

1313 Sherman Street Denver, CO 80203

P (303) 866-3441 F (303) 866-4474 Jared Polis, Governor

Dan Gibbs, DNR Executive Director

Rebecca Mitchell, CWCB Director

TO: Colorado Water Conservation Board Members

FROM: Erik Skeie, Interstate, Federal& Water Information Section

Lauren Ris, Deputy Director

Amy Moyer, DNR Assistant Director for Water

DATE: May15-16, 2019Board Meeting

AGENDA ITEM: 7. Bear Creek Lake Reallocation

Staff Recommendation:

This is an informational item only; no Board action is being requested at this time.

Background:

The Bear Creek Dam and Reservoir Project (aka "Bear Creek Lake") was completed in 1977 and is located on Bear Creek at its confluence with Turkey Creek, approximately 10 miles southwest of Denver, Colorado in Jefferson County. The reservoir was authorized for the purposes of flood control, recreation, municipal, industrial and fish and wildlife enhancement with a majority of the reservoir being used for flood control. The project's active capacity is57,678 AF [at the spillway crest] and is currently operated at a maximum priority storage volume of 2,000 AF. The CWCB currently holds existing rights for Bear Creek Lake decreed under case Nos. 79CW306 (1989 acre-ft) and 84CW167 (2,000 acre-ft).

In May of 2015, the Army Corps of Engineers (Corps) approached the CWCB with the completed Reconnaissance Study to determine the CWCB's interest as the local sponsor of a reallocation feasibility study.

At its November 2015 meeting, the CWCB voted to request that the General Assembly authorize up to \$2,500,000 from the Severance Tax Perpetual Base Fund to be appropriated to the Department of Natural Resources for allocation to the CWCB for the Bear Creek Reallocation of Storage Study. These funds were officially appropriated in Section 7 of SB16-174.



Currently, there are two major ongoing parts of the reallocation process:

- 1) Water Rights Application
- 2) Reallocation Feasibility Study with the Army Corps Engineers

Water Rights Application

First, there is a water rights application being developed by Staff and the Atorney General's Office with engineering support from Brown and Caldwell. In anticipation that the feasibility study will confirm that an additional 20,000 AF may be stored in Bear Creek Lake, the CWCB Board declared its intent to appropriate 20,000 AF of storage in Bear Creek Lake in March of 2016.

The Board directed Staff to identify partners before filing an application, and to that end Staff conducted several outreach efforts to build partnerships with local water users and determine interest in the project (Attachment 1). Through these efforts the following entities have been identified: City of Brighton, Evergreen Metropolitan District, Hidden Valley Water District, City of Berthou, City of Dacono, and Foothills Parks and Recreation.

These partners account for roughly 13,115 AF of the potential 20,000 AF reallocation. Staff has also met with CPW regarding an environmental pool, and based on previous in stream flow analysis in the region, this pool is estimated to be as much as 8,208 AF. Note that the environmental pool estimate is very preliminary, and that the current CWCB rights will be used for the environmental pool as well, and may not be reflected in the volumes in Table 1.

Brown and Caldwell is modeling operational scenarios in Bear Creek Lake using the volume estimates provided in Table 1, and demand scenarios provided by each partner. Draft results are expected at the end of May, 2019.

Table 1: Bear Creek Lake Water Rights Breakdown

Table 1. Bear Greek Lake Water Rights Breakdown				
Dartner	Volume of New			
Partner	Right (acre-feet)			
Brighton	6,600			
Evergreen Metro District	100			
Hidden Valley Water	50			
District	30			
Berthoud	3,000			
Dacono	3,000			
Foothills Parks and	4 F			
Recreation	65			
Environmental Pool	6,885			
TOTAL	20,000			

Staff is anticipating presenting a Draft Water Rights Application to the Board for consideration in July of 2019.

Reallocation Feasibility Study

As previously mentioned, the Corps approached Staff in 2015 with the idea of reallocating up to 20,000 AF of space in Bear Creek Lake for multi-use storage (Figure 1).

