

A group of approximately 15 people are sitting on a large, green grassy field, having a picnic. They are dressed in casual summer attire. In the background, there are large, leafy trees and a range of mountains under a cloudy sky. The scene is captured in a slightly dim, overcast light, suggesting late afternoon or early morning. A vertical white line is positioned to the right of the word 'Welcome'.

Welcome

Poll Questions:

- How long have you lived in Boulder?
- What was your experience with flooding in 2013?

Agenda

- Master Plan Overview
- Creek Overview
- Discussions on Equity
- Project Prioritization Framework
 - Overview
 - Breakout polling and discussions
- Wrap Up and Next Steps
- Comment Form

CFS Master Plan Update



Key Tasks

- Review policies
- Evaluate progress
- Develop program and process recommendations
- Provide a framework for evaluating priorities and projects

PURPOSE STATEMENT

The purpose of the plan is to improve the management of stormwater to help protect people, places, property, and ecosystems in the City of Boulder in a way that builds resilience and is consistent with community values.



Completed Community Engagement

- January: Formation of CWG
- January - March: Be Heard Boulder Launch
- July 21st: Boulder Shelter for the Homeless Visit
- August 3rd: National Night Out
- August 29th: Duck Race
- September 4th: Hometown Festival
- September 22nd & October 16th: Farmer's Market
- Oct / Nov: Virtual Community Meetings



How to Participate

Regional Meetings

Future engagement opportunities

Fall Outreach Schedule

Creek Meetings (all meetings 5:30-7:30 p.m.):

Wednesday, Oct. 20 | Fourmile & Wonderland

Thursday, Oct. 21 | Goose, Twomile & Elmer's Twomile

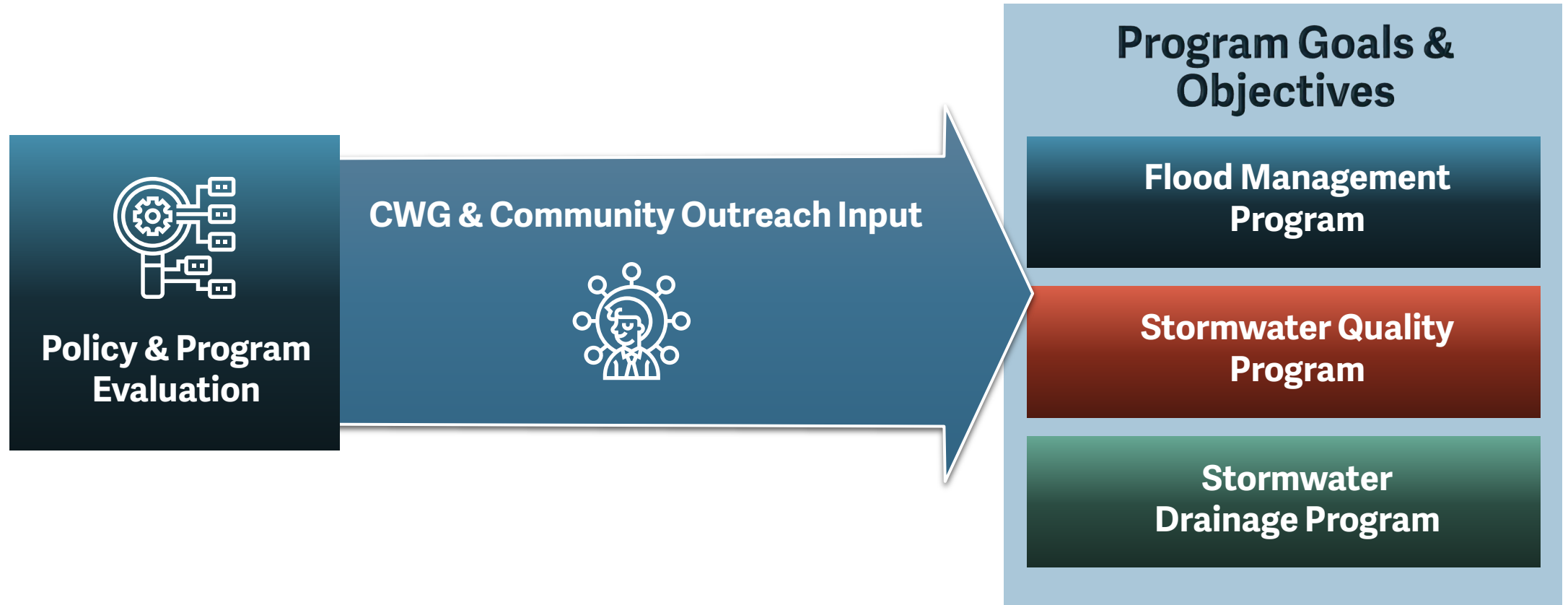
Monday, Oct. 25 | Boulder Creek/Boulder Slough, Sunshine & Gregory

