the loss greater than 1/10-ac of WOTUS,
- 4) permanent roads are constructed above grade in WOTUS for a distance of more than 500 ft, or
- 5) permanent roads are constructed in WOTUS with impervious materials.

As currently proposed, the Walker Recharge Project would meet conditions included in NWP No. 12 and would not require pre-construction notification. NWP 12 conditions are incorporated as environmental commitments and can be found at: <https://usace.contentdm.oclc.org/utills>

[/getfile/collection/p16021coll7/id/6725](#). Central shall review the pre-construction notification requirements and notify ACOE if required after final design is completed.

Implementation of best management practices including reseeded to minimize erosion and stormwater runoff in disturbed areas also will reduce the likelihood of increased turbidity during construction.

3.5 Threatened and Endangered Species

This section of the EA constitutes Reclamation’s biological assessment of threatened and endangered species under Section 7 of ESA. Reclamation used the U.S. Fish and Wildlife Service’s (Service) Environmental Conservation Online System-Information and Planning for Conservation system to request a species list of proposed, candidate, threatened and endangered species, as well as proposed and final designated critical habitat that may occur within the Project Area and/or could be affected by the Proposed Action.

The Service identified nine species potentially within the Project Area as shown in Table 4. The action area for this project includes the South Platte River downstream of the Weldon Valley Ditch Diversion as shown in Figure 1 and Appendix A. Effects to listed species and their designated critical habitats in the Platte River in Nebraska were also evaluated.

Table 4-Federally Listed Species with Potential to Occur in Project Area.

Common Name	Scientific Name	Status+	Habitat Requirements	Potential to Occur within Project Area
Preble’s meadow jumping mouse	Zapus hudsonius preblei	T	Shrub riparian/wet meadow habitat.	Inventory completed, no mice found.
Interior least tern*	Sterna altrillarum athalassos	E	Sandy/pebble beaches on lakes, reservoirs, and rivers	Project depletions adversely affect species in Nebraska.
Mexican Spotted Owl	Strix occidentalis	T	Closed canopy forest in steep canyons	No suitable habitat within Project Area.
Piping plover*	Charadrius melodus	T	Sandy lakeshore beaches and river sandbars	Project depletions adversely affect species in Nebraska.
Whooping crane*	Grus americana	E	Mudflats around reservoirs and in agricultural areas.	Project depletions adversely affect species in Nebraska.
Pallid sturgeon*	Scaphirhynchus albus	E	Large, turbid, free-flowing rivers with a strong current and gravel or sandy substrate.	Project depletions adversely affect species in Nebraska.
Ute ladies’-tressess orchid	Sprianthes divluvalis	T	Moist to wet alluvial meadows, floodplains of perennial streams, and around springs and lakes below 6,500 feet in elevation.	Inventory completed, no plants found.
Western prairie fringed orchid*	Platanthera praeclara	T	Moist to wet prairies and meadows	Project depletions adversely affect species in Nebraska.
Colorado butterfly plant	Gaura neomaxicana var. coloradensis	T	Typically found in wetland habitats along meandering streams among native grasses.	Inventory completed, no plants found.

*Species and habitats occur downstream associated with the Platte River. *T= ESA listed as threatened; E= ESA listed as endangered.

Colorado Butterfly Plant and Ute Ladies' Tresses Orchid

Savage and Savage Environmental was retained by Central to complete an assessment of threatened and endangered species habitat within the Project Area for the Proposed Action. Savage (2017a, 2017b) completed inventories of potential habitat for Colorado butterfly plant, and Ute ladies' tresses orchid. No individual plants or populations for either species were identified during pedestrian surveys completed in August 2017.

Preble's Meadow Jumping Mouse

Savage (2017c) conducted field investigations at a site along and adjacent to the South Platte River within the proposed Project Area for Preble's meadow jumping mouse. It was determined that the site does not contain typical habitat. Due to overgrazing, the riparian corridor and mesic meadow are dominated by inland saltgrass and lack sufficient understory shrub cover to provide cover protection for small mammals and Savage concluded the site lacks potential habitat for this species.

Mexican Spotted Owl

Reclamation has determined that the Project Area lacks suitable habitat for Mexican spotted owl and no inventories were necessary. Old-growth or mature forests and canyons with conifers communities do not occur within the project area. The riparian area contains mature trees but lacks the canyon topography associated with Mexican spotted owl.

Platte River Species

Because the Walker Recharge Project would increase depletions of the South Platte River, Reclamation formally consulted with the Service under Section 7 of ESA. The Section 7 consultation was streamlined a programmatic biological opinion (PBO) issued for the Platte River Recovery Implementation Program and water-related activities affecting flow volume and timing in the central and lower reaches of the Platte River in Nebraska.