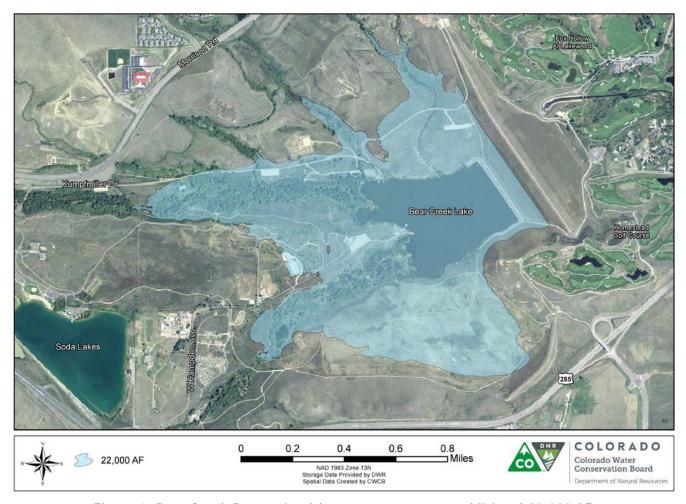


Figure 1: Bear Creek Reservoir with current storage an additional 20,000 AF reallocation.

In 2015, it was estimated by the Corps that the total cost of the feasibility study was going to be \$5M split between the Corps and CWCB. More recent estimates show that the study may only cost \$3M, and the Corps and CWCB will execute a cost share agreement in June of 2019. This Cost Share Agreement calls for a 50/50 split of Feasibility study costs, and allows CWCB or the Corps to terminate the agreement at any time. Once this cost share agreement has been signed by both parties, the feasibility study/EIS process will begin under the Corps' submitted Project Management Plan (Attachment 2). The following timeline gives a look into what all will occur during this three-year process (Figure 2).

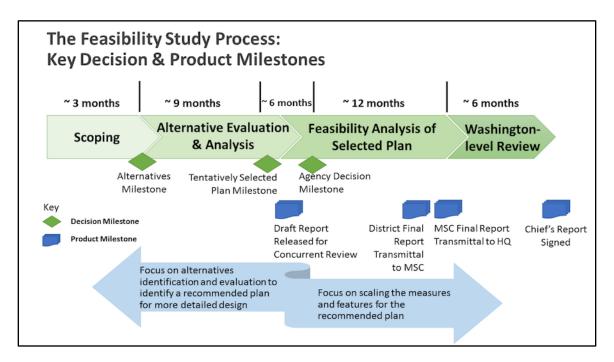


Figure 2: Timeline for the Corps' Feasibility Study Process under the Bear Creek Reservoir Project Management Plan

Attachments:

- 1) Outreach Materials Developed by Brown and Caldwell
- 2) Army Corps of Engineers Project Management Plan

Next Steps

- The CWCB would like to file an application for a new storage right in Bear Creek Lake in the near future and wants to have committed partners at that time.
- CWCB would like to conduct modeling evaluations of partner demands and release schedules to assess yield, water level changes in the reservoir, etc. Interested water providers need to contact Erik Skeie to confirm their interest and/or initiate modeling evaluations.
- The CWCB will pursue environmental studies via a contract with the Corps of Engineers to investigate the reallocation of up to 20,000 AF of existing storage space. The time frame for the studies is contingent upon internal Corps approval processes.



FOR MORE INFORMATION





Bear Creek Lake Reallocation Project Information Meeting

Project Background

The Bear Creek Dam and Reservoir Project (aka "Bear Creek Lake") was completed in 1977 and is located on Bear Creek at its confluence with Turkey Creek, approximately 10 miles southwest of Denver. The reservoir currently has the ability to store over 57,600 acre-feet (AF) of water. The main purpose of the reservoir is for flood control, but it also provides storage space for conservation (or "multipurpose") water, which is used for municipal, industrial, agricultural, and recreational uses, as well as maintaining the fishery in the lake.

The Colorado Water Conservation Board (CWCB) developed Colorado's Water Plan in 2015 and concluded that the state's population is expected to double by the year 2050. The Water Plan identified a significant water supply gap in the South Platte River Basin of between 204,000 and 310,000 AF. Water storage is needed to address this future water demand gap.

In May 2015, the U.S. Army Corps of Engineers ("the Corps") completed a reconnaissance study that concluded **20,000 AF of storage may be available in Bear Creek Lake for reallocation** while maintaining the structure's flood control and other purposes. In anticipation of the reallocation of storage at Bear Creek Lake, the **CWCB declared, at its March 2016 meeting, its intent to appropriate a new storage water right for 20,000 AF.**

Current CWCB Activities

The CWCB is in the initial stages of the storage reallocation project at Bear Creek Lake. In 2016, Senate Bill 174 authorized the appropriation of \$2,500,000 to work with the Corps to study the potential for reallocation of storage. In addition, the CWCB is currently seeking partners who may have an interest in a water storage right or storage space in Bear Creek Lake. Also, the CWCB and their consultant, Brown and Caldwell, are conducting preliminary technical analyses that may be informative to potential partners as they evaluate the project.

