



COLORADO

**Colorado Water
Conservation Board**

Department of Natural Resources

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TO: Colorado Water Conservation Board Members

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DATE: July 18-19, 2018 Board Meeting

AGENDA ITEM: **12. Northern Colorado Water Conservancy District Dedication of Mitigation Releases for Instream Flow Use in the Cache la Poudre River (Water Div. 1)**

The Northern Colorado Water Conservancy District ("Northern") has offered the Colorado Water Conservation Board a donation of a contractual interest in "Protected Mitigation Releases," as defined in 37-92-102(8), C.R.S. for instream flow use in a segment of the Cache la Poudre River ("Poudre River"). This type of donation is guided by the recently enacted Senate Bill 18-170, codified at section 37-92-102(8), C.R.S. Northern obtained an approved mitigation and enhancement plan entitled Northern Integrated Supply Project ("NISP") Fish and Wildlife Mitigation and Enhancement Plan ("FWMEP") referred to herein as ("Mitigation Plan"). The "Intergovernmental Agreement to Implement the Fish and Wildlife Mitigation and Enhancement Plan For the Northern Integrated Supply Project" between the State of Colorado and the NISP Water Activity Enterprise ("IGA") was executed on July 3, 2018. The water donated to CWCB is part of the Mitigation Plan's reservoir release commitments. Northern's draft dedication agreement is attached as Exhibit 1. The CWCB will use the water to preserve and improve the natural environment to a reasonable degree in a segment of the Cache la Poudre River. See Vicinity Map attached as Exhibit 2.

Staff recommendation: Pursuant to Rule 6b of the Rules Concerning the Colorado Instream Flow and Natural Lake Level Program ("ISF Rules"), the Board's consideration of this proposal at this meeting will initiate the 120-day period for Board review. No formal action is required at this time. The initial presentation of this proposal provides an opportunity for the Board and the public to identify questions or concerns that Staff will address at this or a subsequent meeting.

1. The Board's Water Acquisition Procedures

ISF Rule 6 governs the Board's procedures for acquiring water for ISF use. Section 37-92-102(3), C.R.S. (2017) provides 120 days for the Board to determine what terms and conditions it will accept in an acquisition agreement for water, water rights, or interests in water to preserve or improve the natural environment. ISF Rule 6 requires a minimum of two Board meetings to allow for public input prior to taking final action on a proposed acquisition. The Board's initial consideration of this proposal at its July 2018 meeting initiates the 120-day time period for the Board to consider the terms and conditions of the proposed acquisition. Final action on the proposal could occur at



the September 2018 Board meeting. ISF Rule 6m(4) provides that any person may request the Board to hold a hearing on the proposed acquisition, and that such request must be filed within twenty days of this Board meeting. ISF Rule 6e requires the Board to evaluate the appropriateness of the acquisition and to determine how best to utilize the acquired water to preserve or improve the natural environment. ISF Rule 6 lists several factors the Board may consider in its evaluation of the acquisition that are addressed in this memo.

As required by statute, CWCB staff has requested recommendations from the Colorado Division of Parks and Wildlife (CPW), the U.S. Department of Agriculture, and the U.S. Department of Interior. Pursuant to ISF Rule 6m(1), CWCB staff has provided notice of the proposed acquisition to all persons on the appropriate ISF Subscription Mailing Lists and provided notice to the State Engineer's Substitute Supply Plan Notification List for Water Division 1.

1. Background

Pursuant to the Mitigation Plan, Northern committed to make releases and to assure no diversion of those releases through a segment of the Poudre River. Colorado's then existing legal water rights tools made it difficult, if not impossible, for Northern to meet this commitment. Therefore, Northern worked with water users, professionals, and lawmakers to obtain a new statutory ability to protect mitigation releases from new reservoir storage, so long as conditions of the statute are met. SB 18-170 is attached as **Exhibit 4**. One condition of the legislation is for CWCB to join Northern as a Co-Applicant in water court to obtain water court approval of the Protected Mitigation Releases.

In the Mitigation Plan and the IGA, Northern Water committed to making Mitigation Releases of between 18 and 25 cfs of water, up to 14,350 acre-feet per year, into the Poudre River for ultimate delivery to NISP Participants. The IGA is attached as **Exhibit 3**; the Mitigation Plan executive summary is attached as **Exhibit 5**. The full document for the Mitigation Plan can be found at <http://www.northernwater.org/docs/NISP/MapsDocuments/2017FWMEPFinal.pdf>.

The Mitigation Releases described in the Mitigation Plan are intended to enhance water quality and avoid and minimize negative impacts to the aquatic and riparian environments within the Qualifying Stream Reach. Pursuant to 37-92-102(8), C.R.S., Northern wishes to dedicate to the CWCB, at no cost and for instream flow use, Mitigation Releases of the Subject Water Rights through the Qualifying Stream Reach. The Qualifying Stream Reach for the NISP FWMEP Mitigation Releases shall be that part of the Poudre River extending downstream from the Poudre River Delivery Pipeline (the point where releases from Glade Reservoir enter the Poudre River) to the Poudre River Intake Diversion as depicted on the map attached as **Exhibit 2**. CWCB will use and protect the water for instream flow use to preserve and improve the natural environment to a reasonable degree through this stream segment.