Thursday, Oct. 28 | Spanish Language Meeting

Monday, Nov. 1 | Skunk, Bluebell & King's Gulch

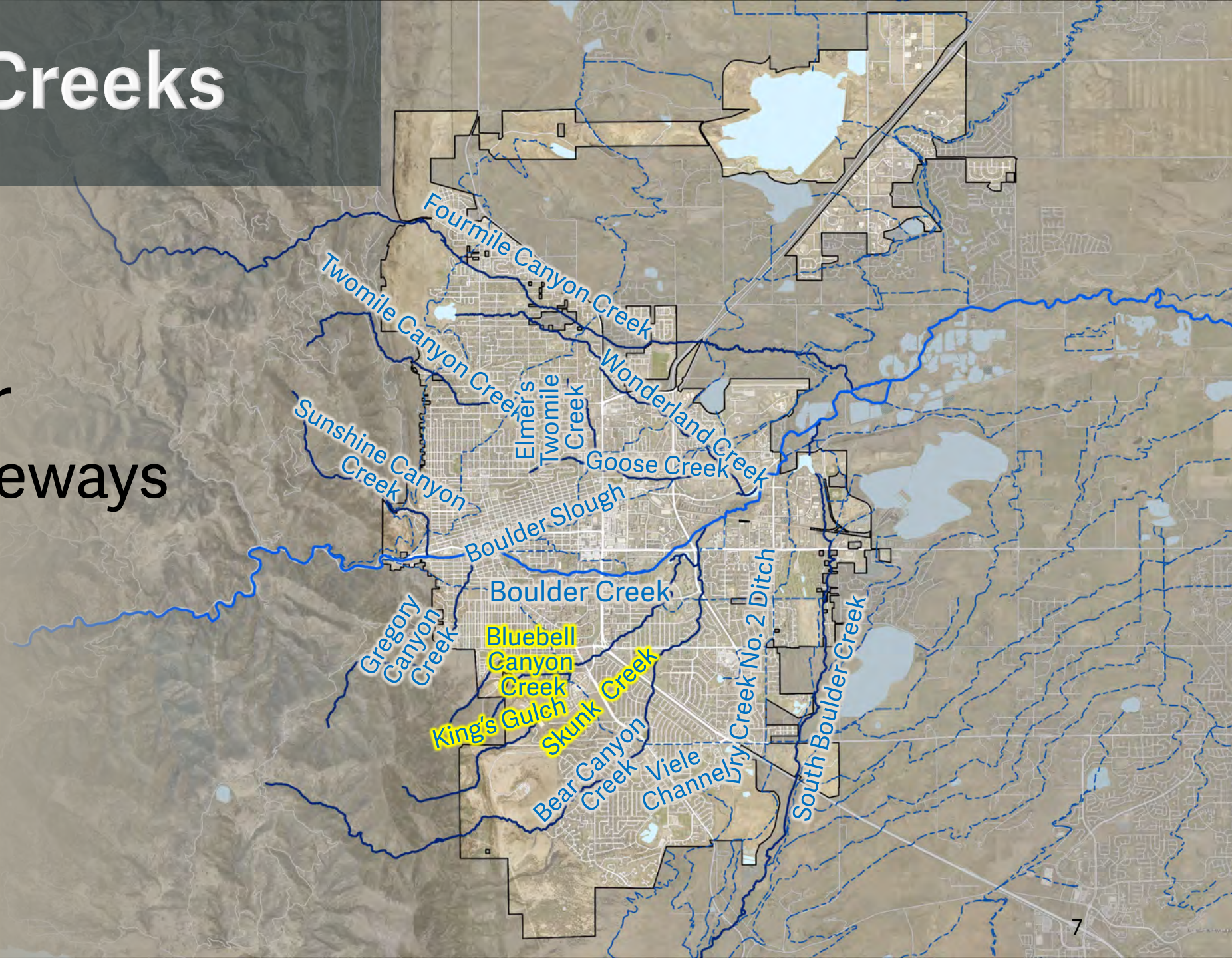
Wednesday, Nov. 3 | S. Boulder Creek, Bear, Viele & Dry Creek Ditch #2