Contents

- Background and Current Activities
- Summary of Technical Analyses:
- Unconstrained Yield
- Exchange Potential
- Water Quality
- Next Steps

Summary of Technical Analyses

Unconstrained Yield

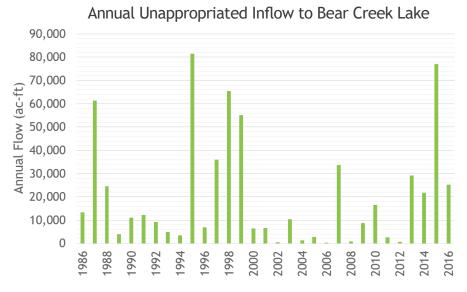
An unconstrained yield analysis was conducted to estimate the amount and variability of unappropriated flows that could be stored in Bear Creek Lake under a new storage right. The analysis used historical records of daily inflows to Bear Creek Lake from 1986 to 2016 and call records to assess the amount of flow that could have been stored when no senior downstream calls were active. The available flows were

decreased to account for releases to downstream, senior water rights on Bear Creek and other deliveries. The results of the analysis showed that the availability of water for

Summary of Annual Water Availability Results

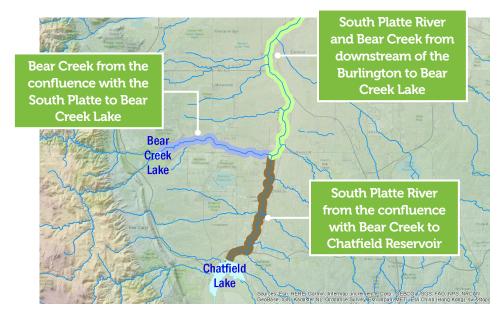
Average: 20,000 AFMedian: 10,000 AFMax: 81,000 AFMin: 300 AF

storage in Bear Creek Lake is variable (see figure below). In a typical year, unappropriated flows occur during snowmelt, though during wetter long-term periods, some amount of flow was available for storage in most months. During the drought of the early 2000s, very little water was available for storage.



Exchange Potential

The CWCB anticipates that water providers may want to use storage space in Bear Creek Lake to store senior water rights or to temporarily store supplies that the water provider would like to exchange and use elsewhere. An initial evaluation of exchange potential was conducted on the reaches shown on the map to the right.



Exchange Potential (Continued) Summary of Annual Exchange Capacity Results

Bear Creek from confluence with South Platte to Bear Creek Lake

Average: 29,000 AFMedian: 28,000 AFMax: 81,000 AFMin: 1,800 AF

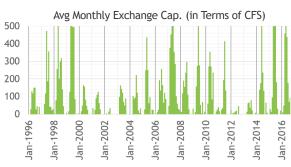
S. Platte and Bear Cr. from dwnstm. of Burlington to Bear Cr. Lake

Average: 22,000 AFMedian:17,000 AFMax: 75,000 AFMin: 200 AF



South Platte from confluence with Bear Creek to Chatfield Res.

Average: 77,000 AFMedian: 58,000 AFMax: 332,000 AFMin: 700 AF



Water Quality

Published water quality data for Bear Creek Lake was obtained and compared with other, similar reservoirs in the vicinity. Bear Creek Lake exceeds water quality standards for Total Phosphorus, Chlorophyll-a, and Dissolved Oxygen during the growing season. Its water quality is comparable to reservoirs against which it was compared. Water quality is expected to improve in the future due to reductions in upstream phosphorus discharges in the 1990s and future regulatory and water management activities.

Metric	Bear Creek Lake	Standley Lake	Barr Lake	Milton Reservoir	Chatfield Reservoir	Cherry Creek Reservoir
Avg Total Phosphorus (ug/l) (Growing Season)	38	11	282	237	NA	122*
	<i>(57)</i>	<i>(10.4)</i>	(375)	(173)	(29.1)	(126*)
Avg Chlorophyll-a (ug/l) (Growing Season)	10.1	3.0	58.6**	12.8**	NA	NA
	<i>(14.6)</i>	(2.1)	(34.5**)	(66.7**)	(16.2)	(23.6)
Avg Dissolved Oxygen (mg/l) (Growing Season)	9.0	8.5	11.0	10.0	NA	NA
	(7.0)	(6.8)	(8.3)	(9.1)	(NA)	(NA)
Avg Total Nitrogen (ug/l) (Growing Season)	759	314	2,300	2,800	NA	897*
	(669)	(394)	(1,740)	(1,960)	(NA)	(910*)