The PBO established a two-tiered consultation process for future federal actions on existing and new water-related activities subject to Section 7(a)(2) of ESA, with issuance of the PBO being Tier 1 and all subsequent site-specific project analyses constituting Tier 2 consultations covered by the PBO. Reclamation submitted a final biological assessment on February 7, 2019, and the Service issued a biological opinion on March 2, 2019 (Appendix D).

The Service concluded that the Walker Recharge Project is consistent with the Tier 1 PBO for effects to listed species and critical habitat addressed in the Tier 1 PBO. The Service determined that Walker Recharge Project is not likely to jeopardize the continued existence of the federally endangered whooping crane, interior least tern, and pallid sturgeon, or the federally threatened northern Great Plains population of the piping plover or western prairie fringed orchid in the central and lower Platte River. The Walker Recharge Project is also not likely to destroy or adversely modify designated critical habitat for the whooping crane.

The United States Department of the Interior, acting through the Service and Reclamation, is implementing all pertinent Reasonable and Prudent Measures and implementing Terms and Conditions stipulated in the Tier 1 PBO Incidental Take Statement which will minimize the anticipated incidental take (including harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting) of federally listed species.

Central intends to rely on the provision of the Platte River Recovery Implementation Program to provide ESA compliance for potential impacts to the federally-listed Platte River species and critical habitat. Reclamation, as condition of the WaterSmart grant award, will require that Central fulfill the responsibilities required of the Platte River Recovery Implementation Program in Colorado, which includes participation in the South Platte Water-Related Action Plan (SPWRAP). Central has provided certification that they are in good standing with the SPWRAP. More information on SPWRAP can be found at: <https://platteriverprogram.org/information-platte-river-basin-water-users> and <https://www.fws.gov/platteriver/Documents/Colorado%20Guidance%202015.pdf>. This requirement is incorporated into the environmental commitments in Chapter 4.

In addition, Reclamation has determined that Walker Recharge Project will have no effect to Colorado butterfly plant, Ute ladies' tresses orchid, Preble's meadow jumping mouse, or Mexican spotted owl. In the unlikely event that listed species are encountered during construction of Phase I of the Walker Recharge Project, Central shall stop all activities and notify Reclamation.

3.6 Wildlife and Fisheries Resources

General wildlife along the South Platte River within and adjacent to the Project Area include bald eagle, greater prairie chicken, mule deer, white-tailed deer, river otter, black-tailed prairie dog, ring-necked pheasant, bobwhite quail, wild turkey, geese, great blue heron, sandhill crane, white pelican, and other waterfowl (CPW 2018).

Bald eagle, mule deer, white-tailed deer, and wildlife turkey all utilize the South Platte River corridor as winter concentration areas. An active bald eagle nest has been identified about 3 miles downstream of the Project Area but no know active or historic raptor nests occur within ½ mile of the Project Area. Migratory birds and active nests are protected under the Migratory Bird Treaty Act. Under the Proposed Action, local wildlife may temporarily avoid the Project Area during construction but are expected to experience only short-term displacement. Construction activities should be limited during a severe winter to minimize potential impacts to wintering concentration of local wildlife. However, the two recharge ponds would provide additional habitat benefitting waterfowl and other water-dependent wildlife in the area.

Common fish species found in the South Platte River downstream of the Weldon Valley Ditch include white sucker, carp flathead minnow, and creek chub (Tate and Martin 1995). Other cool water species that may be present include longnose sucker and longnose dace. Plains killifish,

stoneroller, plains minnow, red shiner, shorthead redhorse and big mouth shiner are abundant downstream towards the confluence with the North Platte River.

Fish species within the Project Area are primarily limited to those species considered to be tolerant and adaptable to degraded water quality, habitat alterations, siltation, organic pollution, channelization, and flow fluctuations (Tate and Martin 1995). The Proposed Action is predicted to have no measurable effect on these fish species.

3.7 Land Use

Land use within and adjacent to the Project Area is rural in nature consisting of dryland and irrigated farming, cattle ranching, and waterfowl hunting. All Phase I wellfields, pumps, and associated facilities would be located on lands already owned by Central previously used for agriculture (see Appendix A). The 5-acre North Pond and associated pipeline would be located only on parcels owned by Central (Figure 5).

