# Legislation Text

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A Resolution adopting Volume 1 and 2 of the City of Colorado Springs Drainage Criteria Manual - Tim Mitros, Subdivision Engineering Review Manager and Steve Gardner, Engineering Programs Manager - Tim Mitros, Subdivision Engineering Review Manager and Steve Gardner, Engineering Programs Manager

**From:**
Dave Lethbridge, Interim Director of Public Works
Tim Mitros, Engineering Development Review and Stormwater Manager
Steve Gardner, Stormwater Manager

**Summary:**
The current Drainage Criteria Manual (DCM) is outdated and no longer adequate to meet the City's and the region's stormwater management goals and water quality requirements. The revised Drainage Criteria Manual will provide critical guidance to planners, engineers and contractors for improvements to the existing system and for new system expansion. A highly experienced and qualified Project Team has assessed current stormwater policies and practices, reviewed local, state and national standards, and incorporated their recommendations into the DCM.

The DCM was assembled using previously accepted city standards, incorporating readily available standards, such as from the Denver Urban Drainage and Flood Control District (UDFCD), and using original analyses developed by the Project Team. The UDFCD, known throughout the nation and also internationally, was formed in the late 1960's and has developed extensive guidance on stormwater management policies and practices that are applied widely in Colorado. This source provided a solid foundation for the DCM and large portions of it are included by reference.

The DCM is proposed for adoption after an extensive public process to incorporate the experience and preferences of the local engineering and development community, local, state and federal agencies, and other interested parties. From the responses received by reviewers of the DCM, there is broad support for its adoption.

We believe that implementation of the policies and practices described in the DCM will provide drainage projects that are effective in meeting the City's stormwater management goals and Municipal Separate Storm Sewer Syatem (MS4) requirements.

The DCM is also a significant contribution toward the development of standards that can be used throughout the Fountain Creek watershed to achieve regional goals. Amendments may be required from time to time to make the DCM more applicable to the entire Fountain Creek watershed. Four "spin-off" projects are proposed to further address stormwater management goals through a cooperative effort with other jurisdictions in the watershed. It is anticipated that other jurisdictions

within the watershed will also adopt the DCM so that stormwater issues will be addressed consistently and regional goals can be realized.

**Previous Council Action:**
Council has authorized this project through the budget allocation process and funding consultant contracts necessary to complete this project. Council has also expressed support for efforts to improve stormwater management practices in the City and throughout the Fountain Creek watershed.

In April, 2013, following a presentation by Staff, City Council asked staff to pursue approval of the DCM Volume 2 by Colorado Department of Public Health and Environment (CDPHE). Staff submitted the DCM Volume 2 to CDPHE for review and approval in July, 2013. Review comments from CDPHE were received in September, 2013. Staff responded to CDPHE's comments, and re-submitted the DCM Volume 2 in February, 2014. On April 15, 2014, CDPHE issued a letter to the City approving the DCM Volume 2 with minor revisions. As a condition of approval, the City has until July 1, 2014 to approve and adopt the DCM Volume 2.

**Background:**
The current Volume 1 of the City/County Drainage Criteria Manual was adopted in 1987 with revisions in 1991 and the current Volume 2 of the DCM was adopted in 2001 with periodic amendments. Volume 1 includes basic stormwater management policies and guidance for improvements related to runoff quantity. Volume 2 primarily addresses issues related to water quality and runoff reduction methods. Storm water management practices have advanced significantly since the adoption of the current manual and consequently does not reflect the best available information for effective stormwater management.

There have been several efforts in the last 10 to 15 years to address stormwater management comprehensively within the Fountain Creek watershed. These efforts included the Fountain Creek Watershed Study by the Army Corps of Engineers and the Strategic Plan for the Fountain Creek Watershed by the Fountain Creek Vision Task Force, both completed in 2009. Both of the guidance documents proposed updating local drainage standards to better manage stormwater in the Fountain Creek watershed. Stormwater commitments of the Southern Delivery System 1041 Permit also provided an incentive to update the DCM.

It is hoped that the DCM will be applied throughout the Fountain Creek watershed with adoption by other jurisdictions.

Upon approval by the City Council, the DCM will become effective 30 days later for projects submitted after that date. Provision has been made for projects submitted prior to the effective date by allowing 6 months for completion of active submittals.

The DCM incorporates by reference much of the content in the UDFCM manual, especially for the most generally accepted and standardized methods. Referencing content in the UDFCD manual reduced the scope of the project and reduced the project cost. The most significant changes included in the DCM are related to detention storage, natural channel design, and water quality requirements. Detention storage is required and will generally be provided in regional detention ponds identified in master plans for the drainage basin. Runoff from developed areas will be reduced to near historic rates allowing downstream channels to remain in a more natural condition, providing

the opportunity to preserve natural floodplains.

