

RECLAMATION

Managing Water in the West

EA No. EC-2013-001

Donala Water and Sanitation District, Temporary Excess Capacity Contract, Fryingpan-Arkansas Project

Environmental Assessment



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

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Mission Statement

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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Chapter 1 – Purpose and Need

Introduction

The Bureau of Reclamation (Reclamation) is proposing to issue one-year excess capacity storage contract(s) [temporary excess capacity contract(s)] to the Donala Water and Sanitation District (Donala). An excess capacity contract is often referred to as an “if and when” contract, meaning if and when space is available in Pueblo Reservoir, Donala would be allowed to use this excess space for its water, subject to higher storage priorities by the Fryingpan-Arkansas (Fry-Ark) Project and other entities within the Arkansas River basin. The proposed contract(s) would allow storage of non-Fry-Ark Project water (non-Project water) in Pueblo Reservoir if and when excess storage space is available. The proposed contract(s) would use existing Fry-Ark storage facilities and facilitate exchange of Donala’s water to upstream points.

The Fry-Ark Project is a multipurpose, trans-mountain water diversion and delivery project in Colorado. The Fry-Ark Project was authorized in 1962 (by Public Law 87-92 as amended), and sponsored by the Southeastern Colorado Water Conservancy District (District). The Fry-Ark Project makes possible a 30-year average annual diversion of about 55,000 acre-feet (ac-ft) of water from the Colorado River basin (Fryingpan River and other tributaries of the Roaring Fork River), which are located on the West slope of the Rocky Mountains, to the Arkansas River basin located on the East slope. Water imported from the West slope is conveyed to Turquoise Reservoir, and then typically conveyed through the Mt. Elbert conduit to the Mt. Elbert Forebay. Water conveyed from the Mt. Elbert Forebay is used to generate power at the Mt. Elbert Powerplant and then discharged to Twin Lakes Reservoir. These facilities store Fry-Ark Project water, in addition to other sources of water, before it is released to the Arkansas River for delivery to Pueblo Reservoir where it is further distributed to Fry-Ark Project users (Figure 1.1). Pueblo Reservoir is the terminal storage facility for the Fry-Ark Project.

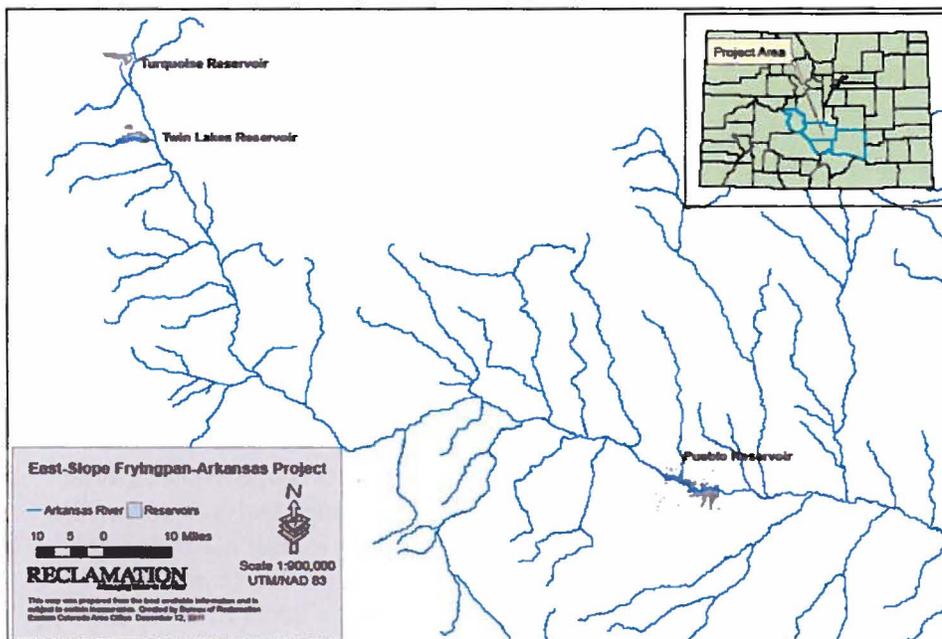


FIGURE 1.1 East-Slope Fryingpan-Arkansas Project Area

Purpose and Need for Action

The purpose of the proposed contract(s) is to maximize the use of existing infrastructure to support Donala's municipal and industrial needs. Temporary excess capacity contracts enable Donala to more efficiently use their non-Project water by providing temporary storage, on an annual basis. Consequently, a temporary excess capacity contract(s) would meet Donala's needs by providing valuable water storage and increased water management flexibility. By providing a temporary excess capacity contract(s) for non-Project water, Reclamation would be acting pursuant to the Reclamation Act of June 17, 1902 (32 Stat. 388), and Acts amendatory and supplementary thereto, including the Reclamation Project Act of August 4, 1939 (53 Stat. 1187). The proposed temporary excess capacity contract(s) would facilitate the movement of Donala's water rights from the Willow Creek Ranch as well as non-Project water leased from the Pueblo Board of Water Works (Pueblo Board) within the Arkansas River basin. The transfer and lease of water rights is regulated by Colorado water law and is not within the jurisdiction of Reclamation or the scope of this Environmental Assessment (EA).

Reclamation proposes to consider issuing Donala a temporary excess capacity contract(s) on an annual basis, if necessary, as long as conditions do not change significantly compared to what was analyzed in this EA and environmental commitments are met as described in Chapter 2-Alternatives, including no change of effects associated with agreements and exchanges with non-Reclamation entities that use non-Project water or contracts. Any future annual requests not covered under the scope of this EA would require separate National Environmental Policy Act (NEPA) documentation. It is expected that when water contracts or water developments are implemented in the Fry-Ark facilities that have the potential to change modeled hydrologic conditions, re-analysis of this decision would occur.

Decision Process

Reclamation must decide whether to enter into temporary excess capacity storage contract(s) with Donala. Because the execution of the proposed contract(s) would constitute a federal action, it is subject to compliance with the National Environmental Policy Act (NEPA) of 1969, amendments, and other regulatory laws. This EA was prepared by Reclamation to analyze and disclose the potential effects associated with the Proposed Action Alternative as well as the No Action Alternative.

On December 21, 2011, Reclamation completed Donala Temporary Excess Capacity Contract Environmental Assessment 2012-002 (Donala 2012 EA) and a Finding of No Significant Impact (FONSI) was signed. Donala was issued a temporary excess capacity contract with Reclamation shortly afterwards on January 17, 2012 (Contract No. 12XX6C0010). In 2013, Donala proposes to use contract exchanges by agreement with Colorado Springs Utilities (Springs Utilities) to capture Willow Creek Ranch water rights in Springs Utilities Twin Lake's non-Project storage and between Donala's proposed storage in Pueblo Reservoir and Springs Utilities non-Project storage in the upper reservoirs (Twin Lakes and Turquoise Reservoirs). These agreements and exchanges are between non-Reclamation entities and do not use Fry-Ark Project water or contracts. However, due to their connected action, the potential effects of exercising these contract exchanges will be disclosed in this EA. All other effects were analyzed in the 2012 EA and are reiterated here for clarity as well as the 2006-2010 EA (EA/FONSI No EC-1300-06-02), which was tiered to in the 2012 analysis. The results of prior analyses did not identify any significant effects related to temporary storage of Donala's water in Pueblo Reservoir.

Background

Donala is a Colorado water and sanitation district whose boundaries currently encompass land located within El Paso County. Donala owns and maintains water service facilities to provide municipal water service to its inhabitants and to satisfy its service agreements. Donala is located outside the boundaries of the Southeastern Colorado Water Conservancy District (District), with a majority of its service area located within the Arkansas River Basin. The small portion of Donala's service area outside the Arkansas River Basin will not be serviced with the proposed contract. Currently, the majority of Donala's water supply originates in deep aquifers in the Denver Basin that are declining. Donala's purchase of native Arkansas River water rights provides a renewable supply to meet existing and projected municipal and industrial water demands (Donala 2012). Use of excess capacity in the Fry-Ark Project does not require construction of any new facilities to accommodate storage, conveyance, or exchange of this water. Donala currently receives all of its renewable water through a connection to Colorado Springs' water system near the Northgate Exit east of the US Air Force Academy. Donala is authorized to discharge under a National Pollutant Discharge Elimination System permit from Upper Monument Creek Regional Wastewater Treatment Facility to Monument Creek, a tributary of Fountain Creek. Donala also reuses wastewater discharge to irrigate the Gleneagle Golf Course under a Colorado Department of Public Health and Environment/Water Quality Control Division reuse permit. Donala, as a water and sanitation district, has no stormwater regulatory or management powers. El Paso County is responsible for stormwater management within Donala's service area. Donala has, however, agreed with Springs Utilities to support and cooperate in regional stormwater management efforts to the extent of its authority. Donala's water service area and facilities are shown in Figure 1.2.

