

TOWN MANAGER'S REPORT

# STORM RESPONSE

# JUNE 9, 2024

DAVID CORLISS, TOWN MANAGER  
JUNE 18, 2024



# JUNE 9 STORM RESPONSE

Substantial rain fall particularly the east side of town

- Town Facilities
- Parks and Recreation Facilities
- Streets
- Stormwater Challenges

# JUNE 9 STORM RESPONSE

- Front Range Trail damage in Cobblestone neighborhood
- Other trail areas in need of repair and clean-up

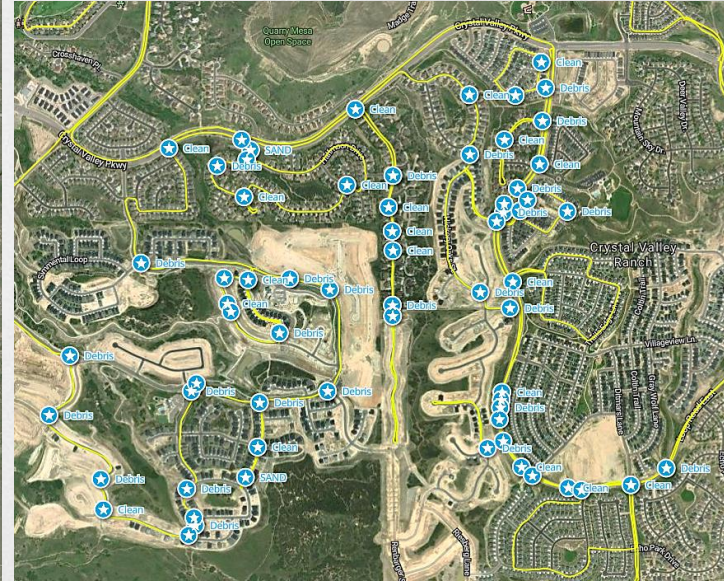
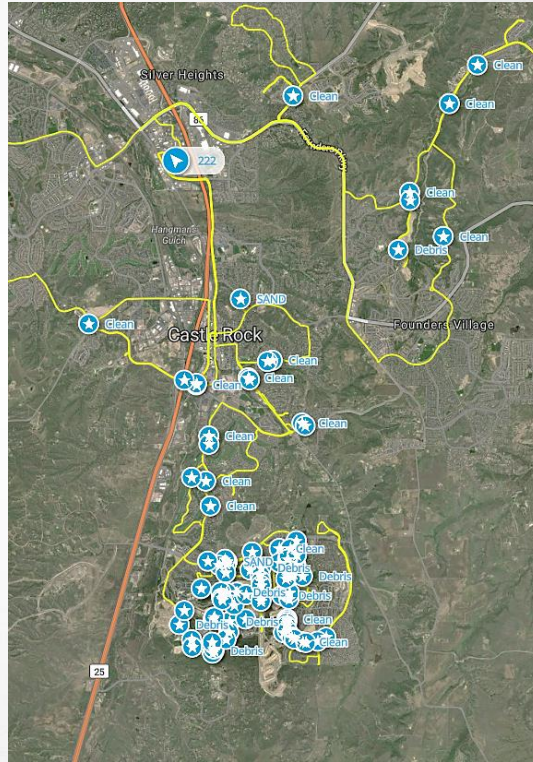
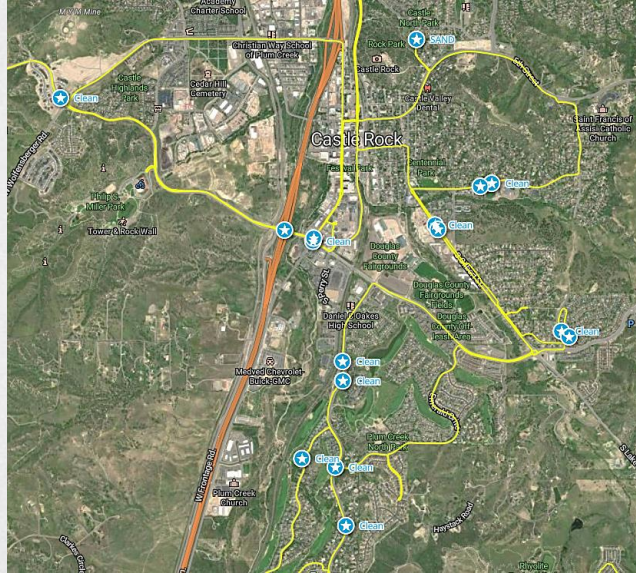