Master Plan Content Informed by Public Outreach



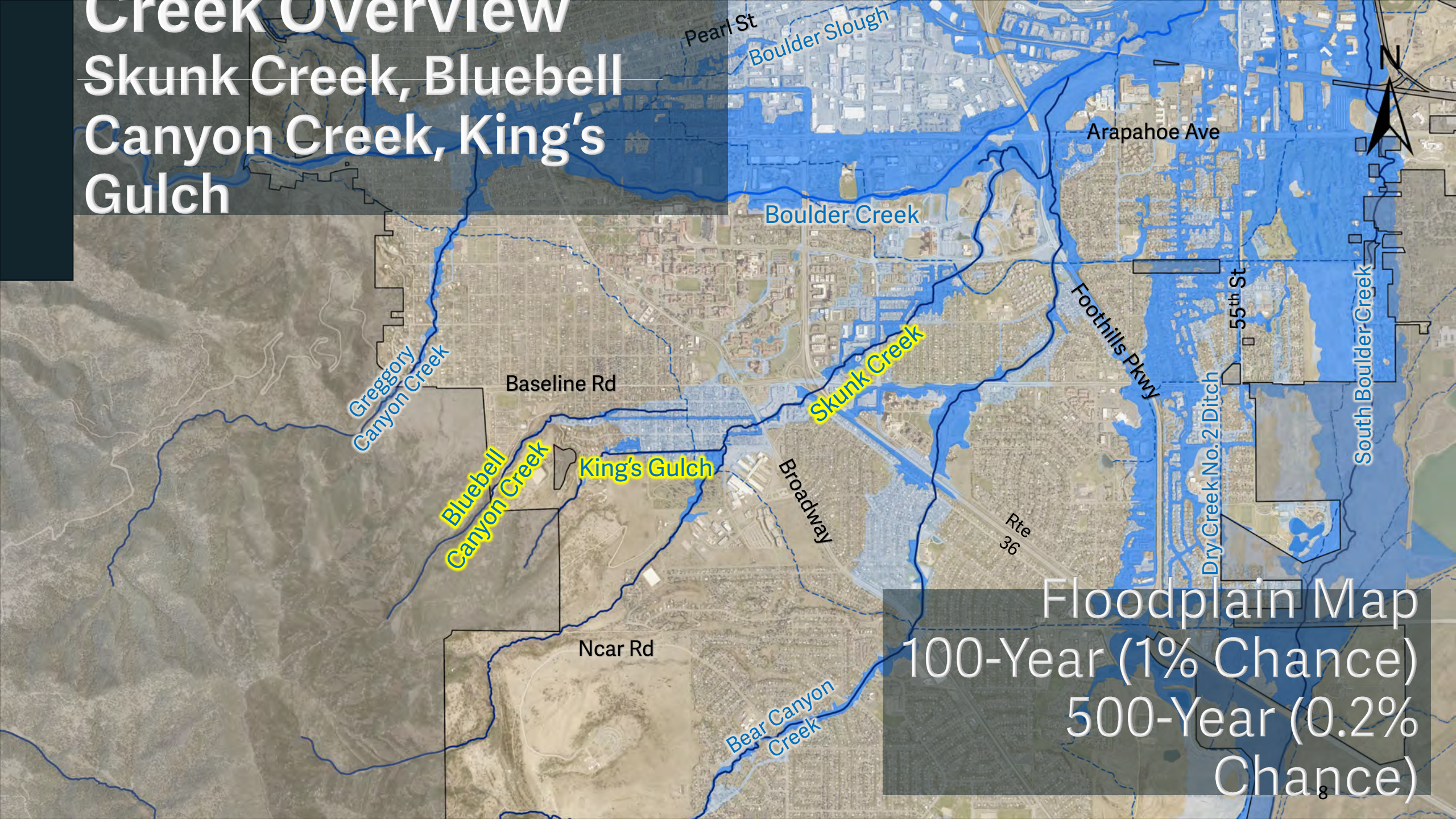
Boulder's Creeks

16 Major
