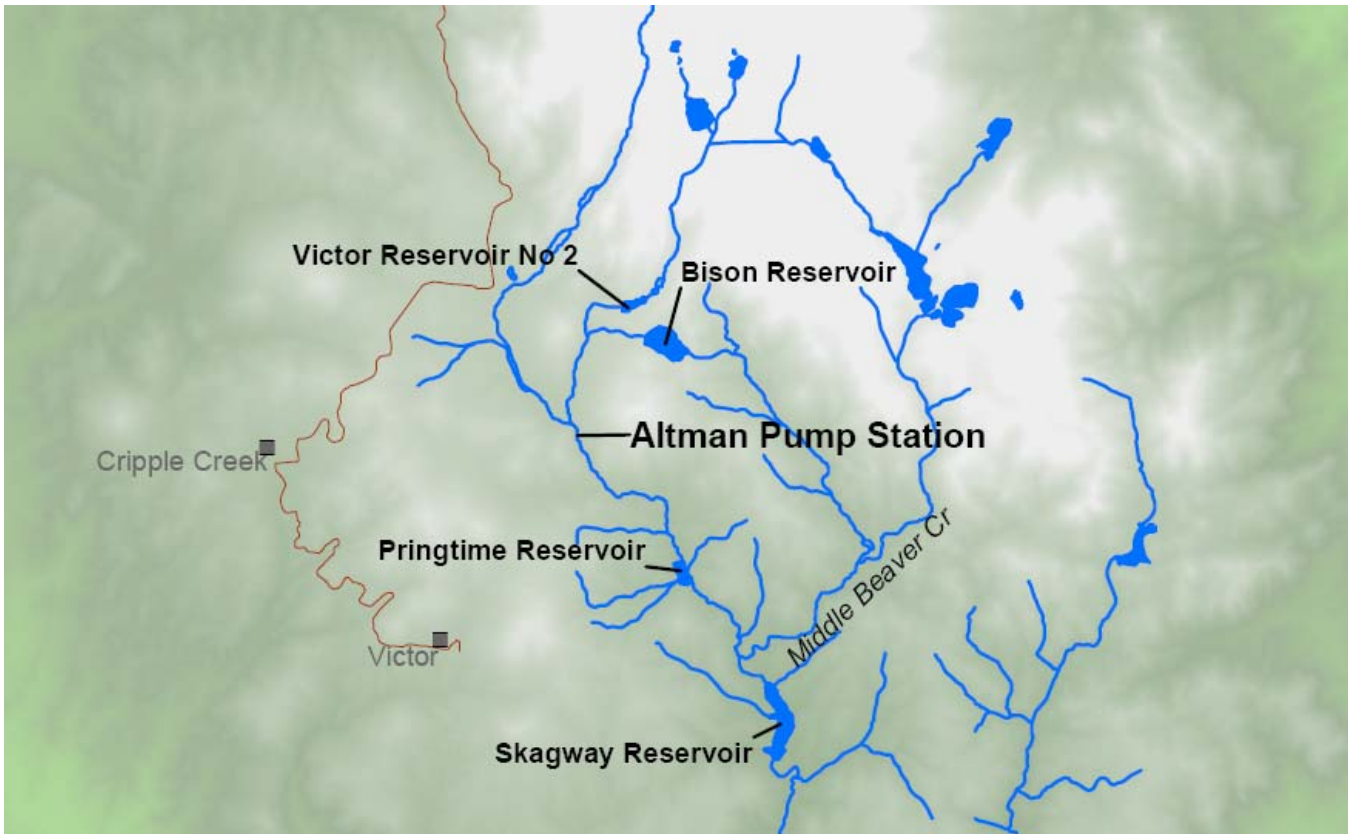
RECLAMATION

Managing Water in the West

EA No. EC-1300-09-01

2009 City of Victor Temporary Excess Capacity Contract, Fryingpan-Arkansas Project

Environmental Assessment



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

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CHAPTER ONE – PURPOSE OF AND NEED FOR ACTION

INTRODUCTION

The Bureau of Reclamation (Reclamation) is proposing to enter into a one year excess storage capacity contract with the City of Victor (Victor) for contract year 2009. The contract would allow storage of non-project water in Pueblo Reservoir if and when space is available.