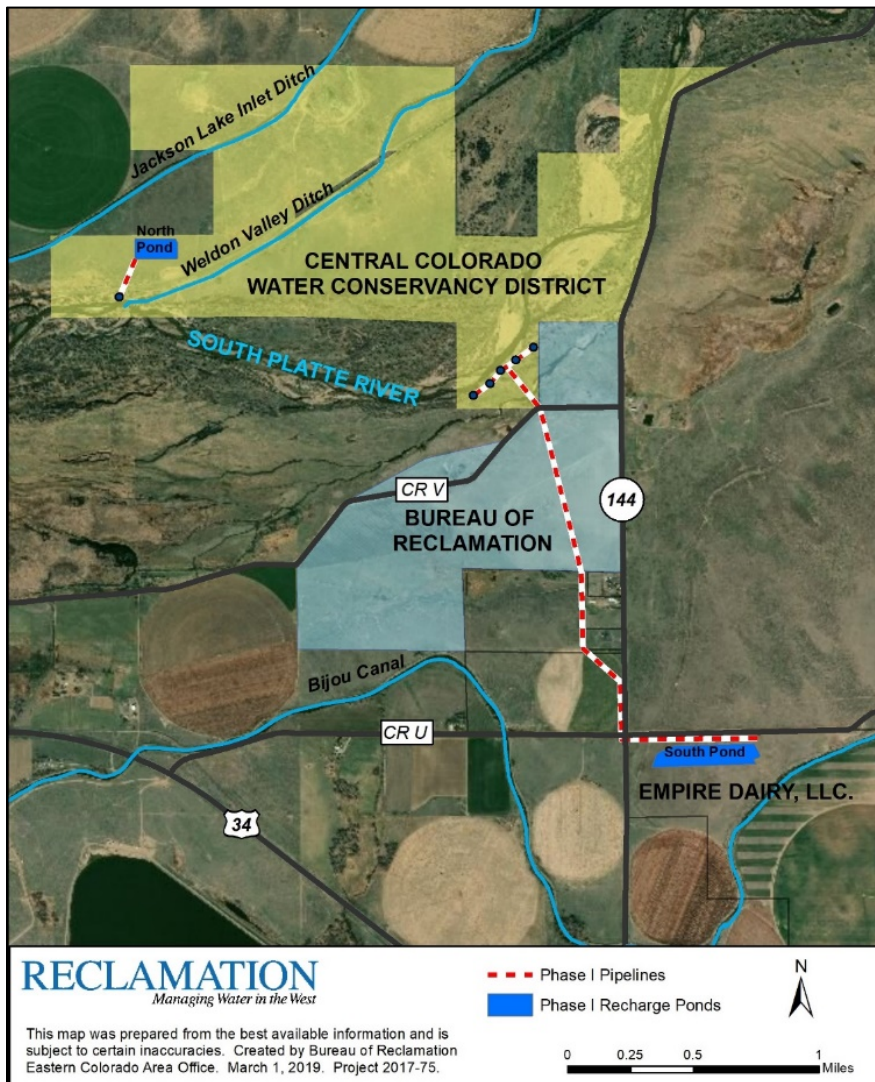


Figure 5-Walker Recharge Project Land Use and Ownership

The South Pond would be located on private lands approximately 1.5 miles southeast of the well field and the pipeline would cross Reclamation and four privately-owned parcels.

The South Pipeline would cross Morgan County Road V and cross the Reclamation-owned Kinnaman Tract. The parcel was purchased in conjunction with the Narrows Unit and if the Narrows Unit had been completed, a dam on the South Platte River would have inundated the Project Area. Reclamation currently leases this parcel to a local rancher who dryland farms the area for winter wheat under a 5-year grazing permit. Under the Proposed Action, Reclamation would issue a License to Central to construct and maintain the pipeline for the Walker Recharge Project.

The South Pipeline would continue south along a fence line in open pasture and then cross a parcel with center pivot used to irrigate pasture grass and alfalfa. The pipeline would then cross Highway 144 and follow Morgan County Road U to the South Pond. The South Pond (~10 acres in size) would be constructed on a parcel owned by Empire Dairy, LLC and used as dryland pasture. Central has acquired easements to construct and maintain the South Pipeline and South Pond. In non-irrigated pasture land, Central would reseed and restore all private lands disturbed during construction consistent with the negotiated easement and agreements.

Table 5 includes an estimate of acres temporarily and permanently disturbance during the construction of Phase I. The estimate assumes a 100-foot width construction footprint is needed for construction of both the North and South pipelines.