Drainageways



Creek Overview

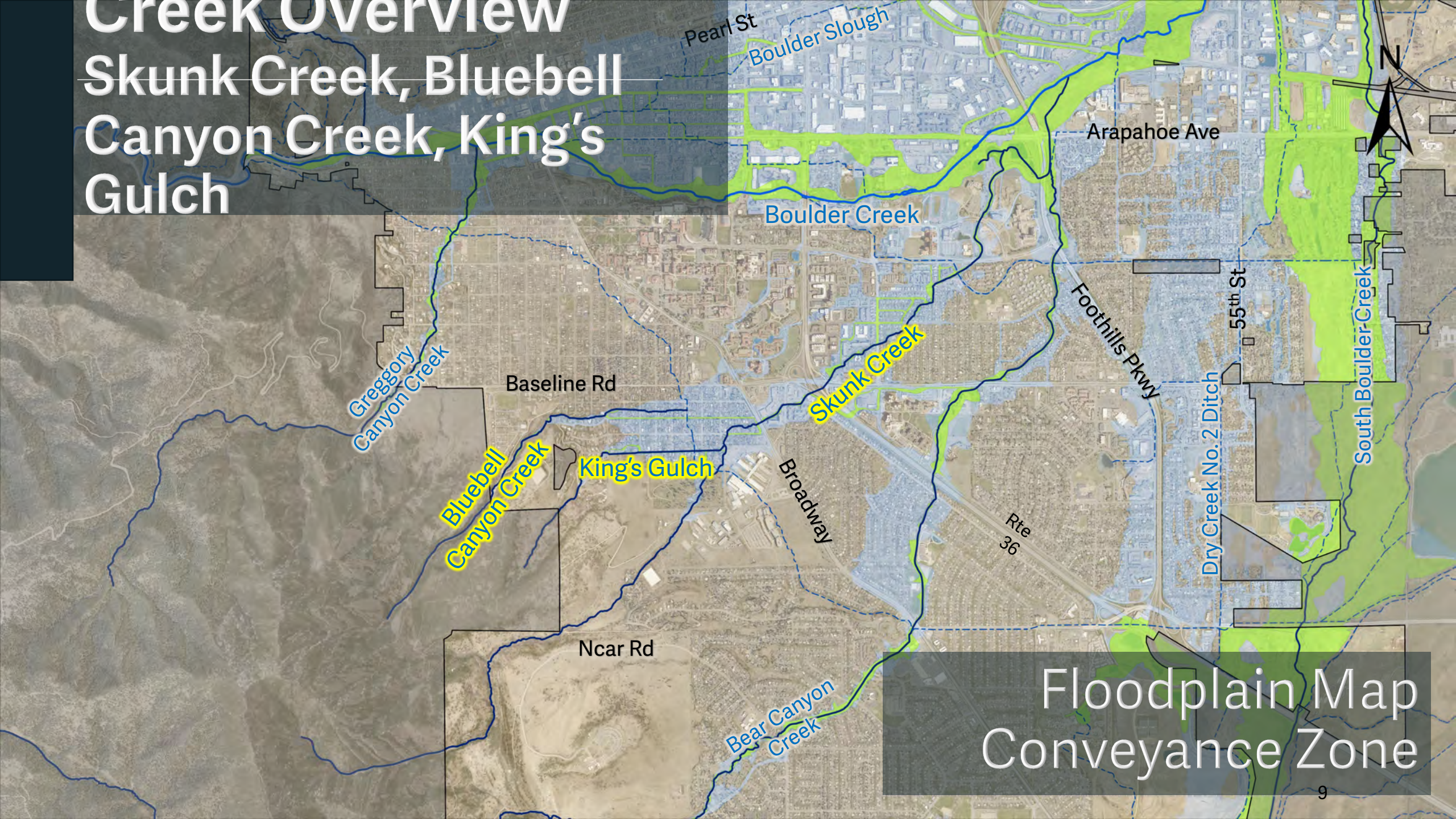
Skunk Creek, Bluebell Canyon Creek, King's Gulch