This Environmental Assessment (EA) was prepared by Reclamation in accordance with the National Environmental Policy Act (NEPA), the Council on Environmental Quality Regulations for Implementing the Procedural Provisions of NEPA (40 CFR 1500-1508), and Reclamation's NEPA Handbook (USDI 2000). It is not a decision document, but rather it is a disclosure of the environmental consequences of the No Action and Proposed Action Alternatives.

PURPOSE AND NEED

In general, the purpose of the issuance of excess storage capacity contracts is to maximize the use of existing infrastructure to support entities with temporary municipal, industrial, irrigation, fishery, and recreation needs in their response to increasing water demands, and annual variability of climate and resultant hydrologic conditions. These contracts enable contractors to more efficiently use their non-project water, by providing temporary storage for that water for use at a later date. Consequently, temporary excess capacity contracts meet contractor needs by providing valuable water storage and increased water management flexibility.

Victor has a need to store up to 1,000 acre-feet (ac-ft) of their non-project water in Pueblo Reservoir to provide more reliable timing for municipal purposes (Victor 2007, Victor 2008 Victor 2009).

BACKGROUND

Reclamation completed Environmental Assessment and Finding of No Significant Impact No. EC-1300-06-02 (2006-2010 EA) in April 2006 and it is incorporated in this document by reference. The 2006-2010 EA analyzed the effects of making up to 80,000 ac-ft of Fryingpan-Arkansas Project excess capacity storage and 10,000 ac-ft of excess exchange capacity available from 2006-2010.

As a basis for the analysis, the 2006-2010 EA included hydrologic modeling, which included and in most cases doubled the amounts requested from contracts requested from 2000-2005. The 2006-2010 EA did not prevent any contractor that was not included in the analysis from receiving a contract; however, it did stipulate that additional NEPA documentation would be required for any potential effects of future requests that were not evaluated.

As in 2008, the 2009 request was determined to be outside the scope of the 2006-2010 EA. The 2009 request is the same as the 2008 request. A review of the 2008 EA verified that the impact analysis could be applied to the 2009 request; therefore the EA prepared here is essentially the same.

ISSUES AND IMPACT TOPICS

During the consideration of the proposed contract, Reclamation conducted internal and external agency scoping, as discussed in Chapter Four – Consultation and Coordination, to determine the issues relevant to the proposed contract. Below is a summary of the issues Reclamation identified to be included for further evaluation in Chapter Three – Affected Environment and Environmental Consequences,

and those considered but excluded from further evaluation along with a brief explanation. No new issues were discovered in 2009.

Issues and Impact Topics Included for Further Evaluation

Hydrology

- Impacts downstream of Altman Pump Station (Altman).

Aquatic Resources

- Impacts to sport and Federally-listed fish and their food sources downstream of Altman.

Recreation

- Impacts to fishery and other forms of recreation downstream of Altman.

Issues and Impact Topics Considered but Excluded from Further Evaluation

Threatened and Endangered Land Species, Floodplains, Wetlands, Water Quality, Vegetation, Farmland, Soil, Environmental Justice

Neither alternative involves construction activities or other on-the-ground changes. The water would still be within the range of normal flows downstream of Altman. Therefore, no impacts are anticipated to any of these resources.

Indian Trust Resources

Indian trust assets are legal interests in property held in trust by the United States for Indian tribes or individuals. The United States has a responsibility to protect and maintain rights reserved by or granted to Indian tribes or Indian individuals by treaties, statues, and Executive Orders, which are sometimes further interpreted through court decisions and regulations. This trust responsibility requires Reclamation to take all actions reasonable and necessary to protect trust assets. No Indian-owned lands, federally-recognized Indian reservation, or ceded lands have been identified within the study area where traditional use rights are retained by a federally-recognized Indian tribe; therefore, no Indian trust assets would be affected by implementation of either alternative.

