

The Crossroads of Duty and Doctrine

Ken A. MacKenzie, P.E.
Urban Drainage and Flood Control District
Denver, Colorado

2015 Sustaining Colorado Watersheds Conference
October 7, 2015 – Westin Riverfront Resort, Avon, CO

Retention



Flood Detention



Flood & Water Quality Detention



The “72-Hour Rule”

Temporary Detention (72 Hr Storage)

- Direct water rights may be temporarily detained for up to 72 hours in order to allow more efficient or effective beneficial use of the water.
- If storm water is not diverted or captured in priority, by exchange or under a substitute water supply plan or decreed plan for augmentation, Colorado Water Law requires it to be released. The State Engineer’s current policy requires that all water stored out of priority be released to the stream system within a maximum of 72 hours after detainment.



DEPARTMENT OF NATURAL RESOURCES

DIVISION OF WATER RESOURCES

John W. Hickenlooper
Governor

Mike King
Executive Director

Dick Wolfe, P.E.
Director/State Engineer

Administrative Approach for Storm Water Management

May 21, 2011

This statement applies to the Colorado Division of Water Resources' administrative approach for storm water management of precipitation that falls on an individual site. For the purposes of this statement, an individual site is defined as a discrete area that has been developed through one development effort. This statement clarifies the Division of Water Resources' administrative approach but the allowances in the administrative approach do not grant a water right or offer protection from a claim of material injury by a water user.

Storm water management is commonly achieved by means of detention and/or infiltration structures which may have the effect of adversely affecting vested water rights. Whether individual site storm water management is to be accomplished by means of a detention facility, an infiltration facility, or a facility that incorporates both detention and infiltration, the ideal is that precipitation that falls on an individual site should be dispersed from the surface of the individual site at the same rate as would have occurred prior to development on the site. Meeting this ideal does not entitle any party to divert or consume water added to the ground water or surface water supply due to a reduction in pre-development consumption by vegetation, unless such diversion or consumption is done in priority.

- Allowances are made for individual sites only
- Individual site defined as a discrete area that has been developed thorough one development effort
- Detention allowed but must release all water within 72 hours
- Infiltration allowed but surface water must be gone within 72 hours
- Green roofs allowed but no water storage allowed below the root zone



URBAN DRAINAGE AND FLOOD CONTROL DISTRICT

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May 1, 2013

Dick Wolfe, P.E.
Director/State Engineer
Colorado Department of Natural Resources, Division of Water Resources
1313 Sherman Street, Suite 808
Denver, Co 80203

RE: Request for Concurrence Regarding De minimis Impacts to Water Rights from Regional Water Quality Detention, and for Clarification of Administrative Allowances for Regional Water Quality Detention

Dear Mr. Wolfe;

A concern was brought to my attention this week regarding water rights impacts from regional water quality detention and whether regional water quality detention is included in the administrative allowances described in the Division's May 21, 2011 memorandum titled "Administrative Approach for Storm Water Management."

- The impact of regional water quality detention on water rights is de minimis
- Providing water quality detention on a site-by-site basis is worse for water rights holders
- Detention on a watershed scale is necessary in order to fully protect our receiving streams from degradation due to the hydromodification of urbanization
- Sought concurrence and clarification that the Division's 2011 memorandum applies to regional as well as individual sites



DEPARTMENT OF NATURAL RESOURCES

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June 5, 2013



Ken A. MacKenzie, P.E., CFM
Manager, Master Planning Program,
Urban Drainage and Flood Control District
2480 W. 26th Avenue, Suite 156B
Denver, CO 80211-5304

Subject: Your request for Concurrence Regarding De minimis Impacts to Water Rights from Regional Water Quality Detention, and for Clarification of Administrative Allowances for Regional Water Quality Detention

Dear Mr. MacKenzie,

I've reviewed the letter you sent to Dick Wolfe on May 1, 2013 regarding water rights impacts from regional water quality and watershed full spectrum flood control detention in the context of the Division of Water Resources' memorandum titled *Administrative Approach for Storm Water Management* ("Memo"). I understand that you would like clarification that the administrative approach described in the Memo applies to water quality and flood control detention on a regional and watershed as well as site-specific basis. I appreciate this opportunity to engage in a dialogue on this important issue which has statewide significance.