Floodplain Map
100-Year (1% Chance)
500-Year (0.2%
Chance)

Creek Overview

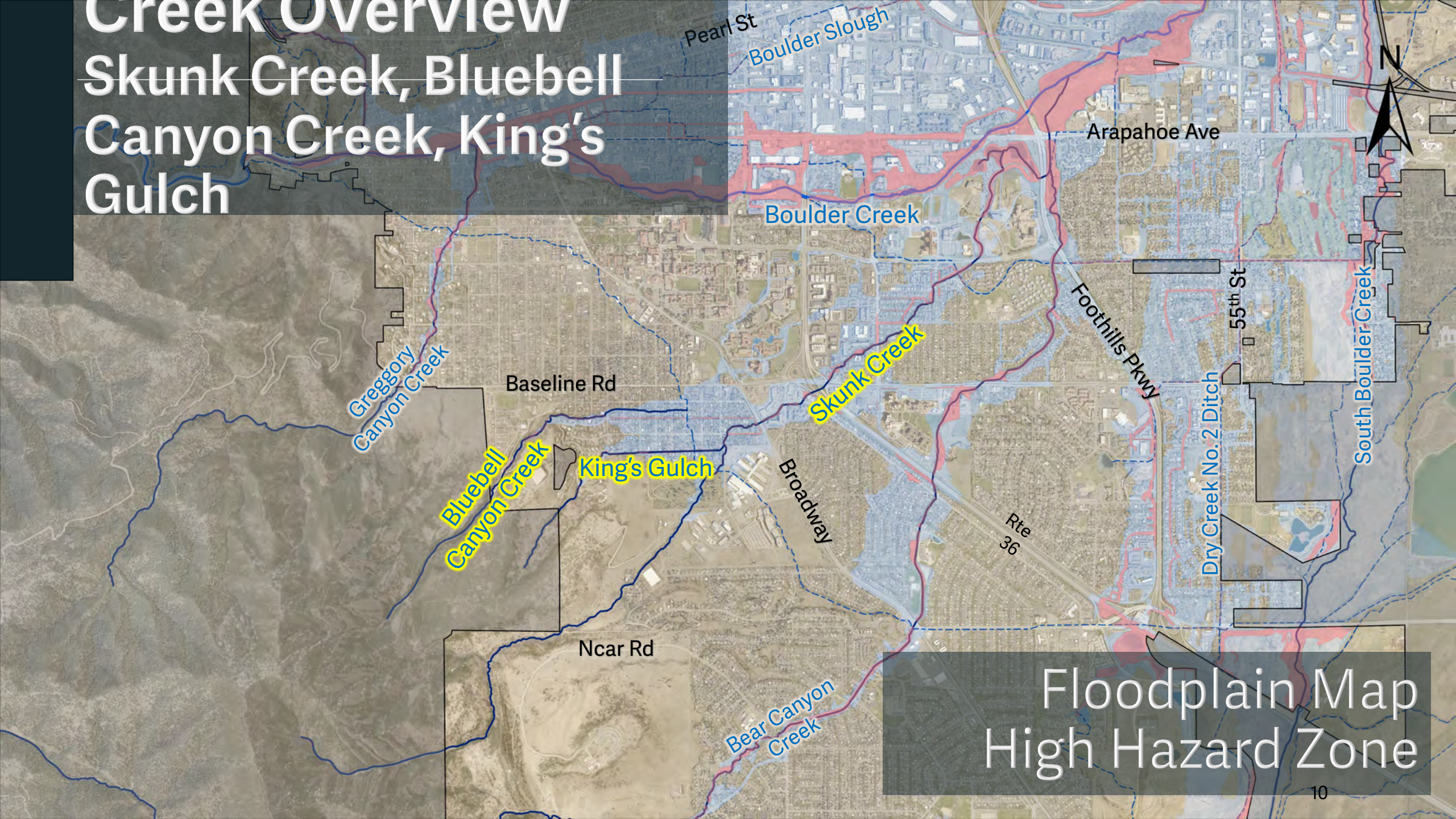
Skunk Creek, Bluebell Canyon Creek, King's Gulch