Table 5-Estimated Areas of Temporary and Permanent Disturbance

Project Feature	Acres of Disturbance	Type of Disturbance	Land Ownership
North Pipeline	~2.0 acres	Temporary	Central
North Pond	~5.0 acres	Permanent	Central
South Wellfield	~0.5 acres	Temporary	Central
South Pipeline	~2.5 acres	Temporary	Central
	~6.0 acres	Temporary	Reclamation
	~15.0 acre	Temporary	Private
South Pond	~10.0 acres	Permanent	Private
Total Disturbance	26.0 acres	Temporary	
	15.0 acres	Permanent	

Construction of the two recharge ponds would result in the loss of about 15 acres of pasture land. Construction of the wellfield would temporarily disturb about 0.5 acres for wells heads, pumps, and power. The pipelines would be buried below the surface and disturbances should be temporary. Minimizing trench width to what is necessary for construction and stockpiling and reusing topsoil during revegetation will greatly assist in restoring all dryland and irrigated agricultural lands temporarily during construction. An environmental commitment would require Central or its contractor to control noxious weeds within the 100-foot construction pipeline footprint and all other disturbed lands for three years following construction.

Reclamation would also include the following conditions in its issuance of a License to use Reclamation lands:

- All activities on Kinnaman tract will be restricted to a 100-foot wide temporary construction footprint and a 50-foot width maintenance corridor along the pipeline alignment.
- Central would be required to pay crop damage for crop loss to Reclamation's permittee once construction is completed. Reclamation's Grant Officer's Technical Representative will conduct an on-site inspection and measurement to determine the amount of and cost of crop damage.
- Pipeline must be buried at least 36 inches deep to allow Reclamation's permittee to plow the soil for preparation of the seed bed and to harvest any crops.
- During construction activities, the top 12 inches of topsoil should be carefully removed and set aside, before completion of the rest of the trenching. Once the piping is laid in the trench, the layer of topsoil must be replaced and smoothed out sufficiently to plant a crop.
- Any drain tiles encountered during construction must be repaired and/or replaced before the soil and/or pipe is laid on top of the drain tile. If drain tiles are encountered during construction, Reclamation must inspect any repair.
- All other surface disturbances must be repaired.

3.9 Historic Properties

Central contracted Western Cultural Resource Management, Inc. to conduct a cultural resource inventory of the proposed diversion site, pipelines, wells, and recharge ponds. The cultural resource inventory identified nine historic sites and nine isolated finds. The historic sites include a railroad bridge, a railroad segment, a canal segment, two ditch segments, a highway segment, a telegraph line segment, a habitation site, and a dump. The isolated artifacts include glass fragments, metal objects, can fragments, quartzite flakes, and chert flakes. The isolated finds, the habitation site, and the dump were determined to be not eligible for inclusion in the National Register of Historic Places (NRHP) in consultation with the Colorado State Historic Preservation Office. The bridge, the canal, the highway, and the Weldon ditch segment were determined to support the NRHP eligibility of the overall linear resources. The railroad segment, telegraph line segment, and Putman Ditch segment were determined to not support NRHP eligibility of the overall linear resources.

Reclamation consulted with the Colorado State Historic Preservation Office, Weld County Planning Commission, Morgan County Planning Commission, the Cheyenne and Arapaho Tribes of Oklahoma, the Cheyenne River Sioux Tribe, the Comanche Nation, the Crow Creek Sioux Tribe, the Kiowa Tribe of Oklahoma, the Northern Arapaho Tribe, the Northern Cheyenne Tribe, the Oglala Sioux Tribe, the Pawnee Nation of Oklahoma, the Rosebud Sioux Tribe, the Southern Ute Indian Tribe, the Standing Rock Sioux Tribe, the Ute Indian Tribe, and the Ute Mountain Ute Tribe to identify impacts by either the No Action or the Proposed Action alternatives. Both

alternatives were determined to have no adverse effect on NRHP-eligible properties. In the unlikely event that cultural resources are discovered during construction, all construction related activities shall be halted until Reclamation can evaluate the cultural resource and determine if additional consultation is required under NRHP.

3.10 Indian Trust Assets

Indian Trust Assets (ITAs) are legal interests in property held by the United States for Indian Tribes or individuals. ITAs include, but are not limited to, lands, minerals, hunting and fishing rights, traditional gathering grounds, and water rights. The United States Department of the Interior’s policy is to recognize and fulfill its legal obligations to identify, protect, and conserve the trust resources of federally recognized Indian Tribes and tribal members, and to consult with the tribes on a government to government basis whenever plans or actions affect tribal trust resources, trust assets, or tribal health and safety (512 DM 2).

Under the United States Department of the Interior’s policy, Reclamation is responsible for identifying any potential effects to ITAs as part of the planning process for the Proposed Action. Any effect to ITAs as a result of the Proposed Action must be addressed within this EA. When an effect to ITAs cannot be avoided, Reclamation will provide appropriate mitigation or compensation to the federally recognized Indian tribes or individuals. The affected environment for ITAs corresponds to the Area of Potential Effect for direct effects for cultural resources.