SCOPE OF ANALYSIS

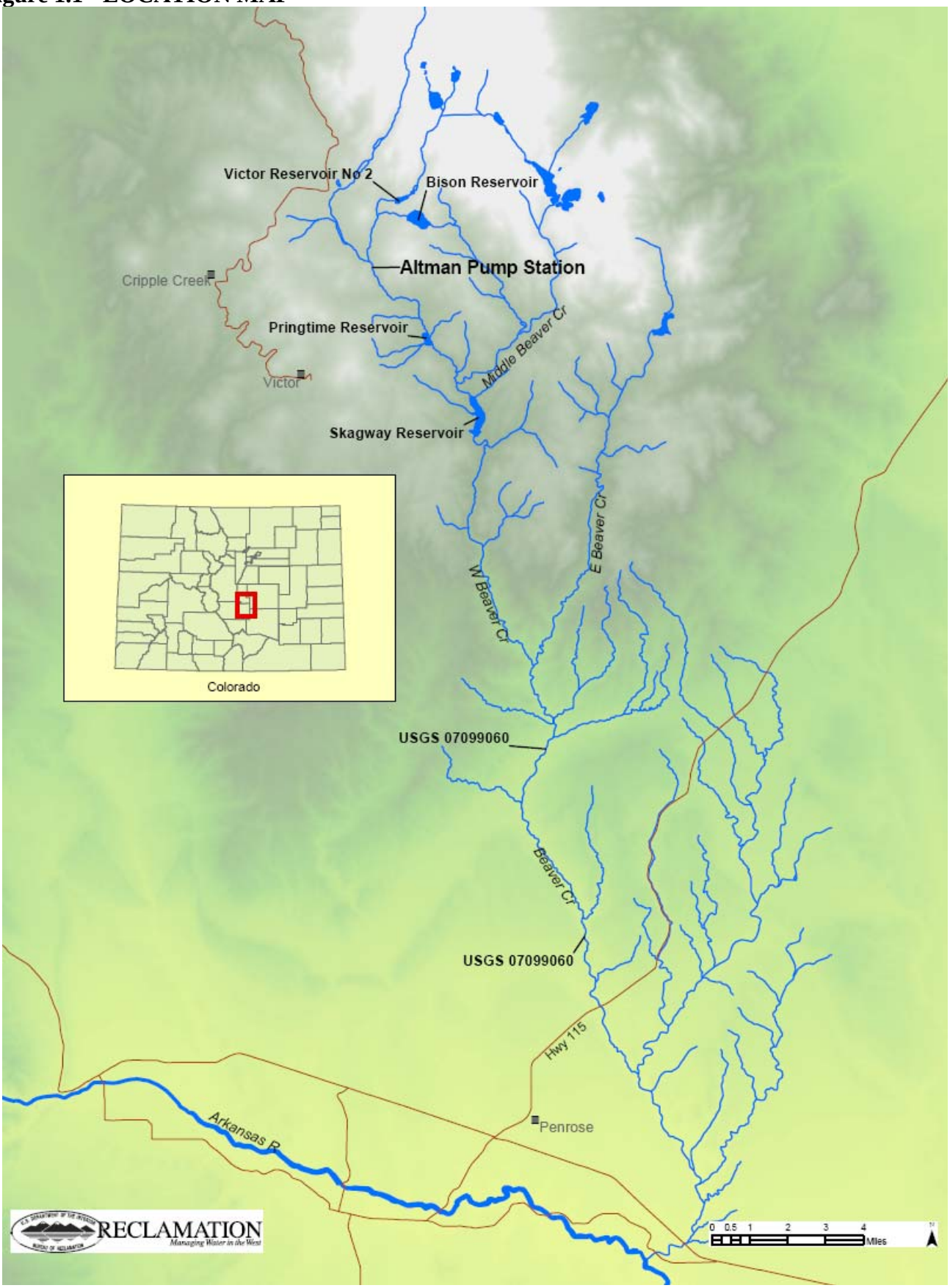
During the consideration of the proposed contract, Reclamation revisited the 2006-2010 EA to determine whether the expected impacts were within the scope of analysis previously conducted. Further, an evaluation of whether or not the environmental commitments were being met was completed. Table 1.1 summarizes the result of this effort.