Floodplain Map
Conveyance Zone

Creek Overview

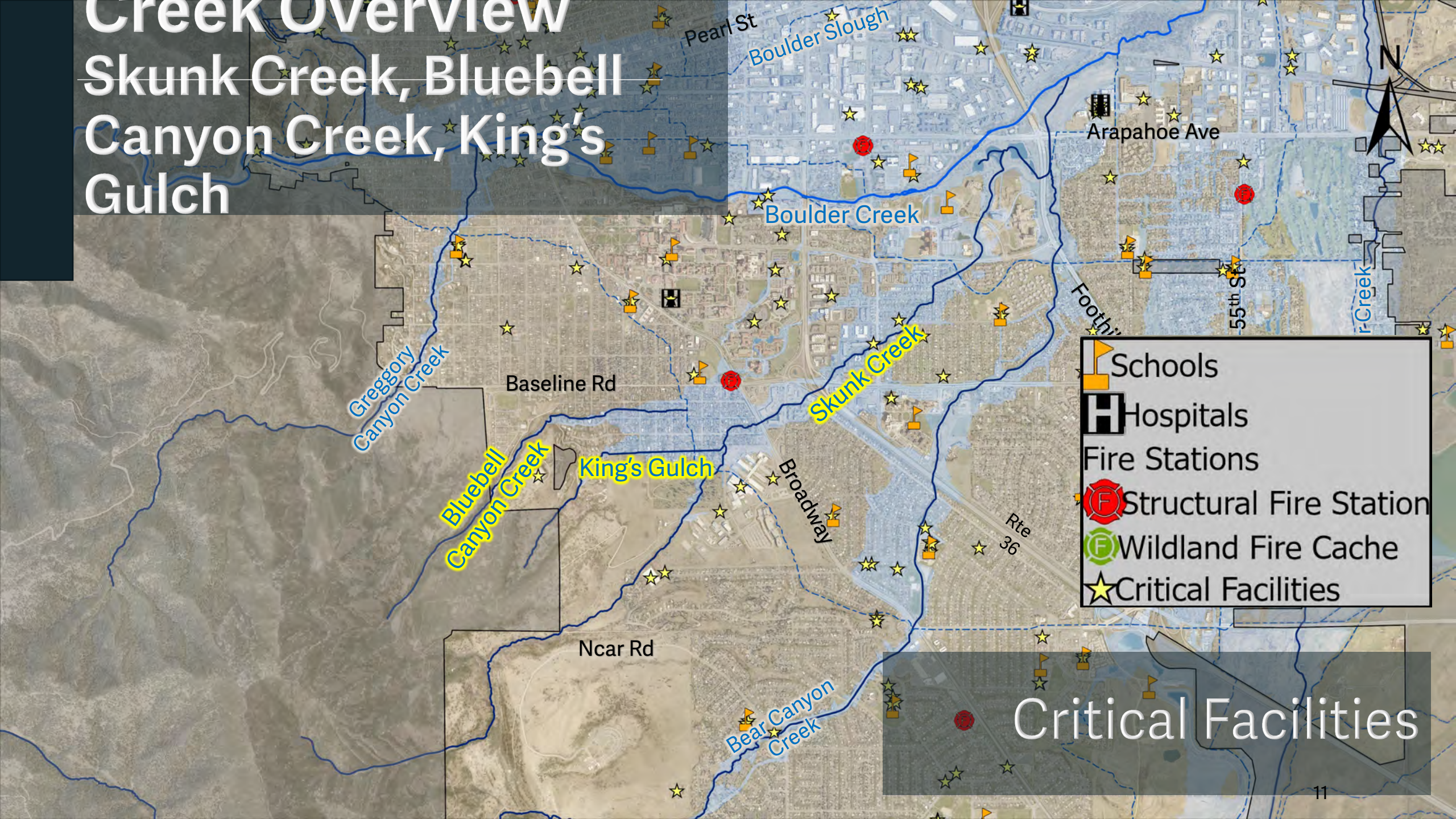
Skunk Creek, Bluebell Canyon Creek, King's Gulch