2. Water Proposed for Acquisition

The water rights proposed to be donated to the CWCB would be up to 14,350 acre-feet per year of water available to Northern in the to-be-constructed Glade Reservoir and Glade Forebay in Larimer County. Based upon discussions with Northern Water, and Colorado Parks and Wildlife ("CPW") regarding the need for and use of the donated water, Staff recommends that the CWCB acquire a contractual interest in the mitigation release water up to 14,350 acre-feet.

3. Reach of Stream Proposed for Use of the Acquired Water Rights

The reach of stream proposed for use of Northern's Mitigation Release water is the Poudre River extending downstream from the Poudre River Delivery Pipeline (the point where releases from Glade Reservoir enter the Poudre River) to the Poudre River Intake Diversion. The segment extends from near the mouth of the canyon through the City of Ft. Collins for approximately 13 river miles.

4. Existing and Future ISF Water Rights

The CWCB does not currently hold an ISF water right within this reach of the Poudre River. Colorado Parks and Wildlife ("CPW") and others have been studying and collecting field data in this segment of the Poudre River for over 10 years. CPW evaluated the studies and data by means including R2CROSS and PHABSIM modeling techniques to develop target flow rates for this section of the Poudre River. CPW's preliminary target flow recommendations for this stream segment are as follows:

	Preserve ISF target rates	Improve ISF target rates
Winter (approx. November-April)	Up to 55 cfs	Between 55 and 85 cfs
Summer (approx. May-October)	Up to 85 cfs	Between 85 and 130 cfs

6. Natural Flow Regime

The Cache la Poudre River originates in the northern portions of Rocky Mountain National Park. The mainstem and South Fork flow north and east out of Rocky Mountain National Park onto the Roosevelt National Forest. The North Fork drains western portions on the Laramie Foothills to its confluence with the mainstem just below Poudre Park. Within the Poudre Canyon, the river is heavily forested, high gradient, and confined by canyon walls and Highway 14. Beyond the canyon mouth, the river transitions to a plains watershed, flowing through an urban zone surrounding the City of Fort Collins and rural lands further east bordered by gravel pits and irrigated agriculture. The Poudre River travels eastward approximately 126 miles from its headwaters to its confluence with the South Platte River near Greeley. The watershed's drainage area is approximately 1,880 square miles.

Streamflow in the upper Poudre River is primarily driven by snowmelt with contributions from local precipitation. The hydrology below the canyon mouth is influenced predominantly by upstream reservoir releases and some local precipitation. Peak flows are snowmelt-driven and typically occur in mid-May to June and diminish down to baseflows in mid-summer. Late season flows are supplemented by releases from upstream reservoirs and upstream trans-basin imports - Colorado Big Thompson Project and Laramie River water. Hydrology below the mouth of the canyon is significantly depleted as a result of water management activities and dry up is common on the river. Direct flow diversions are common throughout the irrigation season, while diversions to off-channel storage reservoirs are common in the winter. The entire Poudre River system is a heavily managed system controlled by reservoir releases, trans-basin imports, and diversions and exchanges in the lower watershed. Peak flows are diminished and baseflows are impacted as a result of these water management activities. The NISP Mitigation Releases will boost flows year-round from the canyon mouth down to the

Mulberry Street bridge.

7. Existing Natural Environment

The natural environment in the Poudre River is a somewhat diverse fishery consisting of both native and non-native species. The upper reaches of the Poudre River as it emerges from Poudre Canyon are typical of a cold water trout fishery, containing both rainbow and brown trout. As the river flows to the east through Fort Collins onto the plains, the slope decreases, diversions out of the channel are more significant, and water temperatures rise. Here the fishery transitions from a cold water fishery to a mixed cold water/cool water/warm water fishery. Trout persist in the watershed down to approximately Interstate 25 but are challenged by low flows, reduced habitat, and higher water temperatures. Other species have been observed in this reach - namely carp, fathead minnows, suckers, and dace. The Interstate is roughly the lower boundary of the cold water habitat. The NISP Mitigation Releases will benefit the fishery as described above from the canyon mouth down to the Mulberry Street bridge.

8. Proposed Method of Acquisition

Under this proposal, the CWCB would acquire a contractual interest in up to 14,350 acre-feet of Mitigation Releases from Glade Reservoir. Northern and the CWCB are in the process of negotiating the terms of the dedication agreement. (See draft agreement at **Exhibit 1**). Following such agreement and upon the Board's approval, pursuant to 37-92-102(8)(d)(III), C.R.S., CWCB and Northern will file a water court application to "seek approval of the proposed protected mitigation releases," as required by SB 18-170.

