DEPARTMENT OF NATURAL RESOURCES

DIVISION OF WATER RESOURCES

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Administrative Approach for Storm Water Management

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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 thorough 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.

Precipitation that falls on a site and results in overland flow that becomes concentrated in the natural terrain or manmade drainages on the site may be directed to detention areas on the site. The detention areas must release all of the water detained from the site within 72 hours of the end of a precipitation event. Such detention should be designed to release the water from the site as quickly as downstream conditions allow and should minimize consumption from vegetation. The water may not be diverted from the detention area for any beneficial uses. The water that is released from the detention area is tributary water and is a public resource, subject to appropriation through the prior appropriation system.

In addition, precipitation that falls on a site and results in overland flow that becomes concentrated in the natural terrain or manmade drainages on the site may be directed to infiltration areas on the site. The infiltration areas must be designed to infiltrate the water into the underlying aquifer for the purposes of managing the storm water quality and volume of discharge of precipitation that fell on the site. An infiltration area must be designed to infiltrate the water as quickly as possible and shall not result in an exposed water surface beyond 72 hours after the end of a precipitation event. An infiltration area must be designed to minimize consumption from vegetation. The water may not be diverted from the infiltration area for any beneficial use. The water that infiltrates is tributary ground water and is a public resource, subject to appropriation through the prior appropriation system.

Landscaping that is planted on roofs (green roofs) is allowable as long as the landscaping intercepts only precipitation that falls directly onto the landscaping. The landscaping may not intercept and consume concentrated flow and may not store water below the root zone.

These are administrative allowances that allow storm water to be managed while minimizing the impact to water rights. These allowances cannot be applied to precipitation that falls onto an area not on the individual site.

GENERAL ADMINISTRATION GUIDELINES FOR RESERVOIRS[1]

Colorado Division of Water Resources

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[1] This document was originally prepared under the direction of Hal Simpson, former State Engineer, and further revised under the direction of Dick Wolfe, State Engineer. Several staff members of the Colorado Division of Water Resources were instrumental in its development including Claudia Engelmann, Jim Hall, Alan Martellaro, David Nettles, John Sikora and Dick Wolfe with review by many other staff of the Division of Water Resources. We are grateful that Devin Odell from the Attorney General's Office provided critical legal review.

- consumptive use credits from a downstream changed direct right are left in the stream to replace water diverted in an upstream reservoir

As with all exchanges, the exchange must be approved by the Water Commissioner or Division Engineer and the release downstream timed so that the flow will be the same as if the upstream diversion had not taken place. Further, when a water right holder releases water allowing an upstream diversion by exchange, the diverted water takes on the "character" of the released water. For example, the water stored in a reservoir in exchange for the release of reusable water from a treatment plant would "take on the character" of the reusable effluent and the water released from the treatment plant becomes the same character as the water that was physically stored in the reservoir (either natural stream or delivery water).

Temporary Detention (72-Hour Rule)

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. Examples of such detention would be ponds used to receive delivery of a direct flow irrigation water right that is then applied by a sprinkler or temporarily detained and slugged out through a ditch (operational, head stabilization, equalization or flow regulating ponds), or the use of forebays or regulating structures associated with municipal operations. A specific storage right generally will not be required as long as the water is held for less than 72 hours and the detention is for purposes of allowing for more efficient or effective beneficial use of the direct water right. Absent a storage right or free river conditions, all water, including storm water, must be released within 72 hours. Ponds that intercept ground water are subject to additional limitations and all dams associated with the

construction of ponds must comply with all requirements of the State of Colorado's Dam Safety Rules and Regulations.

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 detained water be released to the stream system within a maximum of 72 hours after detainment.

Surcharge Storage

Surcharge storage means the volume of water that may be impounded but not retained within a reservoir between the normal spillway and the crest of the dam. This surcharge is not considered part of the reservoir fill under the water right. The reason for this is that the reservoir operator does not control water in surcharge and by definition in CRS 37-92-103(10.8) storage is the impoundment, possession, and control of water by means of a dam. Unless free river conditions exist or an exchange is made to "recolor" (or change the character of) this water, surcharge storage must be released within 72 hours. Operation of the reservoir outlet works may be required in order to release the surcharge within 72 hours.

Adequate Measurements

In cases where the reservoir right is limited to gage height, it is important that a staff gage that is easily readable be installed in the reservoir. A stage-capacity table (a table that reflects the capacity or volume of storage in the reservoir based on the stage or elevation of the water in the reservoir) has also usually been developed in conjunction with obtaining an absolute right for the reservoir. As long as the decree for the reservoir covers complete filling of the reservoir and no other water is stored in the