Reclamation consulted with the Bureau of Indian Affairs Southwest Regional Office to identify impacts by either the No Action or the Proposed Action alternatives. There are no known ITA resources that have been identified that could be affected by either the No Action or Proposed Action.

3.11 Environmental Justice

Executive Order 12898 on Environmental Justice requires Federal agencies to analyze programs to ensure that they do not disproportionately adversely affect minority or low-income populations or Indian Tribes. The 2017 population estimates reported by the U.S. Census Bureau for Morgan County is 28,192 (U.S. Census 2018). Table 5 displays the 2017 demographics based on race for Morgan County and for the State of Colorado.

Table 6-Morgan County and Colorado Demographics

Race	Morgan County	State of Colorado
White	92.3%	87.3%
Black or African American	3.3%	4.5%
American Indian or Alaska Native	1.7%	1.6%
Asian	0.8%	3.4%
Native Hawaiian or Pacific Islander	0.3%	0.2%
Other	1.6%	3%

Median household income in 2017 dollars for the period of 2013 to 2017 was reported as \$51,456, compared with the medium household income for Colorado at \$65,458. Morgan

County’s percentage of the population living in poverty for the same period was 11.4% while the entire State of Colorado was lower at 10.3%.

The No Action and Proposed Action are not anticipated to result in disproportionate adverse effects to minority or low-income populations, or Indian Tribes.

3.12 Prime and Unique Farmland

The Farmland Protection Policy Act was passed by Congress in 1981 as Public Law 97-98. The Act’s intent is to minimize the impact federal programs have on the unnecessary and irreversible conversion of farmland to nonagricultural uses. Farmland is defined as prime farmland, unique farmland, and land of statewide or local importance. Prime and unique farmlands are determined by the Secretary of Agriculture based on physical and chemical characteristics. Statewide or local important farmlands are determined by state or local agencies, with approval of the Secretary of Agriculture.

A review of Natural Resource Conservation Service classifications using its Web Soil Survey (2019) identified five soil types listed as Prime Farmland with conditions or Farmlands of Statewide or Local Importance within the Phase I construction footprint (Table 7).

Table 7-Prime and Unique Farmlands

Soil Type	Classification	Project Feature/ Land Ownership	Area Affected	Type of Disturbance
Wann fine sandy loam, saline	Prime farmland if irrigated and reclaimed of excess salts and sodium	South Wellfield South Pipeline Central	~0.5 ac ~2.0 ac	Temporary Temporary
Gilcrest sandy loam, 0 to 1 percent	Farmland of statewide importance	South Pipeline Central	~2.0 ac	Temporary
Bresser loamy sand, 0 to 3 percent	Prime farmland if irrigated	South Pipeline South Pond Empire Dairy, LLC	~2.0 ac ~5.0 ac	Temporary Permanent
Ellicott-Ellicott sandy-skeletal complex, 0 to 3 percent	Prime if irrigated and the product of soil erodibility x C climate factor does not exceed 60	North pipeline Central	~0.5 ac	Temporary
Valent sand, 0 to 3 percent	Farmland of local importance	North Pipeline North Pond	~0.5 ac ~5.0 ac	Temporary Permanent
Total Areas of Prime Farmland Disturbed			~5.0 ac ~5.0 ac	Temporary Permanent
Total Acres of Farmland of Statewide and Local Importance			~2.5 ac ~5.0 ac	Temporary Permanent

Figure 6 shows general location of Prime and Unique Farmlands in relationship to Walker Recharge Project Phase I based on Environmental Systems Research Institutes commonly known as ESRI’s (2019) USA Farmland Class GIS layer.

Under the Proposed Action, about 5.0 acres of soils types classified as prime farmland, if irrigated, would be inundated by the South Pond. An additional 2.0 acres would be temporarily disturbed during construction of the South Pipeline assuming all the 100-foot wide proposed construction corridor is disturbed. Temporary disturbance of about 4.5 acres of soil type classified as prime farmland, if irrigated and reclaimed of excess salts and sodium, would also