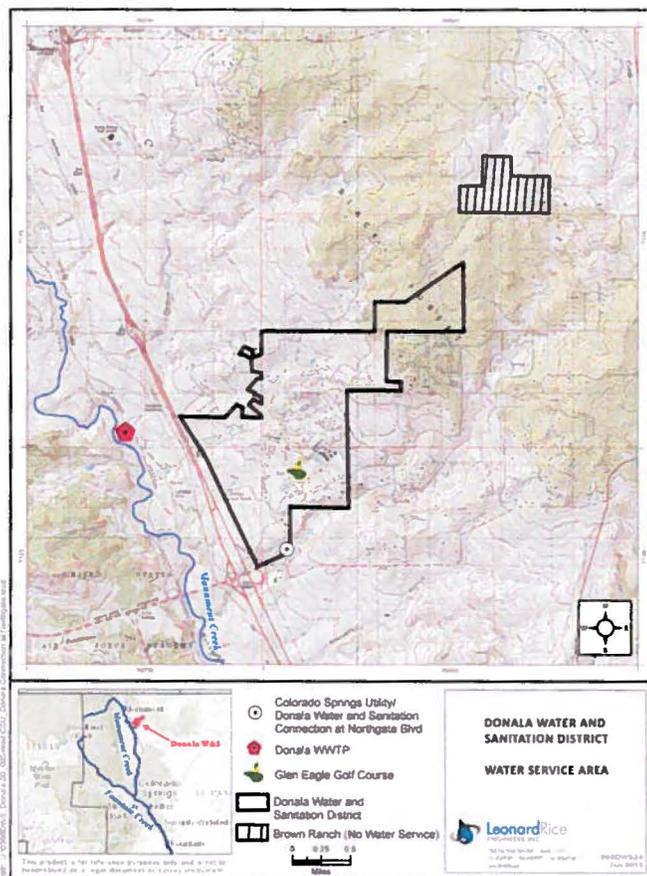


FIGURE 1.2 Donala Water Service Area

On May 26, 2009, Donala filed Case No. 09CW73 in District Court, Water Division 2, Colorado, for an approval of a change of water rights, and approval of conditional rights of exchange. The case was consolidated for trial with Case No. 09CW96. A separate decree was entered in Case No. 09CW96 on September 6, 2011. On November 15, 2011, a decree was filed in Case No. 09CW73. Together these decrees changed the Willow Creek Ranch water rights (described in Table 1.1) which had historically irrigated approximately 255 acres of grazing lands shown in Figure 1.3.

TABLE 1.1 Original Willow Creek Ranch Water Rights

Ditch	Priority	Amount in cubic feet per second (cfs)	Source
Abbott Placer Ditch	03/10/1881	2.0 cfs	Willow Creek
Abbott Placer 1 st Enl.	11/30/1881	1.0 cfs	Willow Creek
Willow Creek Ditch	04/15/1881	1.6 cfs	Willow Creek
Mitchell Ditch Nos. 1-4	05/31/1881	1.3 cfs	Willow Creek
Sites Ditch No. 1	04/30/1881	0.8 cfs	Little Willow Creek*
Sites Ditch No. 2	04/30/1882	1.6 cfs	Little Willow Creek*

*Little Willow Creek is also known as North Willow Creek

The 2011 decrees allow the water rights to be used for all municipal uses within Donala's service area within the Arkansas River Basin and the Springs Utilities service area. Diversions may be up to the rate specified in Table 1.1 from May 1 through August 31. The rights are further limited by the decree, including, but not limited to, maximum diversion volumes (Table 1.2), maximum depletion limits, charges for evaporation and transportation losses, and replacement of historic non-irrigation season return flow requirements to Lake Fork Creek. The return flow requirements change on an annual basis depending on the previous year's irrigation season depletions. This EA analyzes effects based on the maximum return flow requirements.

TABLE 1.2 Maximum Diversion Limits of Willow Creek Ranch Water Rights (ac-ft)

Ditch	May	June	July	August
Abbott Placer Ditch	123	119	123	123
Abbott Placer 1st Enl.	37	42	40	61
Willow Creek Ditch	98	95	98	98
Mitchell Ditch Nos. 1-4	78	77	80	80
Sites Ditch No. 1	35	48	49	49
Sites Ditch No. 2	75	90	92	98

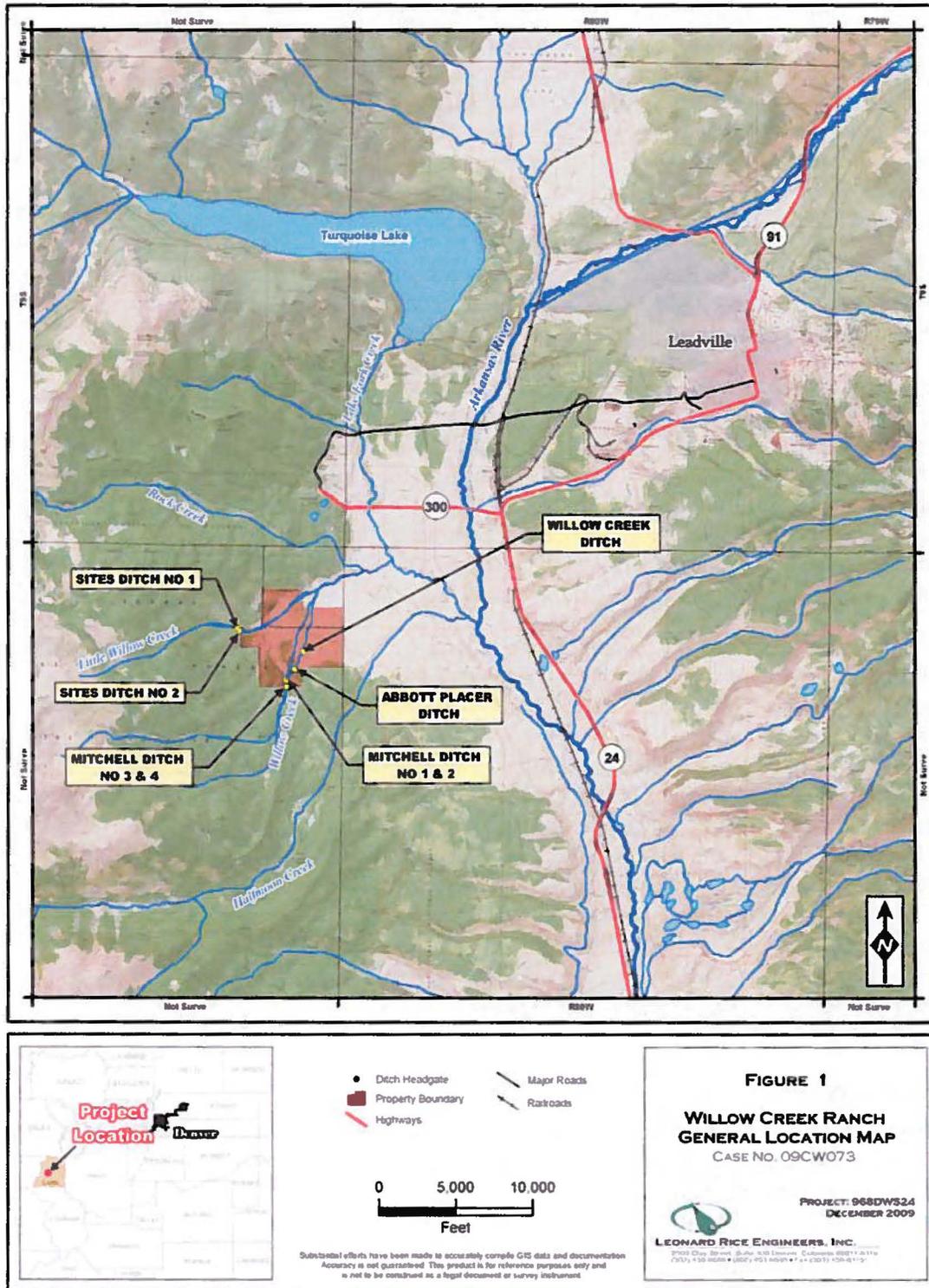


FIGURE 1.3 Willow Creek Ranch

Flows along Lake Fork Creek are constrained by a good neighbor agreement with Lake County to keep maximum flows along Lake Fork Creek to less than 400 cfs whenever possible. As requested by the Upper Arkansas River Restoration Project team, Reclamation tries to mitigate sharp changes in flows to increments of <50 cfs whenever possible. The controlled ramping helps to minimize erosion along areas where bank stabilization and remediation activities have

occurred. In addition, many portions of the Lake Fork Creek watershed are undergoing restoration as part of the Natural Resources Damage Assessment (NRDA) settlement. Colorado Parks and Wildlife and Federal and State trustees are stabilizing acid mine drainage and are developing habitat improvement projects (Stratus 2010). In 2009, high flows from Turquoise Reservoir prompted discussions between the Upper Arkansas River Natural Resource Trustee Council and local stakeholders to develop best management practices to protect and enhance the fishery in Lake Fork Creek, minimize stream damage, and protect stream restoration projects carried out with NRDA settlement funds.