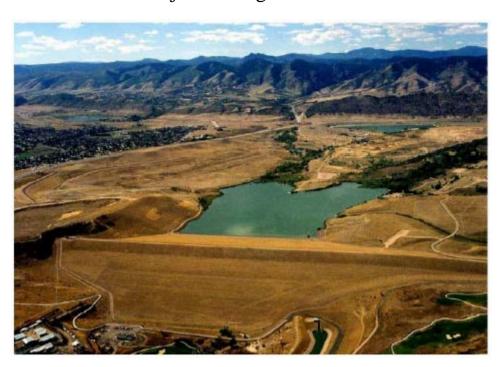
^{*} Measured at the photic zone ** Median value



Bear Creek Reservoir Lakewood, Colorado Reallocation Study

General Investigation Program

Feasibility Study Project Management Plan



January 16, 2019

	DATE	DESCRIPTION & LOCATION WITHIN PMP OF REVISION	<u>DATE</u> <u>APPROVED</u>	APPROVED BY
Original PMP				
Revision #				

Table of Contents

1	Stuc	ly Overview	1
	1.1	Study Authority	2
	1.2	Sponsor and Agreement Information	2
	1.3	Study Definition	2
	1.4	Project Objectives	3
2	Proj	ect Scope	3
3	Proj	ect Schedule	4
4		ect Cost	
5	PRC	DJECT DELIVERY TEAM INFORMATION	6
6	FUN	NDING	6
7	RIS	K MANAGEMENT	7
8	ACC	QUISITION PLAN	7
9		ALITY CONTROL PLAN AND OBJECTIVES	
10	C	HANGE MANAGEMENT PLAN	8
11	C	OMMUNICATION PLAN	8
	11.1	Purpose	8
	11.2	Objectives	9
	11.3	Target Audiences	9
	11.4	Communication Message and Delivery	
12	C	· · · · · · · · · · · · · · · · · · ·	1

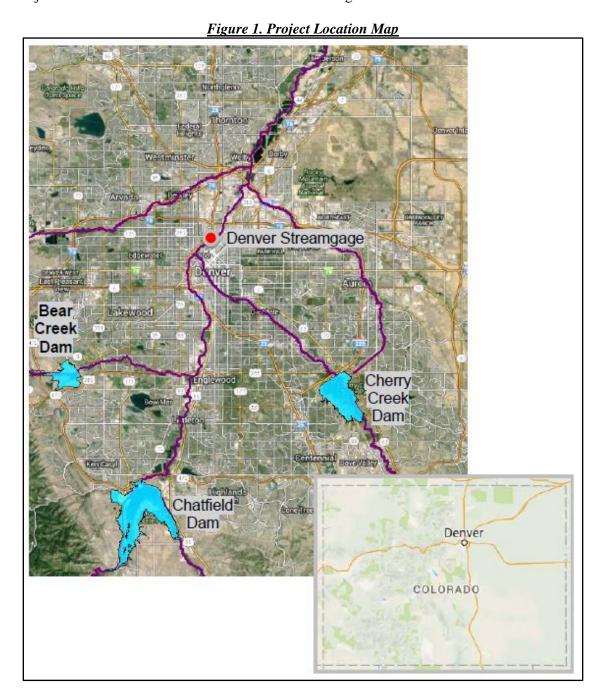
List of Appendices (To be developed after FCSA is signed)

Appendix A: Detailed Project Scope

Appendix B: Review Plan Appendix C: Risk Register Appendix D: Approvals

1 Study Overview

The Bear Creek project is one of the three dam projects, known as the tri-lakes project, the U.S. Army Corps of Engineers (USACE) constructed in the Denver Metropolitan area. Bear Creek was the last of the three dams to be constructed, with construction being authorized in 1968 and the dam being completed in 1982. The main embankment of the dam is constructed of rolled earth fill and just over a mile long. The reservoir of the dam has a surface area of approximately 110 acres at the multipurpose pool elevation of 5,558 ft msl. The location of the Bear Creek Project in relation to the Denver Metro can be seen in Figure 1.



The primary focus of this feasibility study effort will be on looking at the economic and technical feasibility of reallocating part of the reservoir storage pool to Municipal and Industrial (M&I) and other such purposes as requested by the local stakeholders. However, any change in pool storage will require analysis and evaluation, to ensure there is not an intolerable increase in risk associated with any proposed reallocation of storage.