Under the Water Delivery Agreement and Water Court decree, Northern Water will release and deliver water stored in Glade Reservoir as necessary to satisfy the measures for Mitigation Releases identified in the Mitigation Plan, for exclusive use by the CWCB as Protected Mitigation Releases. When Northern Water notifies the CWCB that such releases are being made, the CWCB shall protect the delivered Protected Mitigation Releases through the Qualifying Stream Reach from diversion or exchange by other water users by, when necessary, requesting administration by the Colorado State and Division Engineers to prevent diversion of or exchange upon the water within the Qualifying Stream Reach by other water users.

9. Proposed Use of the Acquired Water

The acquired water would be used to preserve and improve the natural environment in the Poudre River to a reasonable degree by protecting Mitigation Releases up to 18-25 cfs to meet the Mitigation Plan targets and CPW's recommended flows in the Poudre River. The CWCB shall use the Protected Mitigation Releases to help maintain stream flows in the Poudre River to preserve and improve the natural environment to a reasonable degree within the Qualifying Stream Reach in amounts up to the target rates of (a) winter flows of up to 55 cfs to preserve, and flows from 55 cfs to 85 cfs to improve, the natural environment to a reasonable degree, and (b) summer flows of up to 85 cfs to preserve, and flows from 85 to 130 cfs to improve, the natural environment to a reasonable degree.

CPW has reviewed this proposal, has collaborated on this memo, and will provide a final recommendation letter at the next board meeting. CPW staff will be available to answer questions at this board meeting in support of the project. CPW has accepted the 122.2 Mitigation Plan submitted by Northern and thus agrees that the Mitigation Releases will incrementally preserve and improve the natural environment.

CPW has relied on PHABSIM data (collected for the NISP Common Technical Platform) and R2Cross data collected by CPW when preparing final recommendations related to the proposal. In general, these data show that aquatic habitat can be incrementally preserved and improved by flows up to 85 cfs in the winter and 130 cfs in the summer.

10. Historical Use and Historical Return Flows

Because this is a release of stored water and does not involve a change of water right, or other mechanism through which return flows would be owed, the Board does not need to consider this factor.

11. Location of Other Water Rights

There are many other water rights located on the Poudre River; however, they will not be affected by this release and protection of water stored in priority.

12. Material Injury to Existing Rights

There will be no injury to existing rights. The statute guiding this acquisition requires that the owner of the water prove no injury "to vested water rights, decreed conditional water rights, ...or other water users' uses or exchanges of water being made pursuant to appropriation or practices in existence on the date of the filing" of the water court application. See 37-92-102(8)(f)(I)(B) C.R.S. Pursuant to 37-92-102(8) C.R.S., and under the Water Delivery Agreement, water previously stored in priority under the Glade Reservoir water rights would be released as required in the Mitigation Plan and protected by CWCB up to the target flow rates in the identified stream segment. Any other necessary terms and conditions to prevent injury to other water rights will be included in the final water court decree.

13. Stacking Evaluation

When water is available under this lease for ISF use in the Poudre River, it can be used in addition to any other acquired water rights that CWCB may use for instream flow in this segment of the Poudre River to achieve a greater level of protection for the natural environment and to meet the CPW flow recommendations as approved by the Board.

14. Effect of Proposed Acquisition on Any Relevant Interstate Compact Issue

The proposed acquisition does not negatively affect any interstate compact. The reservoir release will be used for instream flow purposes and also other beneficial uses at the lower terminus of the instream flow stream segment.

15. Effect on Maximum Utilization of Waters of the State

This proposed acquisition will promote maximum utilization of waters of the State by delivering the water to the NISP participants downstream, while at the same time supporting the natural environment along the delivery path of the Poudre River with additional beneficial uses for instream flow to preserve and improve the natural environment to a reasonable degree.

16. Availability for Downstream Use

The Mitigation Releases will be used downstream of the Qualifying Stream Reach by the NISP participants.

17. Administrability

CWCB Staff will discuss this project with the Division 1 Division Engineer. It is anticipated that once the water court case is closed and a final decree is issued, the Mitigation Release water from Glade Reservoir through the Poudre River will be administrable, after some needed modification of diversion structures.

18. Potential Benefits of This Proposed Acquisition

The proposed acquisition will increase stream flows in the Poudre River, provide water to current dry up points in the river below headgate diversions, and will provide benefits to the fish species that live in this reach.

19. Cost to Complete Transaction

Northern will donate the water to CWCB, so no direct costs will be incurred. However, as part of the normal work load, CWCB Staff will need to work on the acquisition documents, maintain records of the water use, and participate as a Co-Applicant in water court. The Attorney General's Office will support such application. However, physical modification to any existing diversion structures on the stream and any additional consultant costs will be incurred by Northern.

Exhibits

Exhibit 1 - Water Dedication and Delivery Agreement (Draft)

Exhibit 2 - Vicinity Map

Exhibit 3 - IGA with DNR

Exhibit 4 - SB 18-170 (signed by Governor 4/12/2018))

Exhibit 5 - FWMEP Executive Summary. Full Mitigation plan can be found at:

<http://www.northernwater.org/docs/NISP/MapsDocuments/2017FWMEPFinal.pdf>.