Floodplain Map
High Hazard Zone

Creek Overview

Skunk Creek, Bluebell Canyon Creek, King's Gulch



Critical Facilities

Creek Overview

Skunk Creek, Bluebell Canyon Creek, King's Gulch



Ditch Crossings

Creek Overview

Skunk Creek, Bluebell Canyon Creek, King's Gulch



Ditch Crossings

Creek Overview | Current Issues

Skunk Creek and Anderson Ditch



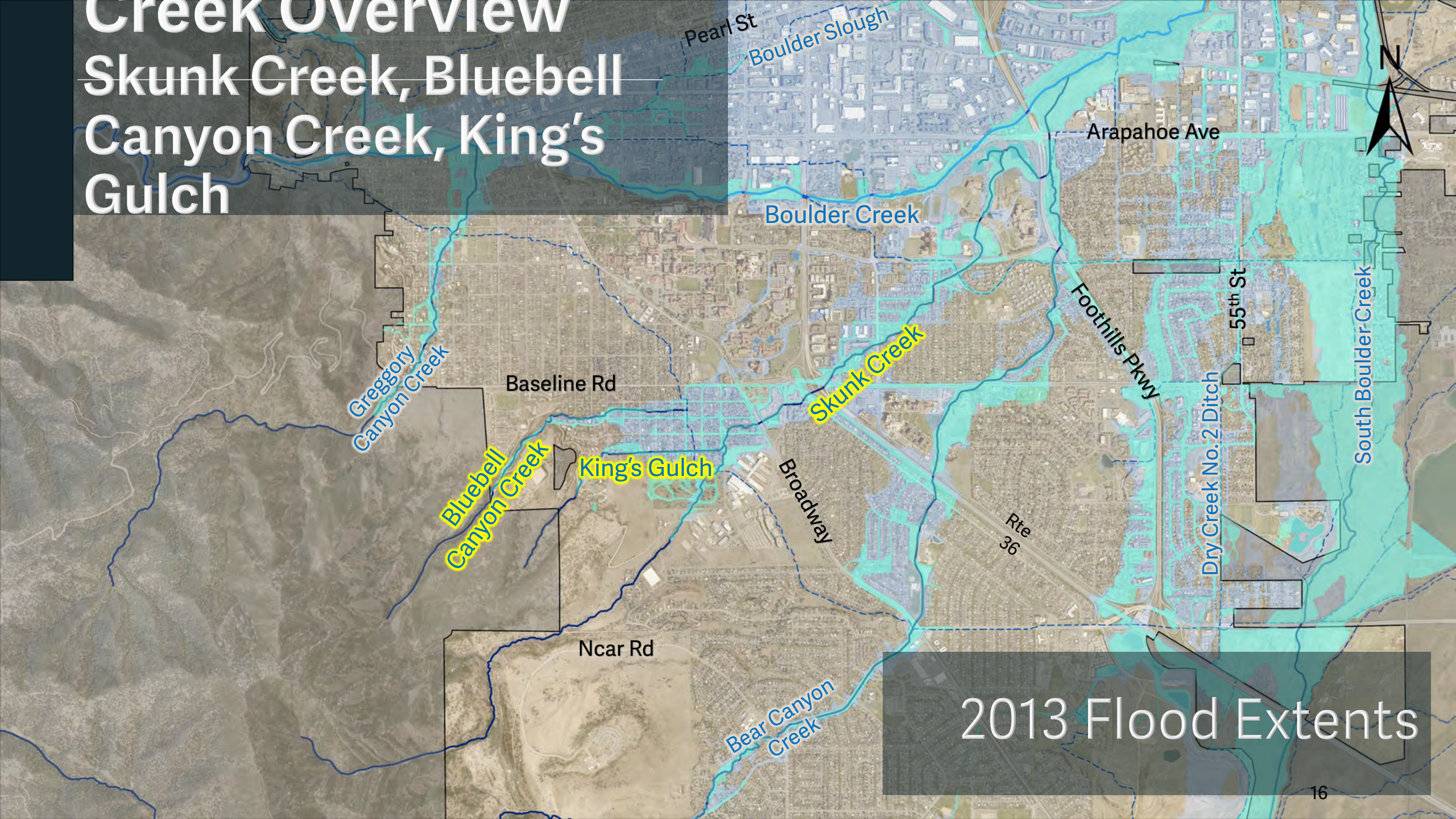
Creek Overview | Current Issues

Skunk Creek and Wellman Canal