- The 2011 administrative allowance is limited to individual sites because the detention &/or infiltration occurs concurrently with the development causing the new runoff
- The allowance neither creates a water right nor offers protection from a claim of injury
- The downstream water rights holders are entitled to benefit from “improved” conditions
- Unwilling to make the same administrative allowance for regional or watershed detention



COLORADO
Division of Water Resources
Department of Natural Resources

1313 Sherman Street, Room 821
Denver, CO 80203



April 28, 2014

Ken A. MacKenzie, P.E., CFM
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Urban Drainage and Flood Control District
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Denver, CO 80211-5304

Subject: Follow up to the June 5, 2013 letter from the Division of Water Resources regarding your Request for Concurrence Regarding De minimis Impacts to Water Rights from Regional Water Quality Detention and for Clarification of Administrative Allowance for Regional Water Quality Detention

Dear Mr. MacKenzie,

On May 1, 2013, you sent a letter to Dick Wolfe on the topic referenced in the subject line above. On June 5, 2013, I sent a letter to you in response. In follow up conversation with you, I agreed to request a **legal opinion from the Colorado Attorney General's Office** related to a water rights issue that is inherent to the discussion of regional water quality detention. Getting a response to you on that matter has admittedly taken a long time. In addition to an unusually high case load and the onset

- Colorado has no legal threshold of injury that is "de minimis"
- Changes to the runoff volume or peak flow rate can deprive junior water rights holders of the opportunity to divert
- Regional detention is an appropriation and a diversion of water for a beneficial use
- When that diversion takes place at a time when senior water rights are not satisfied, the Division Engineer has the responsibility to curtail the diversion

An Act

SENATE BILL 15-212

BY SENATOR(S) Sonnenberg, Baumgardner, Cooke, Guzman, Holbert, Kefalas, Marble, Martinez Humenik, Merrifield, Neville T., Scott, Woods; also REPRESENTATIVE(S) Winter and Carver, Fields, Lebsock, Moreno, Mitsch Bush, Rosenthal, Van Winkle, Williams.

CONCERNING A DETERMINATION THAT WATER DETENTION FACILITIES DESIGNED TO MITIGATE THE ADVERSE EFFECTS OF STORM WATER RUNOFF DO NOT MATERIALLY INJURE WATER RIGHTS.

SB 15-212 becomes §37-92-602(8) C.R.S.

This statute provides legal protection for detention and infiltration facilities, provided they meet the following criteria:

- It is owned or operated by a governmental entity or is subject to oversight by a governmental entity (e.g., required under an MS4 permit)
- It continuously releases or infiltrates at least 97% of all of the runoff from a rainfall event that is less than or equal to a 5-year storm within 72 hours after the end of the event


- It continuously releases or infiltrates as quickly as practicable, but in all cases releases or infiltrates at least 99% of the runoff within 120 hours after the end of events greater than a 5-year storm
- It operates passively and does not subject the stormwater runoff to any active treatment process (e.g., coagulation, flocculation, disinfection, etc.)
- There is no additional beneficial use
- If it is in the Fountain Creek watershed it must be required by or operated in compliance with an MS4 permit

More Information Available Here:

www.udfcd.org/index.html

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Working with you since 1969



2013 FLOOD INFORMATION

Photo of floodwaters at Westerly Creek Park in Denver's Stapleton Community.

UDFCD Board authorizes flood **repairs**

Visit the 2013 **Flood page** to find information on emergency assistance and learn how UDFCD works with local governments

[Links to Local, State, National and Other Flood Information Links](#)

[Click here](#) for FAQs and other resources on Local Flood Assistance & rebuilding

Board Meetings

September 17, 2015
[Board Meeting Materials](#)

[Click here](#) to view past Board meeting and budget information.

Recent News

- ∴ CRS 37-93-602(8) FAQ's
- ∴ CRS 37-93-602(8) Explanation Memo
- ∴ CLOMR Property Owner Notification

On the Horizon:

- Rainwater Harvesting
- Denver Water High Line Canal
- Green Infrastructure Retrofitting

Rainwater Harvesting



Denver Water High Line Canal



AURORA
WATER



DENVER WATER



HIGH LINE CANAL FEASIBILITY STUDY FOR STORMWATER RUNOFF REDUCTION & TREATMENT AUGUST 2014

PREPARED FOR: URBAN DRAINAGE & FLOOD CONTROL DISTRICT
DENVER WATER
CITY & COUNTY OF DENVER
AURORA WATER
ARAPAHOE COUNTY
DOUGLAS COUNTY

PREPARED BY: RESPEC CONSULTING & SERVICES
720 SOUTH COLORADO BLVD, SUITE 410S
DENVER, COLORADO, 80246



Green Infrastructure Retrofitting



The way we develop land needs to change.



Questions?



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