Donala was issued a Pueblo Reservoir temporary excess capacity contract with Reclamation on January 17, 2012 (Contract No. 12XX6C0010). That contract action was analyzed in the Donala 2012 EA and a FONSI was signed on December 21, 2011.

On December 31, 2012, Springs Utilities' Pueblo Reservoir temporary excess capacity storage contract with Reclamation expired. Currently, Springs Utilities' only Pueblo Reservoir storage account is a long-term excess capacity storage contract. The Springs Utilities contract does not contemplate storage of Donala's Willow Creek Ranch water rights. For this proposed temporary contract, Donala cannot store its water rights in Springs Utilities Pueblo Reservoir storage. Thus, Donala will need to seek other water service and contract exchange agreements with non-Reclamation entities to exercise their Willow Creek Ranch water rights in the most effective manner possible. See Chapter 2 for a listing of these agreements.

The change in water rights and resultant change in land use describe the existing conditions used for this analysis. The Willow Creek Ranch water rights are currently left in the stream and flow into the Arkansas River, not being stored in any Fry-Ark facility. The return flow replacement flows are not released into the Upper Arkansas River via the Lake Fork Creek and no exchange between Fry-Ark Project reservoirs is occurring. In addition, Donala has been using approximately the same amount of water, only a 4 percent decrease since 2006, within its service area (Donala, 2012). The proposed contract will not increase Donala's water use. The Willow Creek Ranch water rights and water leased from the Pueblo Board replace water currently purchased by Donala from Springs Utilities. The use of surface water rights replaces declining and finite groundwater resources with a more sustainable source and allows for conjunctive management of Donala's water portfolio.

Chapter 2 – Alternatives

Introduction

This chapter describes the No Action and the Proposed Action alternatives. It also discusses past, present, and reasonably foreseeable future actions, common to both alternatives, with the potential to have cumulative effects.

No Action Alternative

Under the No Action Alternative, Reclamation would not enter into a one-year, temporary excess capacity contract(s) with Donala. Without this contract(s) Donala would likely lose use of surface water in the Arkansas Basin that it would otherwise be able to divert, resulting in Donala not being able to provide a cost-effective water supply to its water users (Donala 2012).

Donala has indicated that without the contract(s), they would sell the Willow Creek Ranch water rights to another municipality. It is likely such a municipality would use the water in the same manner Donala has proposed, due to the return flow requirements released at the Turquoise

Reservoir outlet (Sugarloaf Dam) associated with the Willow Creek Ranch water rights decree. Therefore, for this analysis, the use of the water rights and resulting return flows is assumed to be for the same time period and in the same amount and rate as described in the Proposed Action Alternative.

Proposed Action Alternative

Reclamation would enter into a one-year, temporary excess capacity contract(s) with Donala for storage of up to a total of 499 ac-ft of non-Project water in Pueblo Reservoir. See Table 2.1 describes the maximum monthly inflow into Pueblo Reservoir (Donala 2012). Note that the amount requested for 2013 was the same as was requested in 2012.

TABLE 2.1: 2013 Contract Request Maximum Expected Inflow into Pueblo Reservoir (ac-ft)

Water Right/Water Supply	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total (ac-ft)
Abbot Placer	0	0	0	0	51	57	46	44	0	0	0	0	198
Abbot Placer	0	0	0	0	16	21	17	23	0	0	0	0	77
Willow Creek	0	0	0	0	37	48	44	25	0	0	0	0	154
Mitchell	0	0	0	0	31	39	35	31	0	0	0	0	136
Sites No. 1	0	0	0	0	13	18	15	11	0	0	0	0	57
Sites No. 2	0	0	0	0	23	24	16	9	0	0	0	0	72
TOTAL Willow Creek Ranch *	0	0	0	0	171	207	173	143	0	0	0	0	694
Transit losses (2%)	0	0	0	0	3	4	3	3	0	0	0	0	13
TOTAL INFLOWS**	0	0	0	0	168	203	170	140	0	0	0	0	681
Max Return Flow Obligation***	24	19	17	8	0	0	0	0	15	21	47	32	183

*Total maximum depletions from Willow Creek Ranch water rights May through August are 694 ac-ft.

** Total maximum Pueblo Reservoir inflows are depleted by 13 ac-ft of transit losses leaving 681 ac-ft.

***A maximum of 183 ac-ft of the Pueblo Reservoir inflow is exchanged up to Pueblo Board's storage in Turquoise Reservoir to fulfill return flow obligations, leaving 499 ac-ft for Donala's Pueblo Reservoir storage.

Donala is requesting storage of up to 499 ac-ft of its non-Project water in Pueblo Reservoir to provide for municipal purposes. The storage space could be filled and emptied multiple times during the year to accommodate exchanges but cannot exceed 499 ac-ft at any one time.

The following is a description of the proposed contract and operations, including associated agreements with non-Reclamation entities, under the Proposed Action Alternative.

Proposed Pueblo Reservoir Storage Contract

A temporary excess capacity storage contract would allow Donala to store their non-Project water in Pueblo Reservoir, up to 499 ac-ft, when space is available. The space would be used for storage of native Arkansas River water decreed to Donala under its Abbot Placer, Willow Creek, Mitchell Sites No. 1 and Sites No. 2 (collectively known as Willow Creek Ranch) water rights, as well as the leased non-Project water from Pueblo Board.

When water needs to be evacuated from Fry-Ark facilities to meet the necessities of flood control, power generation purposes, storage of native or trans-mountain Fry-Ark water and/or Fry-Ark operation requirements (i.e. for project purposes), the water stored in temporary excess capacity storage contracts will be evacuated as described in Article 13 of Contract 5-07-70-W0086 with Southeastern Colorado Water Conservancy District.

To utilize the proposed temporary excess capacity storage contract in Pueblo Reservoir, Donala would exercise several private agreements and contract exchanges to receive its water in the most efficient manner and using available infrastructure. These agreements and exchanges are between non-Reclamation entities and do not use Fry-Ark Project water or contracts. The associated agreements are as follows (See Appendix A for details):

- ***Pueblo Board Lease Agreement***

This agreement facilitates movement of leased non-Project water stored in Pueblo Reservoir to Pueblo Board’s upstream storage in Turquoise Reservoir to fulfill return flow obligations in Lake Fork Creek. When there is extra leased water, over and above what is needed for return flow obligations, Donala plans to receive it through one of several potential private contract exchanges.

- ***Proposed 2013 Springs Utilities Contract Exchange***

This contract exchange would facilitate the Willow Creek Ranch water rights in the Arkansas River being exchanged for the same amount of water in Springs Utilities’ Twin Lakes Reservoir storage. If exchange with Springs Utilities’ Twin Lakes storage was not possible, the Willow Creek Ranch water rights would continue down the Arkansas River to Donala’s proposed storage in Pueblo Reservoir. Under this exchange, Donala’s proposed Pueblo Reservoir storage account cannot be credited from Springs Utilities Pueblo Reservoir non-Project water account at this time.

- ***Proposed 2013 Upper Reservoirs Contract Exchange***

This arrangement exchanges Donala’s Willow Creek Ranch water rights and potentially extra leased non-Project water from Donala’s proposed Pueblo Reservoir storage to Springs Utilities’ upper reservoir storage.

- ***Colorado Springs Utilities Service Agreement***

Under this agreement, Springs Utilities delivers treated water (credit) to Donala at the Northgate interconnection (See Figure 1.2).

All temporary excess capacity contracts, including Donala’s proposed temporary excess capacity contract(s), must meet various measures to minimize impacts to natural resources, existing flow programs, and other values, as described in Table 2.2, as environmental commitments. An evaluation of whether or not these environmental commitments would also be met under the Proposed Action Alternative for Donala was completed and is summarized below.

TABLE 2.2 Compliance with Environmental Commitments

Environmental Commitment	Compliance Determination for Donala’s contract
All water must be transported, stored, and released in accordance with the laws of the State	To be included in contract.