Sponsor and Corps acceptance of the task descriptions, and time and cost estimates addressed in this PMP constitute agreement of the PMP overall, with the understanding that more detail will be provided for future tasks and milestones as the study progresses. Updates to this PMP will be prepared as needed to ensure the document accurately reflects the efforts of the study team. The information contained in this PMP will be used to update appropriate budgetary and other related documents for the feasibility study.

1.1 Study Authority

This feasibility study is being conducted under the authority of the Energy and Water Development Appropriations Bill of 1998 and the Flood Control Act 1950. These pieces of legislation authorize the USACE to study the potential for storage reallocation at Chatfield, Cherry Creek, and Bear Creek Reservoirs.

1.2 **Sponsor and Agreement Information**

On March**XX** 2019, the Omaha District Commander executed the Feasibility Cost Share Agreement between the State of Colorado, Department of Natural Resources and the US Army Corps of Engineers Omaha District. This agreement initiates the feasibility study of the Bear Creek Reservoir, Lakewood, CO Reallocation Study, being conducted under the General Investigations Program.

1.3 Study Definition

The proposed scope for the Feasibility Study is to determine the feasibility of reallocating a portion of the Bear Creek Reservoir pool to M&I and other similar purposes. All proposed plans will be evaluated for their economic viability, technical feasibility, and environmental and public acceptability. All considered plans will also be assessed for potential safety impacts on the Bear Creek Dam. The study team will follow the USACE Risk-Informed Planning Process (Figure 2) to identify, evaluate, compare, select, and if applicable implement the recommended plan for this study.

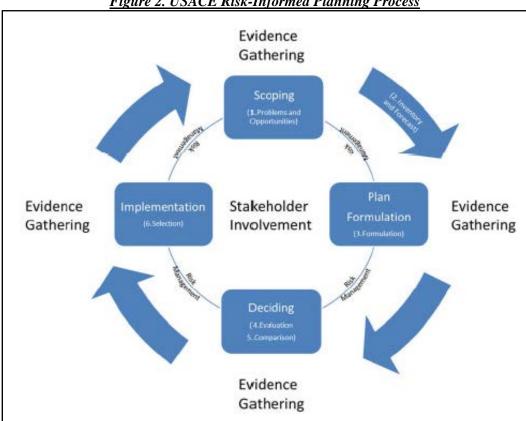


Figure 2. USACE Risk-Informed Planning Process

Project Objectives 1.4

The objectives of this project will be determined by the study team once the FCSA has been signed and the team has conducted the first iterations of the planning process.

2 **Project Scope**

The general scope of this study includes all investigations and analysis required to prepare an integrated feasibility report and National Environmental Policy Act (NEPA) document. The recommendations of this document may lead to the development of a Water Supply Agreement that would reallocate a portion of the Bear Creek Reservoir Pool. This feasibility study may also require the development of a separate Dam Safety document that would have to be presented to the USACE Dam Safety Oversight Group (DSOG). Determination on the applicability of this dam safety document will be made by the team as the study progresses.

This feasibility study will be conducted in accordance with the USACE SMART (Specific, Measurable, Attainable, Risk-Informed, and Timely) Planning Process, which is shown in Figure 2. This feasibility study will also be required to comply with the 3x3x3 planning process, which directs the study team to accomplish the study within 3 years, for \$3 million or less, and with 3levels of vertical team coordination and review. Beyond the 3x3x3 and SMART planning processes, this study may be subject to meeting certain requirements of the Risk-Informed Dam Safety Process, which will be determined in the future by the study team.

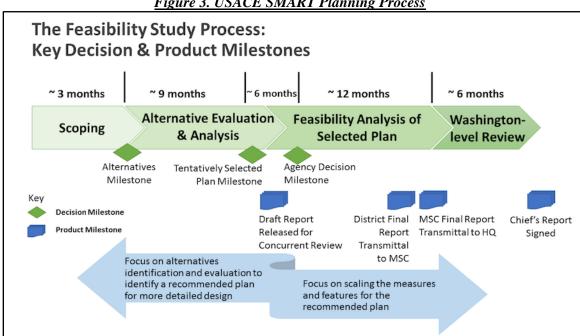


Figure 3. USACE SMART Planning Process

Project Schedule

The project schedule will be developed in conjunction with the detailed study scope of work during the first iterations of the planning process. However, Table 1 shows a high-level schedule with the major study milestones identified.