Table 1.1 – COMPLIANCE WITH ENVIRONMENTAL COMMITMENTS IN 2006-2010 EA

Environmental Commitment	2009 Compliance Determination
All water must be transported, stored, and released in accordance with the laws of the State of Colorado.	To be included in contract.
By entering into a temporary excess capacity contract with Reclamation, for the use and distribution of United States waters, the Contractor shall comply will all sections of the Clean Water Act.	To be included in contract. Confirmed requests include 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.	The City of Aurora long-term excess capacity contract was signed on September 12, 2007. The 57,389 ac-ft total being requested for 2008 is still well under the now 70,000 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 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 has confirmed that collection of selenium data is ongoing. Reclamation will initiate a study toward the end of the 2006-2010 term to determine any correlations.
Temporary excess capacity contract operations shall not cause flows on the Arkansas River as measured at the Avondale gage to fall below 86 cubic feet per second (cfs).	Ongoing communication with signatories of the IGA (Intergovernmental Agreement between the City of Aurora, Colorado 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.
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	The Aurora long-term excess capacity contract allows up to 10,000 ac-ft of exchange. However, no temporary exchange contracts have been requested for 2009, including Victor's request. Therefore, this commitment is not applicable.

District Wastewater Treatment Plan or the Salida Treatment Plant to meet their CDPES permit requirements.	
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.	Reclamation will use the previous day's flows, as measured by adding flows at the Arkansas 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. Reclamation would not allow City of Victor to exercise an exchange from a lower reservoir into Pueblo if flows fell below 50 cfs.
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 Arkansas Above Pueblo gage to fish hatchery return flows.	To be included in contract. See above.
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 (Service), or (2) if the water originates in the Gunnison River basin, individual consultation with the Service may be required.	Confirmed completed.
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.	Confirmed to be under the 14,200 ac-ft per year analyzed in the 2006-2010 EA.
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.	The portion of Victor's request that involves exchanging to the Altman Pump Station was found to be outside the scope of analysis of the 2006-2010 EA. Additional analysis of impacts to the hydrology downstream of Altman, and the aquatic resources (including threatened and endangered species) and recreation in those waters will be documented in this EA. Based upon the magnitude of the changes in flows expected with the Proposed Action Alternative, the scope of analysis will be limited to stretches of stream from the Altman Pump Station (Altman) to the confluence with the Arkansas River, as impacts beyond that point are believed to be indiscernible. See Figure 1.1 for a location map. The analysis only specifically addresses West Beaver Creek below Altman. However, it should be assumed that the level of impacts will gradually reduce with further distance from Altman. See the 2006-2010 EA for the complete analysis for all other aspects of the 2009 requests.

Figure 1.1 - LOCATION MAP



CHAPTER TWO – ALTERNATIVES

NO ACTION ALTERNATIVE

Under the No Action Alternative, Reclamation would not enter into an excess capacity storage contract with Victor.

Victor is expecting to be unable to continue to purchase water from Colorado Springs Utilities (Springs Utilities) out of Wilson Reservoir (a.k.a. Reservoir No. 8) and Bighorn Reservoir (a.k.a. Reservoir No. 7). Springs Utilities has indicated they do not want to be a permanent supplier of water as they cannot guarantee availability (Victor 2007, Victor 2009). Therefore, although Victor has in the past purchased water from Springs Utilities, for the purposes of this analysis it will be assumed that this would no longer be an option.

Furthermore, although Victor has historically taken all 2.0 cfs of its senior water rights at Altman Pump Station, it has been notified by the Office of the State Engineer (State Engineer) that there will be a stricter administration of Victor's water rights (Judge 2008, Victor 2007). In the future, Victor is anticipating that it will only have 1.0 cfs of senior water rights in priority at Altman most of the time (Victor 2007).

As a result of Victor not being able to continue its historical operations, any diversion greater than 1.0 cfs at Altman will have to be provided by exchange from downstream sources. If Victor were not to receive the requested contract with Reclamation it would look to purchase water directly from a source on the Arkansas River, such as Pueblo Board of Water Works, for exchange to Altman. The exchange would be for the same time period and in the same amount and rate as described in the Proposed Action Alternative (Victor 2007, Victor 2009).