Environmental Commitment	Compliance Determination for Donala's contract
of Colorado.	
By entering into a temporary excess capacity contract with Reclamation, for the use and distribution of United States waters, the Contractor shall comply with all sections of the Clean Water Act.	To be included in contract. Confirmed request includes no construction to transport and/or deliver the water.
If Reclamation enters into any long-term contracts during the term of the proposed action, the amount of storage and exchange covered by this EA will be reduced by the amount of the long-term contract.	Long term excess capacity contracts were issued to the City of Aurora in 2007 for 10,000 ac-ft and to Springs Utilities, Fountain, Security, and Pueblo West in 2011. The four entities will receive a total of 27,200 ac-ft in 2013. The 19,624 ac-ft being requested is still well under the now 42,800 ac-ft available for temporary contracts.
Reclamation will monitor temporary excess capacity operations including daily storage and release data for Contractors' accounts, to better understand real-time use of contracted storage. This will aid in understanding how temporary excess capacity is used and present the opportunity to adaptively manage future temporary excess capacity contract operations.	Monitoring ongoing. Year-end analysis planned. Modifications to temporary excess capacity operations will be made accordingly, if necessary.
Reclamation will work with the State's Water Quality Control Division (WQCD) and other interested parties to compare their water quality data with Reclamation's operational data described above to determine if there is a correlation between selenium concentrations on the Arkansas River from Pueblo Reservoir to the Rocky Ford head gate, and changing hydrology as a result of temporary excess capacity contract operations for the years 2006 through 2010.	WQCD confirmed that collection of selenium data is ongoing. This commitment to compare water quality data for selenium is pending due to incomplete data collection and Arkansas River selenium modeling efforts. When data is received and model finalized, the commitment can be fulfilled.
Temporary excess capacity contract operations shall not cause flows on the Arkansas River as measured at the Avondale gage to fall below 86 cfs.	Ongoing communication with signatories of the IGA (Intergovernmental Agreement between the City of Aurora, Springs Utilities, City of Fountain, Pueblo Board of Water Works, the District and the City of Pueblo to maintain certain flows downstream from Pueblo Reservoir to Fountain Creek), St. Charles Mesa Water District, and State Engineer to ensure compliance.
In support of the Upper Arkansas River Flow Program (Flow Program), Contractors may not exchange water from Pueblo Reservoir to upstream locations against releases made by Reclamation in support of the Flow Program, or make any exchanges from Pueblo Reservoir which would require Reclamation to release additional water to meet the objectives of the Flow Program.	To be included in contract. If a contractor requests to exchange water from Pueblo Reservoir against releases made in support of the Flow Program, the request will be denied. This would prevent entities from exercising a physical exchange against the outflow of Twin Lakes Reservoir from Pueblo Reservoir.

Environmental Commitment	Compliance Determination for Donala's contract
<p>Reclamation will not execute contract exchanges until the Natural Resource Conservation Service (NRCS) makes its annual May 1st water supply forecast, and Reclamation determines whether or not contract exchanges will affect its ability to operate in accordance with the Flow Program recommendations, or impair the ability of Fremont Sanitation District Wastewater Treatment Plant or the Salida Treatment Plant to meet their CDPES permit requirements.</p>	<p>The Springs Utilities and Aurora long-term excess capacity contracts allows up to 10,000 ac-ft of exchange. Springs Utilities has requested exchanges up to 10,000 ac-ft for 2013. According to both Springs Utilities' and Aurora's exchange contracts, Reclamation would offer the exchange, in priority, to contractors who will use the water in-district. Therefore, Springs Utilities would receive preference over Aurora if the situation materializes. Past demand has shown that Aurora has not used their contract exchange since 2005 and never over 5,000 ac-ft total.</p>
<p>Reclamation will limit temporary excess capacity contract operations that have the potential to affect the Arkansas River below Pueblo Reservoir when flows are ≤ 500 cfs and > 50 cfs to a decrease of no more than 50% of the average daily flow as measured by adding the flow at the above Pueblo gage to fish hatchery return flows.</p>	<p>Reclamation will use the previous day's flows, as measured by adding flows at the above Pueblo gage to fish hatchery return flows, to determine whether this mitigation measure would be triggered. This commitment is included as a standard clause in all the contracts.</p>
<p>Reclamation will limit temporary excess capacity contract operations that have the potential to affect the Arkansas River below Pueblo Reservoir when flows are ≤ 50 cfs, as measured by adding the flow at the above Pueblo gage to fish hatchery return flows.</p>	<p>To be included in contract. See above.</p>
<p>Contractors that propose to store water that originates in the Upper Colorado River basin must either (1) sign a Recovery Agreement with the U.S. Fish and Wildlife Service, or (2) if the water originates in the Gunnison River basin, individual consultation with the Service may be required.</p>	<p>Confirmed completed.</p>
<p>Contracts will be conditioned to limit storage of west slope water to the volume modeled for this analysis, or 14,200 ac-ft per year, as discussed in the 2006-2010 EA, Chapter 3, Section IV. If a request is outside of this condition, additional environmental compliance will be required.</p>	<p>Confirmed to be under the 14,200 ac-ft per year analyzed in the 2006-2010 EA.</p>
<p>If the potential effects of future requests were not evaluated in EA No. EC-1300-06-02, as discussed in Appendix C, Hydrologic Model Documentation, additional environmental compliance will be required.</p>	<p>A portion of Donala's request that involves exchange to Pueblo Board's storage in Turquoise Reservoir and related Willow Creek Ranch return flows was found to be outside of the scope of analysis of the 2006-2010 and 2012 EAs. Since the flows downstream of Willow Creek Ranch would not change regardless of whether or not Reclamation issues a contract, no additional analysis is necessary. Additional analysis of impacts to the hydrology downstream of Turquoise Reservoir, the aquatic resources (including</p>

Environmental Commitment	Compliance Determination for Donala's contract
	<p>threatened and endangered species), and the recreation in those waters were completed for the contract request with this EA. Based upon the magnitude of the changes in flows expected with the Proposed Action Alternative, the scope of analysis includes stretches of stream from Turquoise Reservoir to the confluence with the Arkansas River. Impacts beyond that point are believed to be indiscernible. See Figure 1.2 for a location map. The analysis only specifically addresses Lake Fork Creek below Turquoise Reservoir. It was assumed that the level of impacts gradually reduces with further distance from Willow Creek Ranch. See the 2006-2010 and 2012 EAs for the complete analysis for all other aspects of the 2013 request.</p>

Cumulative Effects

Cumulative impacts are defined as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (federal or nonfederal) or person undertakes such other actions” (40 CFR 1508.7). Cumulative effects can result from individually minor, but collectively significant, actions taking place over a period of time. The CEQ regulations that implement NEPA require the assessment of cumulative impacts in the decision-making process for federal projects.

Past and Present Actions

The Willow Creek Ranch was originally irrigated for agricultural purposes. Under this traditional use, the water rights were diverted from the stream and used for irrigation purposes during May through August, with associated return flows entering the Arkansas River system September through April. Prior to the requested contract, the land was sold and the traditional land use was changed. It is no longer being irrigated for agriculture. The existing condition reflects effects of these past and present actions that impacted resources relevant to cumulative impacts of the Proposed Action Alternative.

Upper Arkansas River NRDA-funded restoration activities are ongoing in the upper Arkansas River on public and private lands, from the confluence with California Gulch to the confluence with Twobit Gulch, and on public and private lands along approximately four miles of Lake Fork Creek, all in Lake County, Colorado (Stratus 2010).

Reasonably Foreseeable Future Actions

There are additional agricultural water rights in the analysis area that potentially could be removed from agriculture, however, this is considered speculative and thus it is not a reasonably foreseeable action.

Climate change in general is considered reasonably foreseeable, however it is considered immeasurable for a proposal involving temporary, one-year contracts.

Donala has discussed a need for a long-term excess capacity storage contract that would allow similar storage in Pueblo Reservoir for a term of up to 40 years and an associated excess capacity conveyance contract with Reclamation and Springs Utilities to transport the water through the North Outlet Works of Pueblo Dam into the Southern Delivery System (SDS) Project. The SDS Project is currently under construction. Donala is not an SDS participant and a process has not yet been developed between Springs Utilities and Reclamation to allow use of SDS facilities by non-SDS participants. Thus, these potential contract actions were not considered “ripe for decision” at this time and are not considered in this EA.

The Upper Arkansas River NRDA-funded restoration activities are expected to continue for several years. The resource areas this is expected to benefit include wetlands, riparian habitat in the floodplains, and water quality (Stratus 2010). As such, the expected beneficial impacts have been disclosed in this EA.

Scope of Analysis

During the consideration of the proposed contract, Reclamation conducted internal and agency scoping, as documented in Chapter Four – Consultation and Coordination, to determine the issues relevant to the proposed temporary excess capacity contract. Reclamation examined the 2006-2010 EA and 2012 Donala Temporary Excess Capacity Contract EA to determine whether the expected impacts were within the scope of analyses previously conducted. A portion of Donala’s request that involves contract exchange from Donala’s proposed non-Project storage in Pueblo Reservoir to the Pueblo Board’s storage space in Turquoise Reservoir was found to be outside of the scope of analysis of the 2006-2010 EA. The proposed 2013 Springs Utilities contract exchange and proposed 2013 upper reservoirs contract exchange were also found to be outside the scope of the 2012 EA. In order to analyze the potential effects of the proposed contract exchanges in conjunction with the other potential actions that could be implemented under this contract, impacts to the hydrology along Lake Fork Creek, downstream of Turquoise Reservoir, the aquatic resources (including threatened and endangered species), and recreation in those waters were analyzed for the proposed contract request in this EA. Based upon the magnitude of the daily changes in flows expected with the Proposed Action Alternative, the scope of analysis includes stretches of Lake Fork Creek from Turquoise Reservoir to the confluence with the Arkansas River. Impacts beyond the confluence are believed to be indiscernible, as the maximum potential change in flows (0.78 cfs) attributable to Donala’s proposed contract are only 1 percent of the average Arkansas River flows during the same time (USGS 2011a).