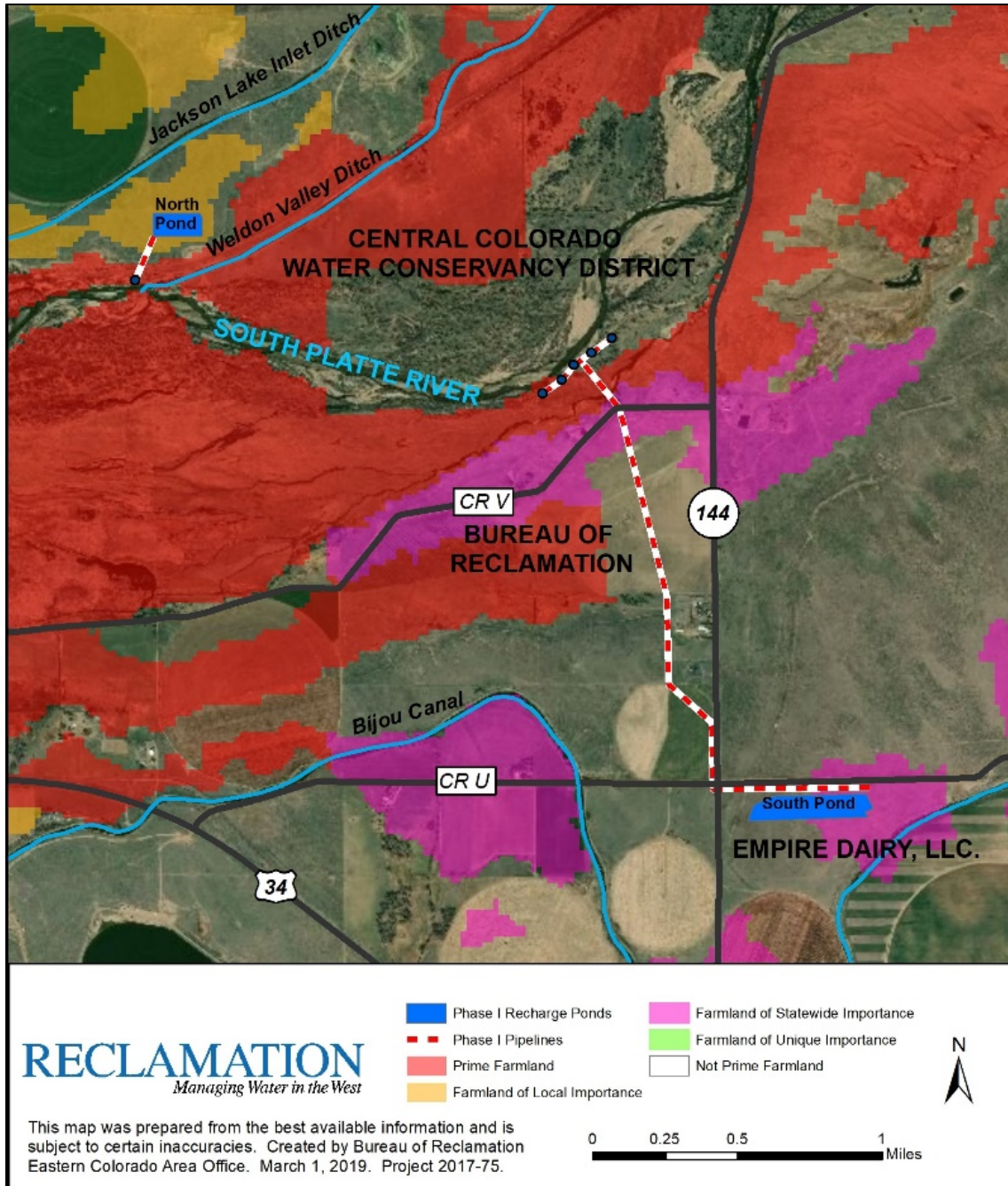


Figure 6-Prime and Unique Farmlands (NRCS 2019, ESRI 2019).

occur during construction. The North Pipeline would temporarily disturbed about 0.5 acres with soil types classified as prime farmland, if irrigated and the product of soil erodibility x climate factor does not exceed 60, and 0.5 acres of farmland of local importance.

Reclamation reviewed the Colorado Decision Support System GIS layers for irrigated lands in Colorado (CDNR 2019) for the years 1956, 1976, 1987, 1997, 2001, 2005, 2010 and 2015. None of the prime farmland identified in Table 7 were shown to have been previously irrigated

and are classified by the Natural Resource Conservation Service (NRCS 2019) as having irrigation capability classifications as having severe or very severe limitations.

Because the identified lands are not and have not been historically been irrigated, no adverse impacts are predicted. The primary purpose of the Walker Recharge Project is to help Central conjunctively manage its surface and groundwater supplies to increase reliability of irrigation water supplied to agricultural producers in northeast Colorado. Area farmers can benefit from augmentation of existing irrigation wells provided by the Walker Recharge Project. The augmentation can allow farms in keeping their farm lands viable and producing agricultural crops in the future.