Table 1: Study Milestone Schedule

C4 1 MOL 4	D (
Study Milestone	Date
Sign FCSA	March 2019
Public Scoping Meetings	May 2019
Alternatives Milestone	
Meeting (AMM)	June 2019
Tentatively Select Plan	March 2020
(TSP)	Water 2020
Draft Report Released	April 2020
for Public Review	April 2020
Public Review Meetings	May 2020
Agency Decision	Santambar 2020
Milestone (ADM)	September 2020
Final Feasibility Report	September 2021
Chief's Report Signed	March 2022

4 Project Cost

The preliminary estimate of the study costs are shown below. The majority of the planning and engineering work that is needed to complete the study involves formulating alternative plans, evaluating the effects of alternative plans, comparing alternative plans, and selecting the recommended plan for implementation. The Corps also has obligations to comply with environmental laws, regulations, and to conduct public involvement during its feasibility studies.

Please note that all developed cost estimates will assume labor performed at or slightly above current pay rates and only includes tasks known to be essential at this time. Some deviation may occur over the duration of the project's development. Such deviations would need to be coordinated with the study partners. Table 2 shows the summary of costs.

Table 2: Preliminary Estimated Study Costs by Discipline

Tubie 2. Treuminary Estimateu Stat	<u>, , , , , , , , , , , , , , , , , , , </u>	ost
Cost Item	USACE	Sponsor
Project Management	\$300,000	
Programs/Fund Management	\$50,000	
Environmental Resources	\$200,000	
Floodplain & Flood Risk Management	\$100,000	
Hydrologic Engineering	\$400,000	
Structural Engineering	\$100,000	
Geotechnical Engineering	\$200,000	
Hydraulic Engineering	\$200,000	
Dam Safety Engineering	\$300,000	No Work In-
Water Control Engineering	\$150,000	Kind Identified at
Real Estate	\$150,000	this time.
Cost Engineering	\$75,000	
Environmental Sciences	\$50,000	
Economics	\$300,000	
Public Outreach	\$50,000	
Office of Counsel	\$50,000	
Reviews	\$250,000	
Travel	\$75,000	
Independent External Peer Review**	\$100,000	
Total Costs		
Total Cost	\$3,10	00,000
FederalCost Share	\$1,600,000	
Non-Federal Cost Share		\$1,500,000
Work In-Kind		\$0
Cash Share		\$1,500,000

^{**}IEPR Costs are 100% Federal and not cost-shared.

5 PROJECT DELIVERY TEAM INFORMATION

Table 3: Bear Creek Reservoir, Lakewood, CO Reallocation Study Project Delivery Team

Corps of Engineers PDT Members					
Name	Title	Phone	E-mail		
	Project				
Jeff Bohlken	Manager/Plan	402-995-2671	Jeffrey.C.Bohlken@usace.army.mil		
	Formulator				
	Project				
Ron Beyer	Manager/Plan	402-995-2748	Ronald.S.Beyer@usace.army.mil		
	Formulator				
Dave Crane	Env. Resource	402-995-2676	David.J.Crane@usace.army.mil		
2 4 7 6 7 4 1 1 6	Specialist	.02 000 2070			
Leslie Jaramillo	Program Analyst	206-431-2793	Leslie.D.Jaramillo@usace.army.mil		
	Other team n	nembers TBD onc	e FCSA is signed.		
	Non-Federal Spo	nsor Project Deliv	very Team Members		
	CWCB Special				
Erik Skeie	Projects	303-866-3441	erik.skeie@state.co.us		
	coordinator				
Lauren Ris	CWCB Deputy	303-866-3441	lauren.ris@state.co.us		
Director Jos 300 3441 ladicii.iis@statc.co.us					
Other team members TBD once FCSA is signed.					

6 FUNDING

In the feasibility phase, the cost share breakdown is 50% federal and 50% sponsor funding, excluding any costs associated with the Independent External Peer Review (IEPR) which are 100% federal. The projected funding schedule for the Feasibility Study shown in Table 4. It should be noted that federal fiscal years (FYs) run from 01 October to 30 September of the following year, i.e. FY19 is from 01 Oct 2018 to 30 Sep 2019.

Table 4: Projected Study Funding Schedule

	Fiscal Year 2019	Fiscal Year 2020	Fiscal Year 2021	Fiscal Year 2022
Federal	\$1,500,000*	\$0	\$0	\$100,000
Non-Federal	\$300,000	\$700,000	\$500,000	\$0

^{*}Federal Share fully funded in FY19 with the exception of any IEPR costs.