The analysis specifically addresses 1) Lake Fork Creek below Turquoise Reservoir to the confluence with Willow Creek and 2) Lake Fork Creek from the confluence with Willow Creek to the confluence with the Arkansas River (see Figure 2.1). It is assumed that the level of impacts gradually reduces with further distance from Turquoise Reservoir. This analysis tiers to the 2012 EA and FONSI for the complete analysis for all other impacts related to Donala’s request.

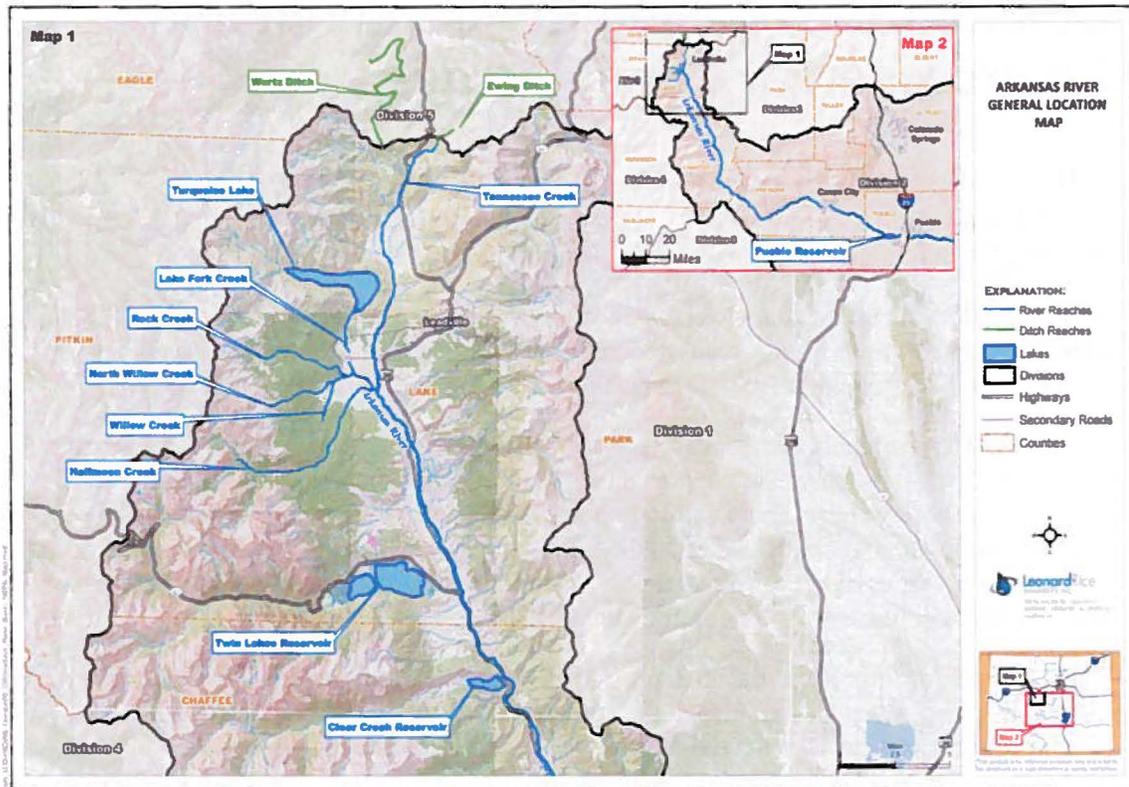


FIGURE 2.1 Arkansas River Basin above Clear Creek Reservoir

Donala is not proposing to increase overall water delivery to its service area. It is proposing to substitute surface water rights from the Arkansas River basin for groundwater extracted from the Denver Basin deep aquifers. Flows downstream of Willow Creek Ranch and the magnitude and timing of return flows to Fountain Creek from Donala’s water service area would not change from existing conditions regardless of whether the proposed contract is issued, therefore, there would be no impacts associated with the proposed action in these areas. In addition, this activity will not exacerbate any stormwater problems or undermine any mitigation commitments. No additional analysis of these areas was necessary.

Issues

Below is an outline of the issues Reclamation identified for further evaluation in Chapter Three – Affected Environment and Environmental Consequences.

- Hydrology: Impacts downstream of Turquoise Reservoir
- Aquatic Resources: Impacts to sport fish and their food sources downstream of Turquoise Reservoir
- Threatened, Endangered, and Special Status Species: Impacts to Federally-listed species and their food sources downstream of Turquoise Reservoir
- Recreation: Impacts to fishery and other forms of recreation downstream of Turquoise Reservoir

Chapter 3 – Affected Environment and Environmental Consequence

Introduction and Methodology

This chapter describes the affected environment and discloses the environmental consequences associated with implementing the No Action and Proposed Action Alternatives.

Donala's 2013 temporary excess capacity contract request is similar to and results in the same streamflow effects as what was requested and analyzed for their 2012 temporary excess capacity contract and disclosed in the 2012 Donala Temporary Excess Capacity Contract EA.

Resources evaluated in this chapter include the hydrology of Lake Fork Creek downstream of Turquoise Reservoir, and the aquatic resources (including threatened and endangered species) and recreation in those waters. There are no impacts expected to terrestrial threatened and endangered species, floodplains, wetlands, water quality, vegetation, farmland, soil, environmental justice, cultural resources, or Indian trust resources. Therefore, impacts to these resource areas have been considered but eliminated from further evaluation.

Based upon the magnitude of the changes in flows expected with the Proposed Action Alternative, the scope of analysis includes stretches of Lake Fork Creek from Turquoise Reservoir to the confluence with the Arkansas River, as impacts beyond that point are believed to be indiscernible. See Figure 1.2. The analysis specifically addresses 1) Lake Fork Creek below Turquoise Reservoir to the confluence with Willow Creek and 2) Lake Fork Creek from the confluence with Willow Creek to the confluence with the Arkansas River. It is assumed that the level of impacts gradually reduce with further distance from Willow Creek Ranch. See the 2012 EA, and by reference the 2006-2010 EA and FONSI No. 2010-26, for the complete analysis for all other aspects of Donala's 2013 contract request.

Under existing conditions the Willow Creek Ranch water rights are left in the stream and flow into the Arkansas River; not being stored in any Fry-Ark Project facility. Return flow replacement flows are not released into the Upper Arkansas River and no exchange of Fry-Ark Project water between Reservoirs is occurring. Existing conditions provide a basis of comparison, which is used to evaluate the level of potential impacts resulting from the implementation of the Proposed Action Alternative and No Action Alternative. The analysis is based on the assumption that the measures identified in Table 2.2 would be implemented for the Proposed Action Alternative. Reclamation based these impact analyses and conclusions on the review of existing literature and studies; information provided by other agencies, professional judgment, and staff insights.

Streamflow Modeling

A mass balance spreadsheet was developed to analyze the potential changes in streamflow conditions that could be expected under the No Action and Proposed Action alternatives. The analysis compares the streamflow conditions of each alternative to those under existing conditions for two stream reaches of Lake Fork Creek between Sugar Loaf Dam and the confluence of Lake Fork Creek with the Arkansas River:

1. Lake Fork Creek Below Sugar Loaf Dam – Lake Fork Creek from Sugar Loaf Dam to its confluence with Willow Creek. (Reach 1)

2. Lake Fork Creek Below Willow Creek Confluence – Lake Fork Creek from its confluence with Willow Creek to its confluence with the Arkansas River. (Reach 2)

The comparison is intended to be a “worst-case” scenario in which the maximum depletions are assumed for the Proposed Action and No Action alternatives. The results of the analysis are presented in Tables 3.3-3.4.

Existing Condition Streamflow

Willow Creek and Lake Fork Creek below the confluence with Willow Creek are both unged, thus monthly streamflows had to be estimated for Willow Creek at its confluence with Lake Fork Creek. For Willow Creek, the natural streamflow was estimated using regional regression equations developed by the U.S. Geological Survey (USGS) for unged basins in Colorado (Capesius, 2009). For each month, a distinct weighted least squares regression equation is used to estimate the monthly mean natural streamflow. The equations are a function of drainage basin area and mean annual basin precipitation. The drainage basin area and precipitation for Willow Creek was determined using the USGS StreamStats interactive map feature and applied to the regression equations to determine the monthly mean natural streamflow for Willow Creek just above its confluence with Lake Fork Creek (USGS 2011b).