4.0 SUMMARY & ENVIRONMENTAL COMMITMENTS

The Proposed Action would provide up to 15,000 ac-ft feet of water annually to help Central conjunctively manage its surface and groundwater supplies to increase reliability of irrigation water supplied to agricultural producers in northeast Colorado. Recharge operations would temporarily store and re-time water from periods of surplus to periods of reduce supply and Central would continue to supply augmentation sources through its GMS and WAS.

Construction of the North and South ponds would convert 15 acres of dryland pasture. Approximately 26 acres would be temporarily disturbed during construction of the South Wellfield, and North and South pipelines. Table 8 summarizes the effects of the Proposed Action by the resource category.

Table 8-Summary of Environmental Effects

Resource	Effects	Discussion
Hydrology	Provide up to 15,000 ac-ft feet of water annually to help Central conjunctively manage its surface and groundwater supplies.	The increased water supply would be used to replace depletions from pumping of about 1,400 groundwater wells within Central’s district boundaries. Alluvial groundwater wells are the primary source of water and supplemental irrigation supplies when yield from surface water rights is insufficient.
Water Rights	Under the Proposed Action, increases in the number of South Platte River Compact calls between 1 and 29 days per year are predicted based on 2012-2017 hydrology assuming similar hydrology and water demands of senior water rights. Future phases (II and III) could increase calls from 1 to 31 days under the same conditions.	Assumes that Central’s 2016 water right application (16CW3202) is decreed without stipulations and that the Walker Recharge Project is not called out by other senior water rights.
Water Quality	Minor temporary effects to water quality may occur during construction.	During construction, Central would implement best management

		practices to minimize stormwater runoff and obtain a Colorado stormwater construction permit.
WOTUS	Construction of the North and South pipelines and installation of a box culvert would cross and temporarily affect WOTUS. Crossings would not exceed 500 ft, parallel the streambed, or result in losses of WOTUS greater than 1/10-ac.	Central would comply with all conditions of NWP No. 12 for construction of the Walker Recharge Project. If after final design, project designs trigger pre-construction notification requirements, Central will contact ACOE directly to ensure compliance with Clean Water Act.
Threatened and Endangered Species	The Proposed Action would have no effect on ESA listed species in Colorado. During formal consultation, the Service concluded that the Proposed Action is not likely to jeopardize the continued existence of the Platte River species listed in Nebraska or adversely modify designated critical habitat.	Central will continue to fulfill the responsibilities required of the Platte River Recovery Implementation Program through participation in South Platte Water-related Action Plan.
Wildlife and Fisheries Resources	Local wildlife may temporarily avoid the Project Area during construction activities. The proposed project will create up to 15 acres of shallow open water habitat for waterfowl and other water dependent wildlife.	Construction activities during a severe winter should be minimized to reduce potential conflicts with wintering concentrations of local wildlife.
Land Use	The Proposed Action would temporarily affect about 26 acres during construction and about 15 acres of dryland pasture would be converted to recharge ponds. Reclamation's agricultural permittee would be compensated by Central for crop damage subject to a License condition. Central also would comply with any easements and agreements negotiated with adjacent private lands.	Reclamation's License contains conditions to ensure its lands remain suitable for crop production.
Historic Properties	The Proposed Action will have no effect on NRHP-eligible properties.	
Indian Trust Assets	No known ITA resources would be affected by the Proposed Action.	
Environmental Justice	The Proposed Action would not disproportionately adversely affect minority or low-income populations, or Indian Tribes.	
Prime and Unique Farmland	<p>The Proposed Action will temporarily affect about 5.0 acres of land classified by the Natural Resource Conservation Service as prime farmland if irrigated, and 2.5 acres listed as farmland of Statewide and local importance.</p> <p>The Proposed Action will cause loss of about 5.0 acres each of farmland listed as prime, if irrigated, and of Statewide and local importance with construction of the recharge ponds. None of these lands are irrigated and the Proposed Action will assist keeping other lands in Weld and Morgan County irrigated by augmenting existing groundwater wells.</p>	The additional water will primarily be used to augment supply to replace depletions caused by alluvial well pumping including augmentation that supports existing irrigated farmland.

4.1 Environmental Commitments and Mitigation Measures

The following environmental commitments would be implemented by Central.