- Next steps: Work with Developer and our Stormwater staff for long term fix



# JUNE 9 STORM RESPONSE

## PUBLIC WORKS DEBRIS CLEANUP



CASTLE ROCK WATER

**JUNE 9, 2024**  
**STORM ASSESSMENT**  
**AND STORMWATER**  
**MANAGEMENT**  
**REQUIREMENTS**

JUNE 18, 2024





# JUNE 9 STORM

## STORM SUMMARY

- Rain and hail event hit Castle Rock between 6:00 pm and 7:00 pm on June 9, 2024
- 24-hour rainfall depths range from 2-5 inches across town.
- Rainfall rates topped 6 inches per hour in some locations
- Average reoccurrence interval storm ranged from 5-1,000 year storm depending on location
- Stream flow measurements in Sellars Gulch: 100-500 year event
- Stream flow measurements in McMurdo Gulch: 50-100 year event



McMurdo Gulch flood stage on June 9

# JUNE 9 STORM

## STORM SUMMARY

Radar view of Castle Rock June 9, 2024 at 6:30 pm

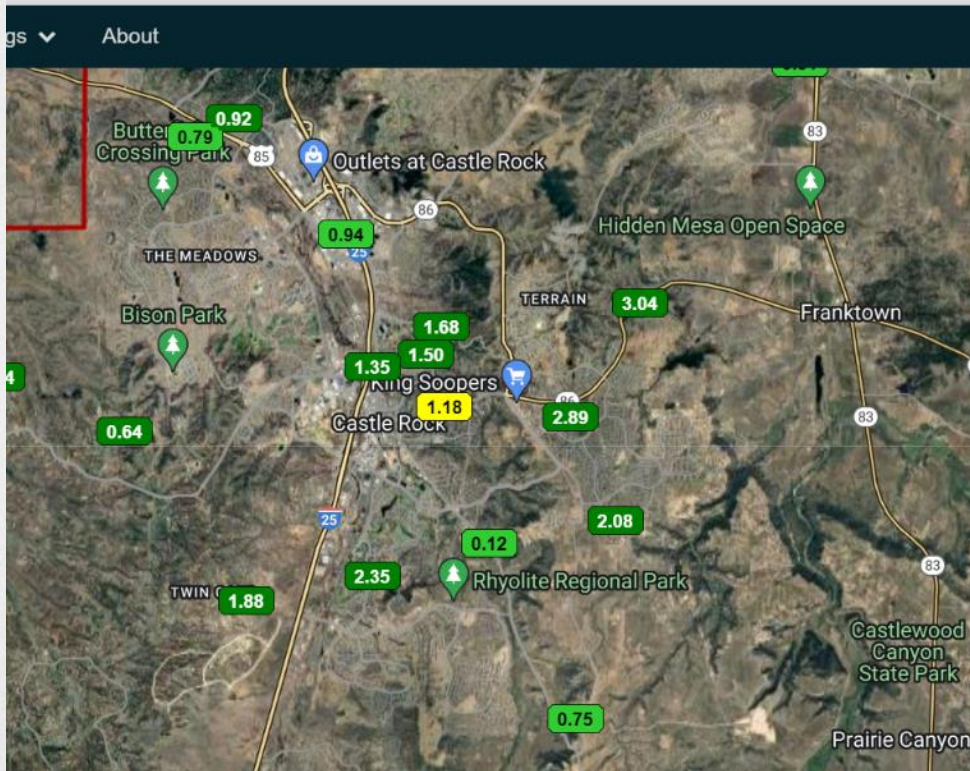




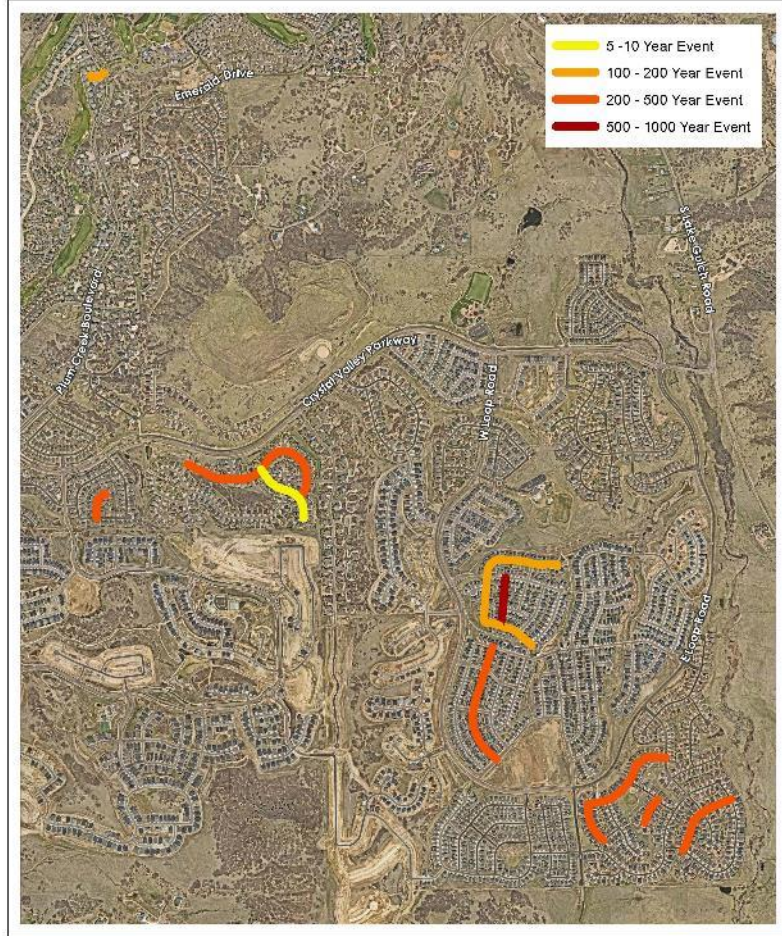
# JUNE 9 STORM

## STORM SUMMARY

24-hrs ALERT/CoCoRaHS Rain ending 06/10/2024 07:00



**TOWN OF CASTLE ROCK**  
Excellence · Dedication · Service



0 500 1,000 2,000 3,000 Feet

Date: 6/14/2024



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# JUNE 9 STORM

## REVIEW OF ISSUES

- 38 Customer Service Calls related to the storm
- Primary watershed areas impacted include McMurdo Gulch, Sellars Gulch and East Plum Creek
- 24 of the issues in Crystal Valley Ranch area
- Issues include:
  - Yard damage 25
  - Structural flooding 2
  - Street flooding/debris 9