For this analysis, it is assumed under existing conditions that Willow Creek Ranch is not diverting under its water rights and any other diversions in the Willow Creek basin are relatively minor. Therefore, the estimated monthly mean natural streamflows are assumed to be representative of the existing conditions in Willow Creek.

The existing condition monthly mean streamflow for Lake Fork Creek below Sugar Loaf Dam (Reach 1) was estimated from the actual gaged streamflow for the period of record at the State of Colorado streamflow gage, Lake Fork Creek below Sugar Loaf Dam near Leadville (LFCBSLCO). The existing condition for Lake Fork Creek from its confluence with Willow Creek to its confluence with the Arkansas River (Reach 2) was then estimated by adding the estimated Willow Creek monthly streamflows to those of Reach 1.

Proposed Action and No Action Streamflows

Both the Proposed Action and No Action alternatives have the same effect on streamflows and assume that return flow requirement releases will occur from Turquoise Reservoir outlet, and therefore, the methodology for estimating the streamflow is identical for both alternatives. Other proposed contract exchanges involve administrative transfers of water and do not affect Lake Fork Creek. Under both alternatives and existing conditions there is no diversion at Willow Creek Ranch. Further, the Pueblo Board lease agreement contemplates a direct delivery release of up to an additional 202 ac-ft from Turquoise Reservoir to Pueblo Reservoir. Donala’s temporary excess capacity contract request does not include such a direct delivery release. Therefore, the flow in Willow Creek under the alternatives is the same as those under existing conditions. Under both the No Action and Proposed Action alternatives, the streamflow in Reach 1 would be increased by the delayed return flow replacement releases from Turquoise Reservoir (assumes return flow replacements for Willow Creek Ranch water rights would be implemented in a similar manner to Donala if another municipality bought the water rights). In order to evaluate a “worst case” scenario, this analysis assumed that the replacement releases would be those associated with the maximum diversion limits identified in the findings of fact for water right change Case Number 09CW73. The replacement releases were computed by applying the delayed return flow requirement percentages specified in the findings of fact to the maximum diversion limits. The total annual maximum replacement requirement is 183 ac-ft and its monthly distribution is shown in Table 3.3 under the Proposed Action Change column. This data is

consistent with the 184 ac-ft of replacement release from Sugarloaf Dam requested in the application. The streamflow in Reach 1 for each alternative was then computed for each month as the sum of the monthly streamflow under existing conditions and the monthly delayed return flow replacement requirement associated with the Maximum Diversion Limits.

For both the No Action and Proposed Action alternatives, the streamflow in Reach 2 was computed for each month by adding the estimated monthly streamflows in Willow Creek to the computed monthly streamflows in Reach 1.

The following terms are used in the discussion of environmental consequences to assess the impact intensity threshold and the nature of impacts associated with each alternative.

Type: Impacts can be beneficial or adverse (Table 3.1).

TABLE 3.1 Impact types

Impact Type	Description
Beneficial	A positive change in the condition or appearance of the resource, or a change that moves the resource toward a desired condition.
Adverse	A negative change that detracts from the resource's appearance or condition, or a change that moves the resource away from a desired condition.

Impact Intensity: The impact intensity for each resource is identified as no impact; or impacts may be negligible, minor, moderate, or major (Table 3.2).

TABLE 3.2 Impact intensity

Impact Intensity	Description
No impact	No discernable effect.
Negligible	Effect is at the lowest level of detection and causes very little or no disturbance.
Minor	Effect that is slight, but detectable, with some perceptible effects of disturbance.
Moderate	Effect is readily apparent and has measurable effects of disturbance.
Major	Effect is readily apparent and has significant effects of disturbance.

Duration: For purposes of this analysis, impact duration is described as short-term or long-term. Short-term impacts last no longer than the contract year. Long-term impacts last beyond contract year.

Direct and Indirect Impacts: Effects can be direct, indirect, or cumulative. Direct effects are caused by an action and occur at the same time and place as the action. Indirect effects are caused by the action and occur later or farther away, but are still reasonably foreseeable.

Direct and indirect impacts are considered in this analysis, but are not specified in the narratives. Cumulative effects are discussed at the end of the section.

Floodplains, Wetlands, Water Quality, Vegetation, Farmland, Soils

Neither alternative involves construction activities or other on-the-ground changes. The water would still be within the range of normal flows downstream of Willow Creek Ranch and

Turquoise Reservoir. Therefore, no change in impacts are anticipated to any of these resources and these topics were dismissed from detailed discussion in this EA.

Since there would be no change in impacts as a result of either alternative, there would be no cumulative effects.

Cultural Resources

The 2007 Programmatic Agreement (PA) between the Bureau of Reclamation, Eastern Colorado Area Office (ECAO) and the Colorado State Historic Preservation Officer (SHPO), regarding Reservoir Operations and Storage Contracts, outlines a process to be followed to comply with the National Historic Preservation Act (NHPA). When a temporary contract is issued, it is considered an undertaking under NHPA. The aforementioned PA documents ECAO's compliance with Section 106, as stipulated in 36 CFR 800, by implementing Stipulation IV of the agreement.

Stipulation IV (Implementing Actions) states that ECAO will identify and evaluate historic properties within the fluctuation zone of reservoirs constructed by ECAO to satisfy the Section 106 requirements for reservoir operations and storage contracts. Stipulation IV. A. specifically discusses the requirements at Pueblo Reservoir. Beginning in 2007, ECAO contracted to have the lands surrounding Pueblo Reservoir surveyed, and sites that were exposed during low water stages evaluated for their eligibility to the National Register of Historic Place (NRHP). The project was completed in 2010 and ECAO consulted with the SHPO. In a letter dated July 15, 2011 (CHS #59084), the SHPO concurred with our findings, thereby satisfying Reclamation's Section 106 requirements for reservoir operations and storage contracts at Pueblo Reservoir.

Concerning the flows released out of Turquoise Reservoir, the largest monthly increase of releases under the proposed contract would be well within the normal release patterns for the reservoir. Therefore, cultural resource would not be adversely affected due to erosion or exposed areas.

Since the effects are within the normal release pattern for the reservoir, there would be no cumulative effects to cultural resources.

Indian Trust Resources

This section addresses Indian trust assets. Indian trust assets are legal interests in property held in trust by the United States for Indian Tribes or individuals. The Secretary of the Interior acts as the trustee for the United States with respect to Indian trust assets. All Department of the Interior agencies share the Secretary's duty to act responsibly to protect and maintain Indian trust assets reserved by or granted to Indian tribes or individuals by treaties, statutes, and executive orders. These rights are sometimes further interpreted through court decisions and regulations. Examples of trust assets include lands, minerals, hunting and fishing rights, and water rights. Interior carries out its activities in a manner that protects trust assets and avoids adverse impacts. The federal Indian trust responsibility is a legal obligation under which the United States "has charged itself with moral obligations of the highest responsibility and trust" toward Indian tribes (Seminole Nation v. United States, 1942). It is also a legally enforceable fiduciary obligation on the part of the United States to protect tribal treaty rights, lands, assets, and resources, as well as a duty to carry out the mandates of federal law with respect to American Indian and Alaska Native tribes and villages.

Assets can be real property, physical assets, or intangible property rights. They need not be owned outright, but can include other types of property interest, such as a lease or a right to use something. ITAs cannot be sold, leased, or otherwise alienated without federal approval. While

most ITAs are on Indian reservations, they can also be off reservations. The Secretary of the Interior manages ITAs in accordance with Principles for the Discharge of the Secretary's Trust Responsibility (DOI 2000).

In June 2011, Reclamation contacted representatives of tribal groups with historical ties to the Arkansas River Basin and analyzed relevant treaties. Reclamation requested government-to-government consultation with the Tribes to identify any trust assets or treaty interests in the area. Reclamation also contacted the Bureau of Indian Affairs' Southern Plains, Rocky Mountain and Southwest Regional Offices to inform them of the consultation and request any comments the Agency may have regarding ITAs. To date, no ITAs have been identified in the area. Therefore, Indian trust resources were dismissed as an impact topic in this EA.

Environmental Justice

Presidential Executive Order 12898, General Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, requires all federal agencies to incorporate environmental justice into their missions by identifying and addressing the disproportionately high and/or adverse human health or environmental effects of their programs and policies on minorities and low-income populations and communities.

Environmental justice is the fair treatment and meaningful involvement of all people, regardless of race, color, national origin, or income; with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.

Leadville and surrounding communities contain both minority and low-income populations; however, environmental justice is dismissed as an impact topic in this EA for the following reasons:

- Implementation of the Proposed Action would not result in any identifiable adverse human health effects. Therefore, there would be no direct or indirect adverse effects on any minority or low-income population.
- The impacts associated with implementation of the Proposed Action would not disproportionately affect any minority or low-income population or community.

Implementation of the Proposed Action would not result in any identified effects that would be specific to any minority or low-income community.