A contract with Reclamation is preferred by Victor because the water would be more reliable since it would already be in storage at Pueblo Reservoir. The water from other sources would not necessarily be available for purchase at the time it would be needed or at the time when an exchange would be possible. Without this contract Victor could possibly lose water that it would otherwise be able to divert, resulting in Victor not being able to provide a full water supply to its water users (Victor 2007).

PROPOSED ACTION ALTERNATIVE

Reclamation would enter into a one year temporary excess storage capacity contract with Victor for storage of up to 1,000 ac-ft of non-project water in Pueblo Reservoir. See Table 2.1 for contract request details (Victor 2007, Victor 2008, Victor 2009).

Table 2.1 – 2008 CONTRACT REQUEST MAXIMUM EXPECTED INFLOW AND OUTFLOW FROM PUEBLO RESERVOIR (AC-FT)

April		May		June		July		August	
Inflow	Outflow	Inflow	Outflow	Inflow	Outflow	Inflow	Outflow	Inflow	Outflow
40	0	80	160	80	178	80	172	80	184

Victor is requesting storage of up to 1,000 ac-ft of its non-project water in Pueblo Reservoir to provide for municipal purposes. Of the expected outflow listed above, only the 80 ac-ft in May, 89 ac-ft in June, 80 ac-ft in July, and 92 ac-ft in August that would be exchanged out of Pueblo Reservoir to Altman will be analyzed in this EA. The remainder of their request, which

involves the Arkansas River, is within the scope of the 2006-2010 EA.

Exchanges would only occur when the streamflow at the U.S. Geological Survey (USGS) Stream Gage 07099060 at Beaver Creek above Highway 115 near Penrose, Colorado is greater than 8.0 cfs. When the flow is less than 8.0 cfs, Beaver Creek is not considered a "live stream" to the Arkansas River, meaning the flows do not reach the Arkansas River. Therefore, a flow of 8.0 cfs is necessary in order for the State Engineer to administer the stream in relation to the Arkansas River mainstem (Judge 2008, Judge 2009). Because of this, exchanges could not occur during dry conditions. Based on current snowpack conditions, it will be assumed for this analysis that 2009 will have wet or average conditions, allowing the maximum exchanges possible. Exchanges could occur from mid-April through August. The maximum rate of exchange would not exceed 1.5 cfs.

Victor would abide by Colorado water law and any requirements of the State Engineer, who has jurisdiction over the administration of state waters.

CHAPTER THREE – AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

INTRODUCTION AND METHODOLOGY

This chapter describes the affected environment and discloses the environmental consequences associated with implementing the No Action and Proposed Action Alternatives that are beyond those analyzed in the 2006-2010 EA. This includes the utilization of an exchange to Altman. Resources evaluated in this chapter include the hydrology downstream of Altman, the aquatic resources (including threatened and endangered species), and recreation in those waters. As described in the Issues and Impact Topics section of Chapter One, there are no impacts expected to threatened and endangered land species, floodplains, wetlands, water quality, vegetation, farmland, soil, environmental justice, cultural resources, or Indian trust resources. Therefore, impacts to these topics have been considered but eliminated from further evaluation.

Based upon the magnitude of the request, the scope of analysis will be limited to stretches of stream from Altman to the confluence with the Arkansas River, as impacts beyond that point are believed to be indiscernible. The analysis only specifically addresses West Beaver Creek below Altman. However, it should be assumed that the level of impacts will gradually reduce with further distance from Altman. See the 2006-2010 EA for the complete analysis for all other aspects of the 2009 requests.

The No Action Alternative represents what would occur without the implementation of the proposed contract. It provides a baseline condition, which is used to evaluate the level of impact caused by the Proposed Action Alternative.

Impact Thresholds
Direct, indirect, and cumulative effects are analyzed for each impact topic and are described in terms of type, duration, and intensity with general definitions of each provided below.

Type - describes the classification of the impact as beneficial or adverse, and direct, indirect or cumulative.

Beneficial: positive change in the condition or appearance of the resource, or a change that moves the resource toward the desired condition.

