

STATE OF COLORADO

Colorado Water Conservation Board Department of Natural Resources

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TO: Colorado Water Conservation Board Members

FROM: Linda J. Bassi, Chief
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Stream and Lake Protection Section

DATE: December 13, 2013

SUBJECT: **Agenda Item 4, December 19, 2013 Special Board Meeting**
Stream and Lake Protection - Green Ditch Company Injury with Mitigation Proposal

John W. Hickenlooper
Governor

Mike King
DNR Executive Director

James Eklund
CWCB Director

Introduction

The Green Ditch Company, located in Boulder County, has requested the CWCB to consider an injury with mitigation ("IWM") proposal in relation to the Company's rebuilding of its flood-damaged diversion structure. The Board approved an emergency loan to the Company at the November 2013 CWCB meeting for repairs to the Green Ditch diversion structure, which is located on Boulder Creek. Because the channel of the creek shifted significantly during the September 2013 flooding, the Company may rebuild the diversion structure on the new channel approximately 800 feet upstream of the original point of diversion. Diversions into the new upstream structure could result in an impact to the Boulder Creek instream flow ("ISF") water right decreed in Case No. 1-90CW193 that historically did not occur. If the diversion structure is relocated to the upstream location, the Company proposes to mitigate that potential impact by designing the new diversion structure to allow fish passage while still enabling the Company to divert, even at times of low flows. Rule 8i.(3) requires the Board to consider an injury with mitigation proposal using a two-meeting process. This is the first meeting of the process.

Staff Recommendation

Staff recommends that the Board:

- 1) Make a preliminary determination that the natural environment of Boulder Creek could be preserved to a reasonable degree with the proposed injury if the Company provides the proposed mitigation; and
- 2) Provide comments to Staff on the proposal and identify any issues that the Company and Staff should address before bringing the proposal to the Board for final approval.

Background

The Green Ditch historically diverted from Boulder Creek approximately a half mile downstream of the Boulder Creek and South Boulder Creek confluence, within the reach of the Boulder Creek ISF water right described below.

CWCB Case No.	Stream/Lake	Amount (cfs)	Approp. Date	Watershed	County
1-74W7636	Boulder Creek	15.0	10/1/1973	St. Vrain	Boulder
1-79CW308	Boulder Creek	Up to 15 (ISF)	n/a	St. Vrain	Boulder
1-90CW193	Boulder Creek	Up to 15 (ISF)	n/a	St. Vrain	Boulder

In Case Nos. 90CW193 and 79CW308, the water court decreed changes of several water rights owned by the City of Boulder (“the City”) to add ISF use. In accordance with a donation agreement between the City and the CWCB, the City donated valuable senior water rights to the CWCB to maintain instream flows in Boulder Creek. The downstream terminus of the ISF reach in which the changed water rights are used is the 75th Street bridge. The upstream termini of the changed water rights varies, but all ISF reaches for the changed rights are within the ISF reach decreed in Case No. 1-74W7636, which is from the Public Service Company hydro plant outfall above the City of Boulder down to the 75th Street bridge.

The existing Green Ditch diversion dam spans the width of the channel, creating a barrier for fish passage. The flood event resulted in damage to the diversion structure and relocated the reach of Boulder Creek at this location so that water no longer flows to the Green Ditch headgate. See vicinity map and aerial photo attached to this memo. The Company now needs to repair the diversion structure and ditch channel to enable diversion of its decreed water rights by April 2014. The Company has retained the services of ERO Resources and Olsson Associates to plan and design a practical and environmentally sensitive restoration of the ditch. The Company has not made a final decision on its approach to rebuilding, and will provide that information prior to the January 2014 CWCB meeting.

Proposed Mitigation

If the Company decides to rebuild its diversion structure in the upstream location, the mitigation would be provided via the choice of location and the design of the structure itself. This approach would leave Boulder Creek in its post-flood alignment, which various stakeholders have identified as a healthier environment than its pre-flood location. Specifically, the flood transported and deposited cobble and sediment, creating ideal conditions for the establishment of native riparian trees and shrubs. The former channel lacked these conditions and has a high occurrence of invasive plant species within the stream corridor. Additionally, restoring the stream channel to its pre-flood conditions would rely on the existing diversion dam and diversion structure, which is a major fish barrier. To allow for diversions in the post-flood condition, a new point of diversion for the Green Ditch would be established upstream of the breach, and would be designed to allow fish passage while still enabling the Company to divert, even at times of low flows. A new piping system would connect the new headgate to the existing ditch. This alternative will help improve the watershed’s connectivity by removing a barrier in the stream.

Potential impact to the Boulder Creek ISF water right

Staff is working with representatives of the Company and the City of Boulder Open Space and Mountain Parks Department (a shareholder of the Company) to determine the potential impact of Green Ditch diversions at the new upstream location on the Boulder Creek ISF water right. Diversions into the Green Ditch typically occur from May to October. To determine the potential impact to the Boulder Creek ISF water right, the Company will conduct an analysis of the relative priorities of the Green Ditch water rights and the donated water rights that are the primary source of water for the ISF water right.

Process for relocating diversion structure

While IWM proposals under ISF Rule 8i.(3) usually involve pending water court applications, the Company does not intend to file a water court application to change the location of the diversion structure. Rather, the Company will rely upon section 37-86-111, C.R.S. (2013), which allows a diversion structure to be moved upstream to be able to divert water to the extent it previously was able to, if necessitated by changes to the stream channel from flooding. The statute does not require water court approval of such a relocation of a diversion structure. The Division of Water Resources has recommended that the Company notify the appropriate water commissioner of the relocation of the diversion structure. The statute also provides that the relocation of the structure may not impact other water rights on the stream. The Boulder Creek ISF water right is the only other water right on this reach of Boulder Creek.

Colorado Parks and Wildlife Evaluation of Proposal

Colorado Parks and Wildlife (“CPW”) staff is in the process of reviewing this proposal. For the past several years, CPW has been working with the City of Boulder on the systematic replacement of diversion structures to incorporate fish passage. It is anticipated that this project would be consistent with those efforts. The CPW staff’s analysis and recommendation will be presented at the January Board meeting.

Agreement between the Company and CWCB

Because this IWM proposal does not involve a water court application, stipulation or decree, staff and the Company propose entering into an agreement to document the various aspects of the IWM proposal and its acceptance by the CWCB. The primary elements of the agreement would include: (1) an agreement by the Company to construct, operate and maintain the diversion structure in a manner that provides for fish passage; and (2) CWCB’s agreement that the mitigation adequately addresses any impact to the ISF water right that will result from relocating the diversion structure. Staff will provide a proposed agreement at the January 2014 CWCB meeting.