1. Central must transport, store, and release all water in accordance with State of Colorado water law.
2. Central shall comply with all sections of the Clean Water Act, including NWP No. 12 conditions for construction of Walker Recharge Project Facilities. More information can be found at: <https://usace.contentdm.oclc.org/utills/getfile/collection/p16021coll7/id/6725>.
3. Central shall obtain a stormwater construction permit for the State of Colorado for all construction activities. The permit is required for disturbance of one acre or more of land or is part of a larger common plan. More information can be found at: <https://www.colorado.gov/pacific/cdphe/wq-construction-general-permits>.
4. Central shall continue to participate in the South Platte Water-Related Action Plan and remain in good standing to rely on the provisions of the Platte Recovery Implementation Program to provide ESA compliance for federally-listed Platte River species and critical habitat.
5. In the unlikely event that federally threatened or endangered species are encountered during construction or operation of the Walker Recharge Project, Central shall halt all construction activities and notify Reclamation. Reclamation will consult with the Service to comply with ESA. Construction activities may resume once the consultation is complete and any required protection measures have been implemented.
6. In the event of a severe winter during construction, construction activities should be limited unless Colorado Parks and Wildlife has determined that proposed activities will have negligible impacts to concentrations of local winter wildlife (including mule and whitetail deer, wild turkey, etc.).
7. In the event that an active raptor nest is identified within a ¼ mile of the Project Area during construction, Central shall review Colorado Division of Parks and Wildlife recommended buffer zones and seasonal restrictions for Colorado Raptors available at: <https://cpw.state.co.us/Documents/WildlifeSpecies/LivingWithWildlife/RaptorBufferGuidelines2008.pdf> to comply with the Migratory Bird Treaty Act.
8. Central shall comply with all provision and conditions of the license agreement for piping crossing Reclamation's Kinnaman Tract. Conditions include, but may not be limited to:
 - All activities on Kinnaman tract will be restricted to a 100-foot wide temporary construction footprint and a 50-foot width maintenance corridor along the pipeline alignment.
 - Central is required to pay crop damage for the loss of crops to Reclamation's agricultural permittee once construction is completed. Reclamation's Grant Officer's Technical Representative will conduct an on-site inspection and measurement to determine the amount of and cost of crop damage.
 - The pipeline must be buried at least 36 inches deep to allow Reclamation's permittee to plow the soil for preparation of the seed bed and to harvest any crops.
 - During construction activities, the top 12 inches of topsoil should be carefully removed and set aside, before completion of the rest of the trenching. Once the

pipings is laid in the trench, the layer of topsoil must be replaced and smoothed out sufficiently to plant a crop.

- All other surface disturbances must be repaired.
 - Any drain tiles encountered during construction must be repaired and/or replaced before the soil and/or pipe is laid on top of the drain tile. If drain tiles are encountered during construction, Reclamation must inspect any repair before being buried.
9. Central shall seed and restore all private lands disturbed during construction consistent with negotiated easements and agreements.
 10. Central or its contractor shall control noxious weeds within the 100-foot construction pipeline footprint and all other disturbed lands for three years following construction.
 11. In the unlikely event historic properties are encountered during construction activities, Central shall halt all construction and notify Reclamation, and Reclamation will complete its Section 106 obligation under the National Historic Preservation Act. Construction may resume once Reclamation's consultation with the Colorado State Historic Preservation Office and tribes is completed and any appropriate protective measures have been implemented.
 12. Any changes in the scope of Phase I (i.e. change in pipeline alignment) will require notification to Reclamation and potential additional National Environmental Policy Act compliance.

5.0 CONSULTATION AND COORDINATION

5.1 AGENCY CONSULTATIONS AND COORDINATION

Reclamation's consultation and coordination with federal, state and local agencies was primarily limited to existing public information available on the internet as indicated in the Reference Section of this EA.

Reclamation accessed the Service's ECOS-IPaC website to verify threatened and endangered species analyzed in Savage's 2017 Habitat Assessment reports (2017a, 2017b, 207c).

Reclamation requested and received a species list from the Service on October 29, 2018. The official copy of the species list is included in Reclamation's project folder.

On February 7, 2019, Reclamation submitted to the Service a biological assessment for the Walker Recharge Project and requested formal Section 7 consultation for depletion effects to federally-listed species in the Platte River in Nebraska. The consultation followed a streamlined Section 7 process established in the 2006 PBO for the Platte River Recovery Implementation Program and water-related activities affecting flow volume and timing in the central and lower reaches of the Platte River in Nebraska.

The Service prepared a biological opinion for the Walker Recharge Project dated March 2, 2019. The biological opinion concluded that Proposed Action is not likely jeopardize the continued existence of the federally endangered whooping crane, interior least tern, pallid sturgeon, or the federally threatened northern Great Plains population of the piping plover or western prairie fringed orchid in the central and lower Platte River, or adversely modify designated critical habitat for the whooping crane. Copies of the biological assessment and biological opinion are included in Appendix D.

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