Adverse: negative change that detracts from the resource's appearance or condition, or a change that moves the resource away from the desired condition.

Direct: effect caused by an alternative and occurs in the same time and place.

Indirect: effect caused by an alternative but is later in time or farther removed in distance, but is still reasonably foreseeable.

Cumulative: incremental effect caused by an alternative "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 impacts can result from individually minor, but collectively significant actions taking place over time.

Duration - describes the length of time an effect would occur as short- or long-term.

Short-term: lasting no longer than the contract year.

Long-term: lasting beyond the contract year.

Intensity - describes the degree, level, or strength of an impact as no impact, negligible, minor, moderate, or major.

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.

HYDROLOGY

Affected Environment

The Altman Pump Station is located on West Beaver Creek just below the confluence of West Fork West Beaver Creek and East Fork West Beaver Creek. It is a direct diversion structure that is owned and operated by Victor. Water that enters Altman is pumped to Victor's water distribution system. It has a maximum capacity of about 2.5 cfs with senior water rights accounting for 1.0 cfs.

Victor also has facilities associated with Victor Reservoir No. 2 and Bison Reservoir. Additional water may be purchased for exchange into these reservoirs beyond that contemplated for Altman. However, that action would not require a Federal action and as such will not be included in this analysis.

The Colorado Water Conservation Board (CWCB) does not hold any instream flow rights (ISF) on West Beaver Creek or Beaver Creek (CWCB 2008, CWCB 2009). There are no stream gages on West Beaver Creek. USGS Stream Gage 07099050 Beaver Creek above Upper Beaver Cemetery near Penrose, Colorado is the closest stream gage. See Figure 1.1 for the location and Appendix A for the average monthly flow data from 1991 through 2005 (USGS 2009). This gage is below substantive inputs of water from tributaries such as Middle Beaver Creek and East Beaver Creek. It is also below Skaguay Reservoir, which is owned and operated by the Colorado Division of Wildlife (CDOW). CDOW manages the reservoir to keep it as full as possible for fishery and recreational purposes (Policky 2008, Policky 2009, Tonko 2008).

Environmental Consequences

The exchange to Altman would be for the same time period and in the same amount and rate in both the No Action and Proposed Action Alternatives. See Table 3.1 for details. The only difference between the alternatives is the source of the exchange water. The release of the storage water from Pueblo (for the exchange to Altman) has already been analyzed in the 2006-2010 EA. Therefore, the Proposed Action Alternative (exchange to Altman) would have no impact on the hydrology of West Beaver Creek.

Table 3.1 EXCHANGE TO ALTMAN - BOTH ALTERNATIVES

	May	Jun	Jul	Aug
Amount (ac-ft)	80	89	80	92
Rate (cfs)	1.5	1.5	1.5	1.5
Maximum Days	27	30	27	31

AQUATIC RESOURCES

Affected Environment

West Beaver Creek supports a self-sustaining brown trout (*Salmo truta*) population. Skagway Reservoir is stocked by CDOW with catchable trout species. There is also a self-sustaining population of Northern Pike (*Esox lucius*) in Skagway Reservoir (Policky 2008).

There are no protected populations of the Federally-listed threatened greenback cutthroat trout (*Oncorhynchus clarki stomias*) in the analysis area (Policky 2008, Policky 2009). There is no critical habitat for greenback cutthroat trout (Ellwood, 2008).

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

Environmental Consequences

As discussed in the Hydrology section of this chapter, there would be no impact on the

hydrology of West Beaver Creek as a result of the implementation of the Proposed Action Alternative. The only difference between the alternatives is the source of the exchange water. The release of the storage water from Pueblo (for the exchange to Altman) has already been analyzed in the 2006-2010 EA. Therefore, the Proposed Action Alternative (exchange to Altman) would have no impact to the aquatic resources of West Beaver Creek.

RECREATION

Affected Environment

Fishing is a very popular activity downstream of Altman, including at Skaguay Reservoir. Skagway Reservoir is a State Wildlife Area with camping and wakeless boating opportunities.