If a feasible water reallocation plan is identified and approved, the design and implementation costs associated with the selected plan are 100% non-federal. Additionally, if implementation of dam safety mitigation actions is necessary, these actions will be cost-shared proportionally to any storage space reallocated by the selected plan.

7 RISK MANAGEMENT

Risk management seeks to reduce risk by identifying the risks and placing controls on it. In the context of the project goals, a number of procedures are in place through this PMP to assist in reducing the risk of unrealistic scope, cost estimates, schedule changes, and study resources. One such procedure was the development of a Risk Register, which will be used for capturing and tracking uncertainty throughout the project; the project risk register will be developed as Appendix C. These procedures will help to maintain schedule within cost limitations and under the project manager's span of control authority. Risks will be identified and documented by the study team throughout the life of the feasibility study.

8 ACQUISITION PLAN

The feasibility study scope does not include any contracted work at this time. If the study team determines that it is appropriate to contract out a portion of the feasibility study efforts, an acquisition strategy will be developed at that time. This plan will be developed in cooperation with Omaha District's Contracting Division using recommended tools and processes (PASB, CAM, etc.).

9 QUALITY CONTROL PLAN AND OBJECTIVES

This study will undergo a series of reviews at different times throughout the study life. These reviews include, but may not be limited to:

- <u>District Quality Control:</u> is an internal review process of basic science and engineering work products focused on fulfilling the project quality requirements defined by the study team. DQC is an integrated review approach that includes a Quality Management Plan providing for seamless review, Quality Checks (first line supervisory reviews, PDT reviews), a detailed peer review/checking of the documents, computations, and graphics, etc.
- Agency Technical Review: is undertaken to ensure the quality and credibility of the government's scientific information consistent with all applicable guidance. Each ATR will be conducted by a qualified team of senior highly experienced experts in the type of work being reviewed who are from outside of the home district and are not involved in day-to-day production of the project/product.
- <u>Public Review:</u> will be required for this study as the decision document will be an integrated feasibility study and NEPA document. This review solicits public input and feedback on any, and all, tentatively selected plans to ensure that the plan(s) is/are publically acceptable.
- **Policy Review:** is undertaken to ensure that all decision documents comply with applicable laws and policy. This review culminates in determinations that the recommendations in the reports and the supporting analyses and coordination comply with law and policy, and warrant approval or further recommendation to higher authority.
- <u>Independent External Peer Review:</u> is the most independent level of review, and isapplied in cases that meet certain criteria where the risk and magnitude of the proposed project are such that a critical examination by a qualified team outside of USACE is warranted.

Further details of the quality control and review process for this feasibility study will be provided in a review plan, which is a separate document that will be created once the FCSA has been executed.

10 CHANGE MANAGEMENT PLAN

A procedure is necessary for defining how changes to project scope, schedule, and budget can be made for the project. Significant changes must have the approval of the project sponsor and the Corps. Changes or anticipated changes would be reported.

In practice, most changes will be made at the management level, acting in concert with recommendations from the PDT, including the local sponsor. If there are no significant changes in scope, costs, and schedule, the project manager can approve the change. A modification to the PMP would be needed if the change is considered significant, with notable impact to scope, schedule or budget.

If there are changes that would result in an increase in total project cost or a delay in completion of the overall effort, the Corps will follow a procedure known as the Project Schedule and Cost Change Report (SACCR). After concurrence from the Project Management Team, the Corps PM will prepare the SACCR in concert with a program analyst with the Planning, Programs and Project Management Division. This provides a justification for the changes. Action is taken on SACCRs at the Omaha District and Northwestern Division project review boards. To be approved by the Corps at the District and the Division level, a SACCR must first be approved and signed by the project sponsor if the project is in a cost-shared phase. At the local level, the request for change and costs would be reviewed by one of the sponsor's advisory committees. In absence of concurrence on change in scope and schedule, the full Council or even the Executive Committee may need to be involved.

Both the Corps and the sponsor at the Executive Committee level have veto power over any proposed scope and cost changes that are perceived to be or might become controversial. This provides both parties protection against commitments that would be unacceptable to either party. The intent is that issues would be resolved at the PDT as much as possible. There will be monthly opportunities for thorough communication about potential issues at the Corps in BCPERM and PRB meetings and at the sponsor level at regular agency meetings. Issues that cannot be resolved at the level of the PDT would be raised to the Executive Level. The Omaha District would assign the Deputy to the Omaha District Commander, as the Corps representative on the Executive Council. Any matter that could not be resolved at this level would first be raised to the NWD and possibly HQ level before any final decision would be made. During this time period, the sponsor would be welcome to participate in discussions and meetings to resolve any issues.