Hydrology

Affected Environment

The Willow Creek Ranch is located in the upper Arkansas River basin approximately 5 miles south of Turquoise Reservoir and is drained by both Little Willow Creek and Willow Creek which is a tributary to Lake Fork Creek. The Willow Creek Ranch is currently owned by Donala. Willow Creek Ranch water rights are not diverted from the streams, as there are no longer any functioning diversion structures on the property. The maximum water rights that can be depleted under Case No. 09CW73 are approximately 500 ac-ft annually.

The State of Colorado streamflow gage, Lake Fork Creek below Sugarloaf Dam near Leadville, Colorado, measures flows on Lake Fork Creek (Reach 1). The average monthly flow is shown in the Existing Conditions column of Table 3.3. The average monthly flow for Lake Fork Creek below its confluence with Willow Creek (Reach 2) was estimated by the methodology described in the Streamflow Modeling section above and is shown in the Existing Conditions column of

Table 3.4. The Colorado Water Conservation Board (CWCB) holds two in-stream flow (ISF) rights on Lake Fork Creek. There is a 15 cubic feet per second (cfs) ISF or native flow, whichever is less, year-round from the outlet of Turquoise Reservoir to the confluence with Willow Creek (Reach 1) and a 20 cfs ISF or native flow, whichever is less, year-round from the confluence of Lake Fork Creek and Willow Creek to the confluence with the Arkansas River (Reach 2) (CWCB 2012). The CWCB ISF program was designed to provide minimum stream flows to preserve the natural environment to a reasonable degree (CWCB 2012).

TABLE 3.3 Lake Fork Creek Below Sugar Loaf Dam – Reach 1

	Existing Conditions	Proposed Action			No Action		
	Flow (ac/ft/month)	Flow (ac/ft/month)	Change (ac/ft/month)	Change (%)	Flow (ac/ft/month)	Change (ac/ft/month)	Change (%)
Jan	948	972	-24	2.5	972	24	2.5
Feb	1121	1140	19	1.7	1140	19	1.7
Mar	1547	1564	17	1.1	1564	17	1.1
Apr	2303	2311	8	0.3	2311	8	0.3
May	4348	4348	0	0.0	4348	0	0.0
Jun	6802	6802	0	0.0	6802	0	0.0
Jul	7177	7177	0	0.0	7177	0	0.0
Aug	4533	4533	0	0.0	4533	0	0.0
Sep	1799	1814	15	0.8	1814	15	0.8
Oct	1350	1371	21	1.6	1371	21	1.6
Nov	1542	1589	47	3.0	1589	47	3.0
Dec	805	837	32	4.0	837	32	4.0
May-Aug	22860	22860	0	0.0	22860	0	0.0
Sep-Apr	11417	11600	183	1.6	11600	183	1.6
Total	34276	34459	183	0.5	34459	183	0.5

TABLE 3.4 Lake Fork Creek Below Willow Creek Confluence – Reach 2

	Existing Conditions	Proposed Action			No Action		
	Flow (ac-ft/month)	Flow (ac-ft/month)	Change (ac-ft/month)	Change (%)	Flow (ac-ft/month)	Change (ac-ft/month)	Change (%)
Jan	1274	1298	24	1.9	1298	24	1.9
Feb	1392	1411	19	1.4	1411	19	1.4
Mar	1881	1898	17	0.9	1898	17	0.9
Apr	3047	3055	8	0.3	3055	8	0.3
May	8886	8886	0	0.0	8886	0	0.0
Jun	14894	14894	0	0.0	14894	0	0.0
Jul	10387	10387	0	0.0	10387	0	0.0
Aug	5818	5818	0	0.0	5818	0	0.0
Sep	2567	2582	15	0.6	2582	15	0.6
Oct	2014	2035	21	1.0	2035	21	1.0
Nov	2010	2057	47	2.3	2057	47	2.3
Dec	1169	1201	32	2.7	1201	32	2.7
May-Aug	39985	39985	0	0.0	39985	0	0.0
Sep-Apr	15353	15536	183	1.2	15536	183	1.2
Total	55338	55521	183	0.3	55521	183	0.3

Environmental Consequences

Proposed Action Alternative

Tables 3.3 and 3.4 show the changes that could occur to the stream downstream of Turquoise Reservoir as compared to the existing conditions. In order to illustrate the largest potential difference between the alternatives, the maximum water rights and maximum return flow releases are shown. There would be a short-term increase in the flows on Lake Fork Creek below Turquoise Reservoir to the confluence with Willow Creek and short-term, negligible increases in the flows on Lake Fork Creek below the confluence with Willow Creek, with the highest levels in the winter months. However, if the daily contract exchange is executed, the largest monthly percent change in flows of per month (2.7 percent) in December would still be within the general 5 percent margin of error used for measurement in Colorado streams by the US Geological Survey and well within the normal release patterns for the reservoir (Vaughan 2011). Therefore, the increase in flows would be immeasurable due to physical constraints and would be considered negligible. CWCB ISF's would not be impacted by the change in flows. Effects of any releases of the storage water from Pueblo Reservoir have already been analyzed in the 2006-2010 and 2012 EAs.

No Action Alternative

Under the No Action Alternative, Donala indicated that they would sell the Willow Creek Ranch water rights to another municipality who would likely use the water in the same manner Donala has proposed; thus, the use of the water rights and resulting return flow requirements released at

the Turquoise Reservoir outlet (Sugarloaf Dam) would be for the same time period and in the same amount and rate as in the Proposed Action Alternative. See Tables 3.3 and 3.4 for details. The effects on streams below Turquoise Reservoir would be similar to the Proposed Action Alternative.

Cumulative Effects

Since there would be no measureable direct or indirect effects, there would be no cumulative effects to hydrology.

Aquatic Resources

Affected Environment

Lake Fork Creek supports a self-sustaining brown and brook trout population (Policky 2011). Turquoise Reservoir is actively stocked by Colorado Parks and Wildlife with catchable trout species such as rainbow, Snakeriver cutthroat, and lake trout.

There are no protected populations of the federally-listed threatened greenback cutthroat trout (*Oncorhynchus clarki stomias*) in the analysis area (Policky 2011). See Threatened and Endangered, Special Status Species section for more detail.

Macroinvertebrates represent a significant food source for trout species, and their presence is important to maintaining a productive fishery.

Environmental Consequences

Proposed Action Alternative

As discussed in the Hydrology section of this chapter and shown in Tables 3.3 and 3.4, there would be a short-term negligible increase in the flows on Lake Fork Creek below Turquoise Reservoir to the confluence with Willow Creek, with highest levels in the winter months. There would also be short-term, negligible increases in the winter flows on Lake Fork Creek below the confluence with Willow Creek. The maximum 47 ac-ft per month (0.78 cfs) that would be released from Turquoise Reservoir (Table 3.3) is well within the normal release patterns for the reservoirs (Vaughan 2011) and CWCB ISF's would not be impacted by the change in flows. Therefore, impacts are expected to be negligible to aquatic resources as a result of implementing the Proposed Action Alternative. Effects of any releases of the storage water from Pueblo have already been analyzed in the 2012 EA.

No Action Alternative

The use of the water rights and resulting return flows would be for the same time period and in the same amount and rate as in the Proposed Action Alternative. See Tables 3.3 and 3.4 for details. The effects on aquatic resources in the streams below Turquoise Reservoir would be similar to the Proposed Action Alternative.

Cumulative Effects

Since there would be no measurable direct or indirect effects, there would be no cumulative effects on aquatic resources.

Threatened, Endangered, and Special Status Species

Affected Environment

All reservoirs and affected stream segments considered in this analysis are in Lake County. Table 3.5 shows the United States Fish and Wildlife Service (USFWS) Federally-listed threatened and endangered species within this county (USFWS 2012b).

Table 3.5 USFWS Federally-Listed Species (Lake County)

Species	Scientific Name	Status
Canada Lynx	<i>Lynx canadensis</i>	Threatened
Greenback Cutthroat Trout	<i>Oncorhynchus clarki stomias</i>	Threatened
Penland Alpine Fen Mustard	<i>Eutrema penlandii</i>	Threatened
Uncompahgre Fritillary Butterfly	<i>Boloria acrocne</i>	Endangered

Environmental Consequences

Proposed Action Alternative

There is no ground disturbance expected with the implementation of the Proposed Action Alternative as a result of construction, operation, or maintenance activities. The maximum 47 ac-ft per month (0.78 cfs) that would be released from Turquoise Reservoir (Table 3.3) is well within the normal release patterns for the reservoirs (Vaughan 2011) and CWCB ISF's would not be impacted by the change in flows. Therefore, the only changes expected with the implementation of this alternative are water related. As a result, there would be no impacts ("no effect") to Canada lynx, Penland alpine fen mustard, or Uncompahgre fritillary butterfly expected with the implementation of either alternative.