Environmental Consequences

As discussed in the Hydrology section of this chapter, there would be no impact on the hydrology of West Beaver Creek as a result of the implementation of the Proposed Action Alternative. The only difference between the alternatives is the source of the exchange water. The release of the storage water from Pueblo (for the exchange to Altman) has already been analyzed in the 2006-2010 EA.
Further, there are no ground disturbances as a result of construction, operation, or maintenance activities expected with the implementation of either alternative. Also, the up to 1.5 cfs that would be exchanged to Altman is well within the amount diverted historically (Victor 2007, Judge 2008).

Therefore, no impacts are expected to non-water related recreation or water-related recreation such as fishing or boating as a result of implementing the Proposed Action Alternative.

CULTURAL RESOURCES

Area of Potential Effect

Reclamation and the Colorado State Historic Preservation Officer (SHPO) entered into a Programmatic Agreement for Reservoir Operations and Storage Contracts on January 23, 2007 (Reclamation 2007). The PA states that there is a theoretical possibility of effects at non-EACO reservoirs. In practice the change in elevation is accomplished by others and is not subject to Reclamation Control. Essentially, Effects will occur whether or not the water contracts are implemented. Reclamation has evaluated the effects at non-EACO reservoirs during the NHPA process using available data, but the lack of control at non-EACO reservoirs dictates that they not be included in the Area of Potential Effect (APE).

The proposed operational changes in reservoir levels fall within the normal range of operations at ECAO reservoirs and therefore the APE for the proposed Victor Temporary Excess Capacity Contract is the shoreline and land between the waterline and the maximum pool of Pueblo Reservoir.

The PA allows for implementation of temporary excess capacity storage contracts without further consultation when the expected changes will not exceed the existing high and low pool levels originally established for Pueblo Reservoir, and will require no new construction or modification of the existing reservoir structures.

Effects of Operations and Storage Contracts

ECAO operations impact the physical integrity of sites through loss of sediments, displacement of artifacts, loss of features and organics, and weathering caused by repeated drying, re-wetting and exposure to dissolved chemicals in the water. All known shoreline historic properties within Pueblo Reservoir operating elevations have and continue to undergo these types of impacts.

The types of impacts to historic properties will not change as a result of implementing the operational changes proposed by the Victor Temporary Excess Capacity Contract.

Mitigation of Effects to Historic Properties

The "Implementing Actions" identified in the PA call for ECAO to undertake as part of its National Historic Preservation Act (NHPA) Section 110 responsibilities, systematic intensive cultural resource inventories and evaluation of historic properties within the fluctuation zone of Pueblo Reservoir. These Section 110 inventories began at Pueblo Reservoir in 2007 and will be completed by the end of calendar year 2010. The PA states that these Section 110 inventories will satisfy the NHPA Section 106 requirements for reservoir operations and storage contracts. These Section 110 Inventories mitigate the continued effects to Historic Properties at Pueblo Reservoir. No additional consultation under Section 106 is required for the proposed Victor Temporary Excess Capacity Contract.

CUMULATIVE IMPACTS

Altman is also used for diversions unrelated to the temporary excess storage capacity contract water contemplated in this analysis. However, there is a physical limit of 2.5 cfs and further limitations based on Colorado water rights associated with diversions made at this location. The implementation of the proposed contract would not allow additional diversions beyond historical amounts or what is physically possible. Therefore, the Proposed Action Alternative would not result in any cumulative impacts.

CHAPTER FOUR – CONSULTATION AND COORDINATION

SCOPING PROCESS

Reclamation conducted extensive consultation and coordination during the 2006-2010 EA process. When 2009 contract requests were received, internal discussions between Reclamation staff established which contract requests were outside the scope of the 2006-2010 EA and defined the scope of analysis for this EA.

In March 2008 external agency scoping was conducted for the 2008 EA. Discussion with the CDOW centered on aquatic resources and recreation downstream of Altman, as well as ownership and operation of Skaguay Reservoir. The Colorado Division of Water Resources was contacted regarding administration of state water rights in the area. In 2009, since the request was the same as 2008, it was decided that the 2009 contract requests fell within the scope of the 2008 EA. Statements and standards from the 2008 EA were confirmed and updated as necessary.