  - Trail damage 2
- Storm damaged and shut down Castle Rock Water diversions on East Plum Creek and Plum Creek



Regional detention pond in Crystal Valley with debris lines at approximately 100-year volume

# JUNE 9 STORM

## REVIEW OF ISSUES



Yard flooding impacted by development activity



Yard damage in Crystal Valley Ranch



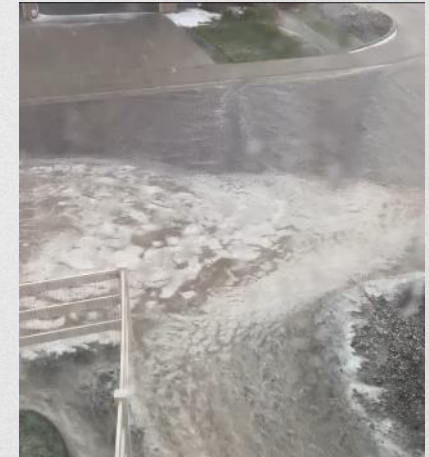
Street flooding in Crystal Valley Ranch



Drainage channels protecting homes in Lanterns



Street flooding in Crystal Valley Ranch



Street overtopping in Crystal Valley Ranch



# JUNE 9 STORM

## GENERAL STORMWATER MANAGEMENT REQUIREMENTS

- Address stormwater management at some level in all developments
- Require drainage report certified by registered engineer for all projects over 1-acre
- Require infrastructure meeting the following:
  - Street conveyance allows for emergency access during major storm
  - Storm inlets and pipes ensure emergency access
  - Detention ponds provide water quality and flood control
  - Minor system features: provides public convenience and accommodates moderate, frequently occurring flows (5-year event, or 20% chance event)
  - Major system features: protects life and major property damage (100-year event, or 1% chance event)
- Comply with Temporary Erosion and Sediment Control (TESC) plans and permits during construction
- Follow Mile High Flood District guidelines for designs and plans
- Ensure design meets minimum requirements per Town code including referenced technical criteria manuals

