

CASTLE ROCK WATER

# 2019 STORM DRAINAGE DESIGN CRITERIA REVISIONS

MAY 21, 2019



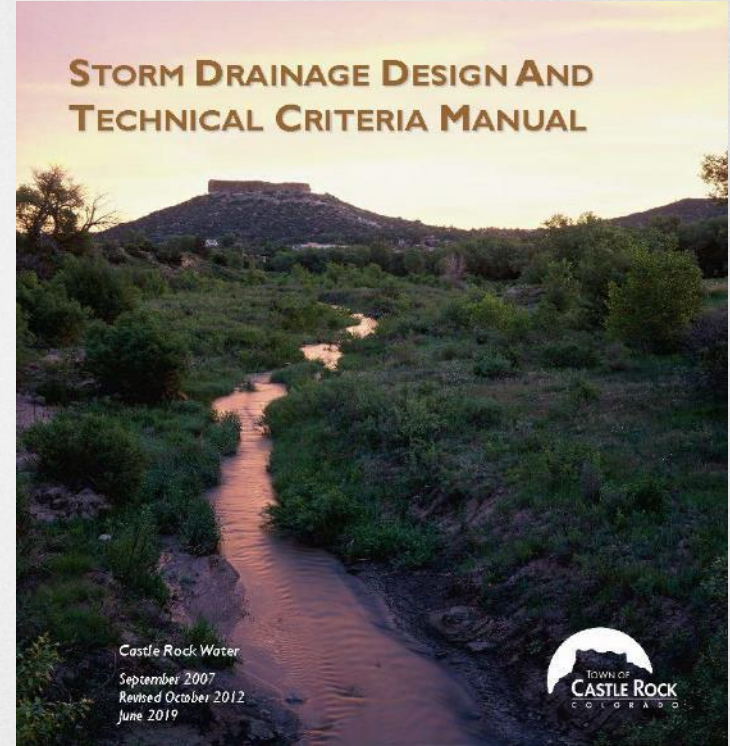
# 2019 DRAINAGE REVISIONS



COLORADO  
Water Quality Control Division  
Department of Public Health & Environment

## OVERVIEW

- Updates driven by new state standards for stormwater management
- New measures for compliance on alternative approaches to stormwater management systems
- Addressing issues with groundwater in residential neighborhoods
- Addressing operation and maintenance of stormwater management facilities to assist public and private management agencies



# 2019 DRAINAGE REVISIONS

## CHANGES IN DESIGN STANDARDS

- Redevelopment and Constrained Redevelopment
- Exclusions from water quality treatment on development sites
- Measures of compliance for alternative approaches to water quality treatment
  - WQCV Standard: Must treat at least 80% of Impervious Area
  - Pollution Removal Standard: Maximum of 30 mg/L Total Suspended Solids
  - Runoff Reduction Standard: Infiltrate or uptake 60% of WQCV
  - Regional WQCV Standard: Provide Pretreatment



**Subsurface Proprietary Systems**



# 2019 DRAINAGE REVISIONS

## ADDRESSING GROUNDWATER CONCERNS

- Impacts to streets due to surfacing groundwater
- Chase drains help but are not a long-term solution
- New criteria discourage lot to lot drainage where issues generally arise
- Require installation of subsurface drains where lot to lot drainage is unavoidable
- Benefits life cycle of streets and reduces nuisance drainage concerns for residents



**Subsurface Drain retrofit layout in impacted street**

# 2019 DRAINAGE REVISIONS

## ADDRESSING OPERATION AND MAINTENANCE

- Impacts Town and private owners due to maintenance burden
- Enhancing O&M guidance in final reports
- Establishing inspection and maintenance frequencies and protocols
- Improving access and circulation in ponds



**Stormwater Facility**



# THANK YOU

## QUESTIONS