Natural Channel Design is a key goal stated in the City's Comprehensive Plan and Engineering Criteria Manual is to protect floodplains and to preserve natural channel features. The revised DCM provides guidance on the design of channels so that their natural features are more likely to be preserved.

Water Quality is required for all land uses and on all land disturbance and development greater than one acre. There may be opportunities for water quality treatment within the regional detention ponds so that separate water quality facilities may not always be required.

The DCM contributes to the implementation of the City's Comprehensive Plan. The following are excerpts from the Comprehensive Plan included in Chapter 4.0, Drainage Reports and Plans, Subsection 4.2, Requirements of the Engineering Criteria Manual. These goals were incorporated into the DCM and the methods described in the DCM provide planners and engineers with specific guidance on how to achieve them:

> Drainage Way Protection (Strategy NE202c)-"Protect riparian areas and natural water bodies on public and private lands as natural drainage ways and ecosystems through land use plans, development plans, best management practices and ordinances".
> Natural Ecosystem and Drainage Way Restoration (Strategy NE 202d)-"Promote the restoration of significant natural ecosystems, habitats for native plant and animal species, natural water bodies and drainageways on public lands, and require protection and mitigation plans for private lands during the development review process".
> Protect Drainageway and Floodplains (Policy NE302)-"Limit development of land within floodplains, which should remain, or be returned to its natural state. Development can reduce a floodplain's ability to store and convey water, intensifying velocity and depth of floodwater in other areas".
> Retain Floodplains in their Natural State (Strategy NE 302b)-"Floodplains will remain as undisturbed riparian corridors, wildlife habitat, or wetlands whenever possible. Trails or other open recreational facilities and utility facilities such as electric, gas, and water mains may be appropriate in certain areas. Identify these areas in master plans, development plans, and development proposals".

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SPIN-OFF PROJECTS: Four issues were raised that may require further evaluation and stakeholder process. Discussion is ongoing with other jurisdicyions and entities topursue these issues:

> Site Planning and Design Standards and Low Impact Development (LID)
> Floodplain Policies
> Project Phasing
> Watershed-wide issues

The Site Planning and Design Standards evaluation project is intended to evaluate the merits of Low Impact Development (LID) and to potentially propose changes to City standards to promote its implementation. The Floodplain Policies project will evaluate criteria and practices for how best to manage floodplains related to development and to preserve their natural functions. The Project

Phasing project will consider how to determine when needed improvements should be constructed and the Watershed-wide Issues project will evaluate additional stormwater management standards and criteria applicable to other parts of the watershed.

CDPHE REVIEW: The City's MS4 permit requires that documents required to implement the conditions of the permit be reviewed by the CDPHE. The DCM Volume 2 has been reviewed and approved by the CDPHE as of April 15, 2014, following the satisfactory address of their remaining minor comments.

**Financial Implications:**

Adoption of the DCM will have no impact on the City Budget.

**Board/Commission Recommendation:**

At the April 4, 2013 meeting of the Drainage Board, a motion to recommend adoption of the DCM to the City Council passed with a vote of 4 to 1. The Drainage Board also expressed support for addressing the spin-off projects at their April 4, 2013 meeting.

**Stakeholder Process:**

An extensive stakeholder process was held leading up to the recommended adoption of the DCM in April, 2013. Interested parties included the development community, engineering professionals, local, state and federal agencies, and city and county staff. A summary of organizations and companies on the project contact list are shown in the attached Table 1-Project Contact List.

This effort included multiple opportunities for interested parties to contribute ideas, concerns, and recommendations. These contributions were diligently reviewed and incorporated into the DCM when appropriate. The attached Figure 1 provides an outline of the process that was followed to organize the project and to provide opportunities for participation of interested parties.

The process has included the following meetings, presentations, and workshops.

Team Meetings
- >14 Issue Group meetings
- >4 Technical Leadership Team meetings
- >3 Executive Leadership meetings

Presentations
- >Drainage Board-periodic updates
- >City Planning Commission
- >HBA Land Use Committee
- >FCWD Technical Advisory Committee
- >FCWD Citizen Action Committee
- >HBA representatives

Workshops
- >Draft chapter review process/kickoff
- >Draft chapter comment review
- >Drainage Board draft DCM review

The draft DCM documents were distributed for review and comment as follows:

Draft DCM Chapters-June, 2011 through June, 2012
Draft DCM-October, 2012 through November, 2012
Revised draft DCM-January, 2013 through March, 2013

The Project Team has reviewed, responded to, and incorporated over 500 comments on Volume 1 and over 100 comments on Volume 2 of the DCM.

Several of the parties involved in the stakeholder process have provided letters or emails commenting on the project. These are attached to this memorandum.

**Alternatives:**
Approve or do not approve the revised Drainage Criteria Manual.

**Proposed Motion:**
Motion to approve the attached resolution adopting the City of Colorado Springs Drainage Criteria Manual.

N/A