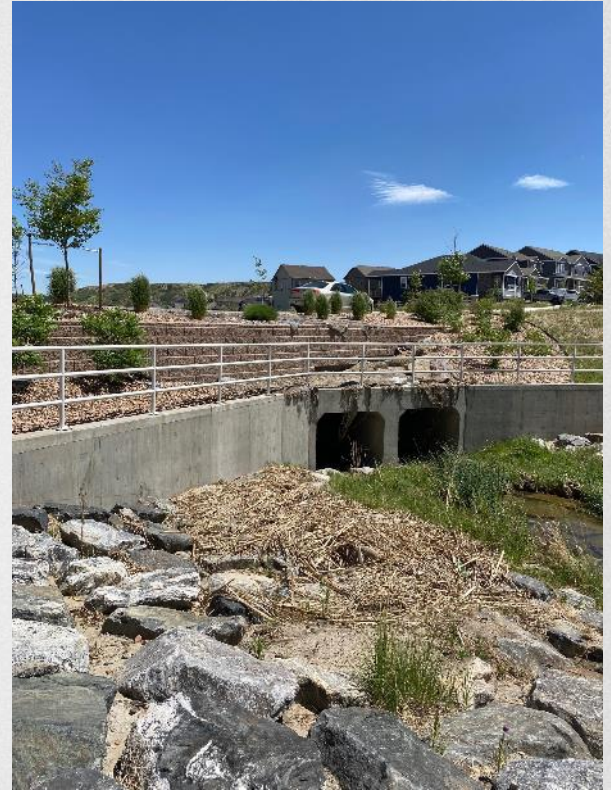


McMurdo Gulch debris lines and high water marks following the storm

# JUNE 9 STORM

## STORMWATER ROLES AND RESPONSIBILITIES

- Owner (developer) overall responsibility for site compliance
- Owner's professional engineer responsible for plans complying with minimum standards
- Owner's contractor responsible for installation to approved plans for public infrastructure
- Home builders responsible for erosion control and individual site grades
- Town reviews plans and designs for general conformance to criteria
- Town inspects infrastructure and erosion control management for general conformance to plans
- Town accepts ownership and operation of infrastructure once complete and warranty expires



Sellars Gulch Tributary debris lines following storm



# JUNE 9 STORM

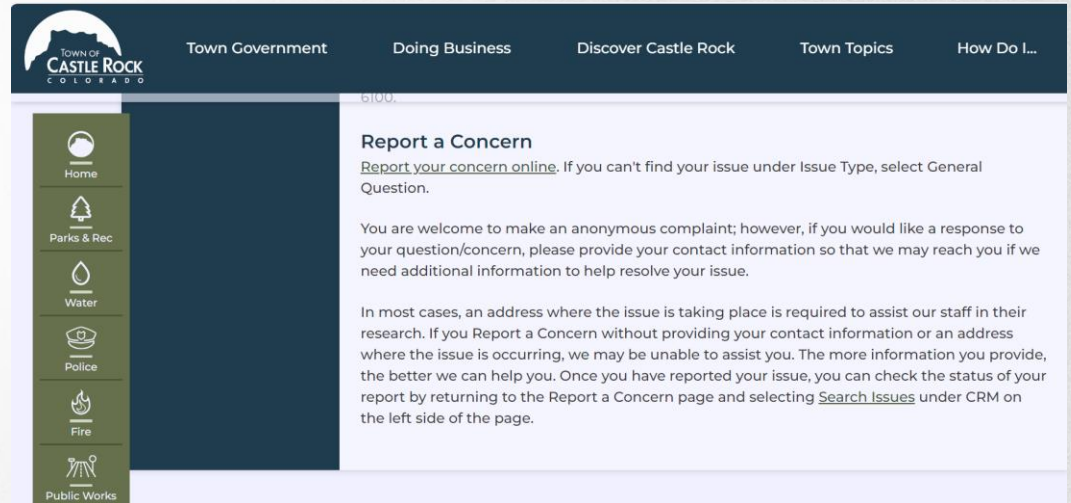
## STORMWATER MANAGEMENT INFRASTRUCTURE PROCESS

- Annexations/Zoning Applications - Phase I Drainage Design for conceptual layout and allocation of space for stormwater management
- Site Development Plans - Phase II Drainage Design for entire storm drainage network – preliminary design
- Construction Documents and Permit - Phase III Drainage Design – final design
- Inspections - All infrastructure inspected by Town staff for conformance to drawings
- Record Drawings - As-constructed mark-ups of Construction Drawings required to be certified by Engineer of Record
- Warranty 2-year warranty required on all infrastructure to address construction defects
- Plot Plans - Each house requires a drainage and grading plan prior to building permit
- Final Drainage Certification - As-constructed survey of lot to confirm minimum drainage requirements
- Inspection - All properties are inspected prior to release of the Certificate of Occupancy

# JUNE 9 STORM

## TOOLS FOR ADDRESSING PUBLIC COMPLAINTS

- Stormwater Hotline 720-733-2235 and [stormwater@crgov.com](mailto:stormwater@crgov.com)
- Report a Concern CRGOV.COM
- On-Call Emergency Response Team
- On-Call Emergency Response Consultants for spills and utility repairs
- Facilitated meetings and research team dedicated to individual issues
- Construction Warranty and TESC Sureties for accountability
- Customer Service Requests reported and reviewed monthly







# QUESTIONS?