In addition, an announcement was posted in February 2009 to Reclamation's NEPA website in consideration of Victor's 2009 request.

PREPARERS

See Table 4.1 for a list of Reclamation staff involved in the preparation of the EA.

Table 4.1 LIST OF RECLAMATION PREPARERS

Name	Title	Contribution
Boston, Richard	Archaeologist	Cultural resources compliance
Lamb, Kara	Public Information Specialist	Scoping guidance and posting
Ronca, Carlie	Natural Resource Specialist	NEPA compliance guidance
Thomasson, Ron	Hydraulic Engineer	Hydrology analysis guidance
Tully, Will	Environmental Specialist	Environmental compliance guidance
Vaughan, Roy	Facility Manager	Document review
Wheatley, Laura	Natural Resource Specialist, SCEP	NEPA compliance and document production

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Ellwood, Leslie. 2008. Personal communication (telephone) between Leslie Ellwood, Colorado Field Office, U.S. Fish and Wildlife Service, and Carlie Ronca, Natural Resource Specialist, U.S. Bureau of Reclamation. January and February 2008.

Judge, Charlie. 2009. Personal communication (telephone/email) between Charlie Judge, Lead Water Commissioner District 12, Colorado Division of Water Resources, and Laura Wheatley, Natural Resource Specialist SCEP, U.S. Bureau of Reclamation. January 2009.

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Policky, Greg. 2009. Personal communication (telephone) between Greg Policky, Aquatic Biologist, Colorado Division of Wildlife, and Laura Wheatley, Natural Resource Specialist, SCEP, U.S. Bureau of Reclamation. February 10.

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Victor (City of Victor). 2007. Personal communication (series of emails, telephone and meeting conversations) between Ivan A. Walter, Physical Engineer for Upper Arkansas, and Carlie

Ronca, Natural Resource Specialist, U.S. Bureau of Reclamation. November 2007 – March 2008.

Victor (City of Victor). 2008. Information Required for Eastern Colorado Area Office to Process Fry-Ark Excess Capacity Contract and to Complete NEPA Compliance Activities 2008.

Victor (City of Victor). 2009. Personal communication (series of emails and telephone conversations) between Ivan A. Walter, Physical Engineer for Upper Arkansas, and Laura Wheatley, Natural Resource Specialist SCEP, U.S. Bureau of Reclamation. January 2009 – February 2009.

APPENDIX A– USGS STREAMGAGE 07099050 BEAVER CREEK ABOVE UPPER BEAVER CEMETERY NEAR PENROSE, COLORADO (cfs)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
1991				21.0	34.5	81.2	38.6	69.0	29.3	17.1		
1992				70.3	70.2	88.8	61.5	38.1	32.2	16.1		
1993				21.2	65.6	54.7	17.1	10.2	23.5	9.32		
1994			15.1	57.2	288.1	116.5	36.5	31.8	20.8	22.6		
1995				29.7	236.9	272.4	166.0	49.6	30.4	24.3	12.8	
1996*				11.6	14.2	19.1	21.1	24.6	26.7	19.4		
1997				23.2	106.0	237.0	44.5	86.6	47.9	24.4		
1998				62.1	128.9	64.0	57.6	97.4	38.8	20.0	15.5	
1999			9.77	41.4	334.8	170.8	53.9	199.2	68.9	27.7		
2000			10.3	45.3	89.3	37.6	17.7	19.4	14.7	11.4		
2001			8.67	25.6	51.4	34.0	23.7	31.3	15.9	8.28	7.77	
2002*			7.23	6.58	5.44	3.47	3.89	2.27	1.35	1.39	1.66	
2003*			5.69	11.7	25.4	49.3	25.0	9.74	19.6	13.2	7.20	
2004			10.1	26.5	46.5	22.1	35.8	43.6	26.2	14.1	10.5	
2005			8.27	31.9	60.1	48.2	15.9	26.6	9.91	13.7	7.15	
Mean of monthly Discharge			**9.4**	**32**	**104**	**87**	**41**	**49**	**27**	**16**	**8.9**	

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