There is no critical habitat for greenback cutthroat trout (greenbacks) in the analysis area (USFWS 2012a). Protected populations of greenbacks are only found in Rock Creek above the Leadville National Fish Hatchery diversion barrier, which is approximately one mile upstream of the confluence with Willow Creek (Policky 2011). Interagency recovery efforts have resulted in greenbacks above the barrier on Rock Creek. Downstream from the barrier, in Rock Creek and Lake Fork Creek, there are other trout species present. The individual greenbacks that make their way below the barrier readily hybridize with the other trout; therefore, they are no longer part of a protected population and are lost to recovery (Ellwood 2011).

Since the protected populations of greenbacks in Rock Creek are outside of the affected area, there would be no impacts ("no effect") expected as a result of this alternative.

Reclamation received concurrence from the USFWS on these determinations on December 9, 2011. Further consultation would be required if at any time it is determined other species are found in the project area that are Federally-listed, if critical habitat is designated in the project area, or if new information becomes available that reveals that the action may impact such species in a manner or to an extent not previously considered.

No Action Alternative

The use of the water rights and resulting return flows would be for the same time period and in the same amount and rate as in the Proposed Action Alternative. See Tables 3.3 and 3.4 for details. The effects on threatened, endangered, and special status species would be the same as the Proposed Action Alternative.

Cumulative Effects

Since there would be no direct or indirect effects, there would be no cumulative effects on threatened, endangered, and special status species.

Recreation

Affected Environment

Turquoise Reservoir contains recreational opportunities, including camping, boating, and fishing. Fishing is also a popular activity downstream of Turquoise Reservoir in the Lake Fork Creek. The lands in the analysis area, including Lake Fork Creek, are primarily private, with the exception of small stretches of National Forest System lands, thus non-water related recreation and fishing are limited in the analysis area.

Environmental Consequences

Proposed Action Alternative

There would be no ground disturbances expected with the implementation of this alternative as a result of construction, operation, or maintenance activities. The maximum 47 ac-ft per month (0.78 cfs) that would be released from Turquoise Reservoir (Table 3.3) is well within the normal release patterns for the reservoirs (Vaughan 2011) and CWCB ISF's would not be impacted by the change in flows. Therefore, the only changes expected with the implementation of this alternative are water related. As a result, there would be no impacts to non-water related recreation expected with the implementation of this alternative.

The Aquatic Resources section earlier in this chapter concluded that effects to sport fish would be negligible as a result of the implementation of the Proposed Alternative. It is estimated that a similar, negligible level of impact would result to fishery-related recreation in those water bodies.

No Action Alternative

The use of the water rights and resulting return flows would be for the same time period and in the same amount and rate as in the Proposed Action Alternative. See Tables 3.3 and 3.4 for details. The effects on fishery-related recreation in the streams below Turquoise Reservoir would be similar to the Proposed Action Alternative.

Cumulative Effect

Since there would be no measureable direct or indirect effects, there would be no cumulative effects to recreation resources.

Chapter 4 - Consultation and Coordination

Reclamation consulted the following agencies and organizations during the development of this environmental assessment:

*Colorado Parks and Wildlife
Donala Water and Sanitation District
Pueblo Field Office, Reclamation
US Fish and Wildlife Service*

Chapter 5 – References

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Chapter 6 – List of Preparers

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Schwendler, Rebecca	Contract Archeologist
Thomasson, Ron	Civil (Hydrologic) Engineer
Vaughan, Roy	Pueblo Facility Manager

Appendix A-Non-Federal Agreements

Pueblo Board Leased Water

On September 20, 2011, Donala entered into a lease agreement with Pueblo Board for 250 ac-ft of non-Project water that could be stored in Pueblo Reservoir under the proposed temporary excess capacity contract(s). The lease allows Donala to deliver its Willow Creek Ranch return flows through a contract exchange with Pueblo Board for a release from storage in Turquoise Reservoir. This lease agreement contemplates a minimum of 48 and a maximum of 183 ac-ft of water (average 94 ac-ft) released annually to replace non-irrigation season return flows to the Upper Arkansas River associated with the change of use of water rights for the Willow Creek Ranch. Donala may also elect to receive any remainder (250 ac-ft less return flow replacement and applicable transit losses) of the non-Project leased water in its proposed storage account in Pueblo Reservoir or as otherwise provided by agreements with others.

The lease agreement allows for non-Project water transfer by several methods (all options disclosed here):

- Contract exchanges of non-Project water from Pueblo Board's Twin Lake storage to Springs Utilities' Twin Lake storage,
- Transfer of water between Pueblo Board's Pueblo storage to Donala's proposed Pueblo Reservoir storage
- Direct releases from Pueblo Board's upstream storage accounts in Turquoise Reservoir, Twin Lakes Reservoir, Clear Creek Reservoir, or discharge from the Ewing and Wurtz Ditches (not utilized for the 2013 contract request).

Donala proposes to use a contract exchange to move leased non-Project water stored in Pueblo Reservoir to Pueblo Board's upstream storage in Turquoise Reservoir to fulfill return flow obligations in Lake Fork Creek. When Donala has enough water to fulfill return flow obligations stored in Pueblo Reservoir they obtain water to apply towards return flow obligations from Pueblo Board by contract exchange. When the contract exchange supporting the return flow obligation occurs, Donala's proposed storage account in Pueblo Reservoir is debited and Pueblo Board's Pueblo Reservoir storage account is credited. At the same time, Pueblo Board physically releases water from their storage in Turquoise Reservoir into Lake Fork Creek to satisfy Donala's return flow obligations for Willow Creek Ranch water rights. Under a provision of the lease, if for some reason Donala doesn't have any or enough water stored in Pueblo Reservoir to use towards fulfilling return flow obligations, Pueblo Board can physically release non-Project water from Turquoise Reservoir into Lake Fork Creek at a higher per acre-foot cost to Donala.

When there is extra leased non-Project water, over and above what is needed for return flow obligations, Donala plans to receive it by either 1) transfer from Pueblo Board's Twin Lake's storage into Springs Utilities' Twin Lakes storage for delivery to Donala at the Springs Utilities Northgate connection or 2) direct transfer between Pueblo Board's Pueblo Reservoir storage and Donala's Pueblo Reservoir storage. Direct releases from Fry-Ark Project reservoirs, with the exception of direct releases to satisfy return flow obligations for the Willow Creek Ranch water rights, are not considered for this one-year, temporary, proposed contract action. Storage of the extra leased water would generally begin in September and continue until April, but it is possible

that Donala could receive some amount year-round. For this analysis, only contract exchanges are proposed with no anticipated releases other than ongoing native return flow requirements, therefore inflow into Pueblo Reservoir is not affected by this one-year, temporary, proposed contract.

Proposed 2013 Springs Utilities Contract Exchange

Donala plans to enter into an agreement with Springs Utilities, known as the 2013 Springs Utilities contract exchange. The contract exchange would facilitate the following operations: The Willow Creek Ranch water rights would leave the Willow Creek Ranch and flow down Lake Fork Creek into the Arkansas River. Directly below the Twin Lakes Outlet on the Arkansas River, the Willow Creek Ranch water rights would be exchanged for the same amount of water in Springs Utilities' Twin Lakes Reservoir storage. Therefore, Springs Utilities would curtail its normal release through the Twin Lakes Outlet and be credited the amount of Donala's Willow Creek Ranch water flows released to the Arkansas River in its Twin Lakes storage as Springs Utilities water. This water would then be delivered to Donala via Springs Utilities infrastructure leading to the Northgate interconnection (see Springs Utilities Service Agreement section). This exchange would occur at the discretion of Springs Utilities and if Springs Utilities is unable or unwilling to store some portion or all of the water, it would flow directly from the Willow Creek Ranch to Donala's proposed storage account in Pueblo Reservoir. At this time, Donala's proposed Pueblo Reservoir account cannot be credited from Springs Utilities Pueblo storage account.

Proposed 2013 Upper Reservoir Contract Exchange

Donala will also enter into an agreement with a non-Reclamation entity with non-Project storage in the upper reservoirs. This agreement will most likely be with Springs Utilities. This exchange agreement transfers non-Project water stored in Donala's proposed Pueblo Reservoir storage to Springs Utilities upper reservoir storage to then be delivered via the short-term water service agreement with Springs Utilities. While the details of this proposed exchange are not yet clear, this type of contract exchange involves only an administrative exchange between storage accounts with no release to the river. The water transferred to the upper reservoir is released from that storage account and delivered to Donala via Springs Utilities infrastructure leading to the Northgate interconnection (see Springs Utilities Service Agreement section).

Springs Utilities Service Agreement

Donala is party to a short-term water service agreement with Springs Utilities which can be renewed until December 31, 2015. The service agreement allows Springs Utilities to deliver treated water (credit) to Donala at the Northgate interconnection (See Figure 1.2). Releases of water to the Arkansas River below Pueblo Reservoir were previously analyzed in the the 2006-2010 and 2012 EAs.