11 COMMUNICATION PLAN

11.1 Purpose

The purpose of the communication plan is to ensure the Project Management Plan provides relevant, accurate, and consistent project information to project sponsors, stakeholders and other appropriate audiences. By effectively communicating, the project can accomplish its work with the support and cooperation of each stakeholder group.

The communication plan provides a framework to manage and coordinate the wide variety of communications that take place during the project. The communication plan covers who will receive the communications, how the communications will be delivered, what information will be communicated, who communicates, and the frequency of the communications.

11.2 Objectives

Effective and open communications is critical to the success of the project.

The key communication objectives for the project are:

- Promote and gain support for the Project Management Plan
- Encourage use of project management best practices
- Give accurate and timely information about the project
- Ensure a consistent message

11.3 Target Audiences

This section identifies the audiences targeted in this Communication Plan, and the purpose of communicating with each audience.

Table 5: Communication Plan Target Audiences

Audience	Communication Purpose	
Project Sponsor	Project plans, project progress, project issues, review of deliverables	
Project Delivery Team	Project direction, project deliverables, clear direction and delegation of tasks	
Planning Branch Chiefs		
Branch Chief	Project strategy, review of project deliverables, project progress, changes in work processes, change requests	
Plan Formulation Chief	Project strategy, review of project deliverables, project progress, changes in work processes, change requests, project issues	
Economics Chief	Changes in work processes, review of project deliverables	
Environmental Chief	Review of project deliverables	
Omaha District	Review of project deliverables, change requests	
NW Division	Review of project deliverables, change requests	
City and County of		
Denver	Review of project deliverables	
District PAO	Review deliverables issued to the public	

11.4 Communication Message and Delivery

The following outlines the targeted audiences, the key communication messages to be delivered, and the method for delivering the information, the communicator, and the frequency of the delivery.

Table 6: Communication Messages and Delivery

		Delivery	D. II	
Audience	Message	Method	Delivery Frequency	Communicator
	Project Plans, Status	E-mail	Weekly	Project Manager
	Report Project	Meetings	During milestones	
	Deliverables,		events	
Project Sponsor	Project Briefings			
	Project	Meetings	Weekly/Biweekly	Project Manager
	schedule/progress, status	E-mail/Project		
Project Delivery Team	reports	file		
Planning Branch Chiefs				
	Project Status	Meetings	Monthly	PM/Section Chief
	(BCPERM)	E-mail	Prior to completion	
Branch Chief	Review Deliverables		_	
	Project Status	Meetings	Monthly	Project Manager
Plan Formulator/PM Chief	Review Deliverables	E-mail	Prior to completion	
	Project Status	Meetings	Monthly	Project Manager
Economics Chief	Review Deliverables	E-mail	Prior to completion	
Environmental Chief	Review Deliverables	E-mail	Prior to completion	Project Manager
	Review Deliverables	E-mail Routing	Prior to completion	PM/Section and
Omaha District	Project Briefing (PRB)	Meeting	Monthly	Branch Chief
	Review Deliverables	E-mail Routing	Prior to completion	PM/Branch Admin
NW Division	Project Briefing	Meeting	Quarterly	Branch Chief
City and County of Denver	Review Final Products	Weblink	Prior to completion	PM/PAO
Stakeholders Stakeholders	Receive Input	Public Meetings	Milestone events	
	Review products	E-mail Routing	Prior to completion	PM/PAO
District PAO	presented to public			
Public	Report Published	Weblink	Completion of study	PM/PAO/Sponsor

12 CLOSEOUT

The process covers closeout of the Feasibility phase and its activities, including but not limited to completion of the fiscal completion, checking of contractor performance, and evaluations of the process.

The PM is responsible for closeout. However, the required actions may require participation of the PDT members, especially for closeout of financial cost accounts. The closeout would also apply in situations where the project might be terminated. All outstanding obligations and commitments will need to be cleared. The sponsor's PDT member responsible for keeping financial records will assist the PM in carrying out an audit of planningcost expenditures, including funds used for contracted services and those for in-kind services. The sponsor is required to submit quarterly or monthly work in-kind documentation, if applicable. The PM shall also ensure that all contracted services products have been accepted prior to making any final payments.

Omaha District procedures for closeout shall follow standard operation procedures. The amounts of federal and non-federal costs will be determined and a balancing of expenditures based on the approved cost share ratio will be determined. The outcome will determine the direction and amount of any funds to be transferred between the sponsor and the federal government.