Creek Overview

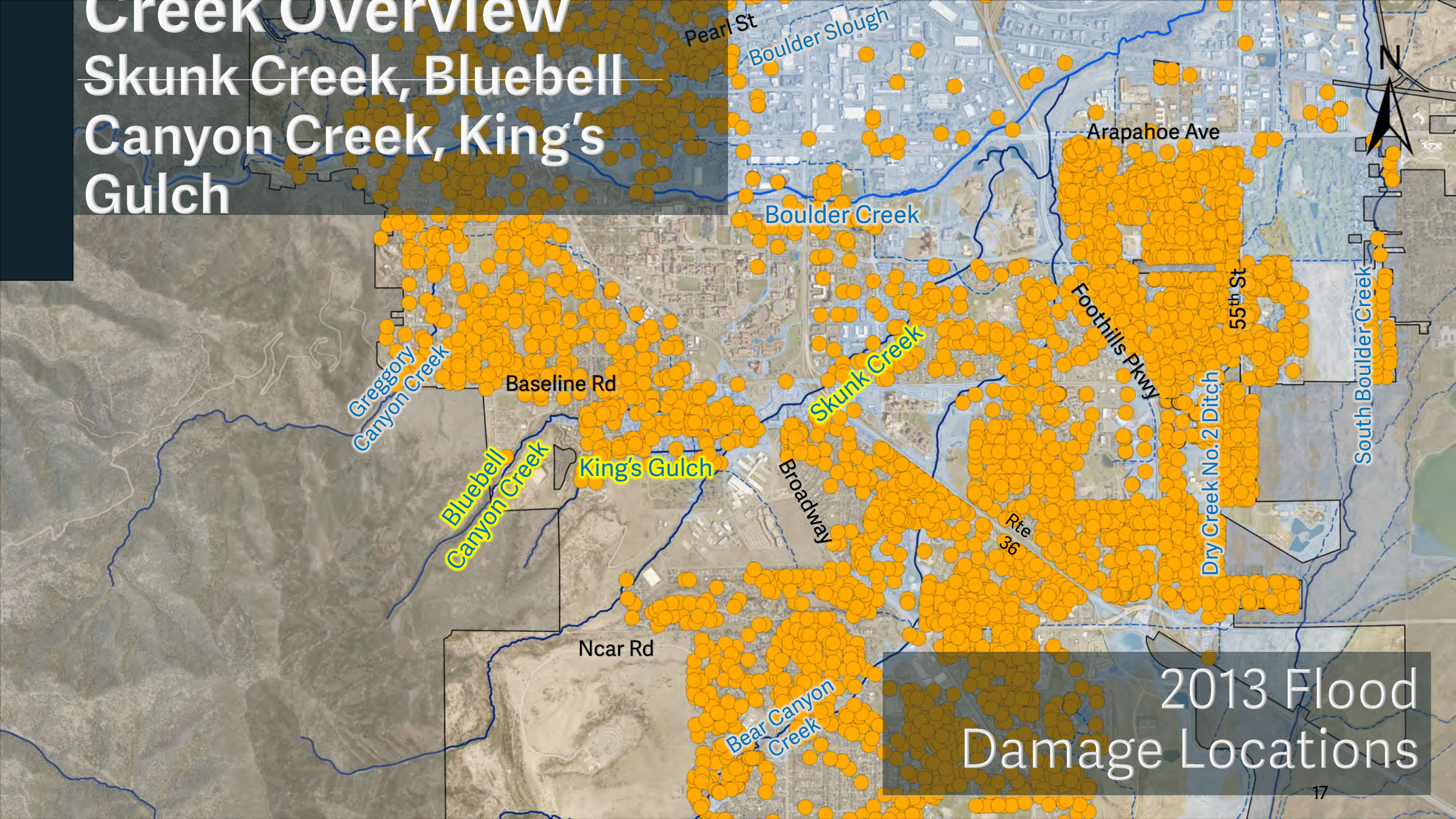
Skunk Creek, Bluebell Canyon Creek, King's Gulch



2013 Flood Extents

Creek Overview

Skunk Creek, Bluebell Canyon Creek, King's Gulch



2013 Flood
Damage Locations

Creek Overview | 2013 Flood



**Bluebell Canyon
Creek**
Hero Bridge

Creek Overview | 2013 Flood

King's Gulch



West of 17th St



17th and King

Creek Overview | 2013 Flood



Skunk Creek
27th Way

Creek Overview | 2013 Flood

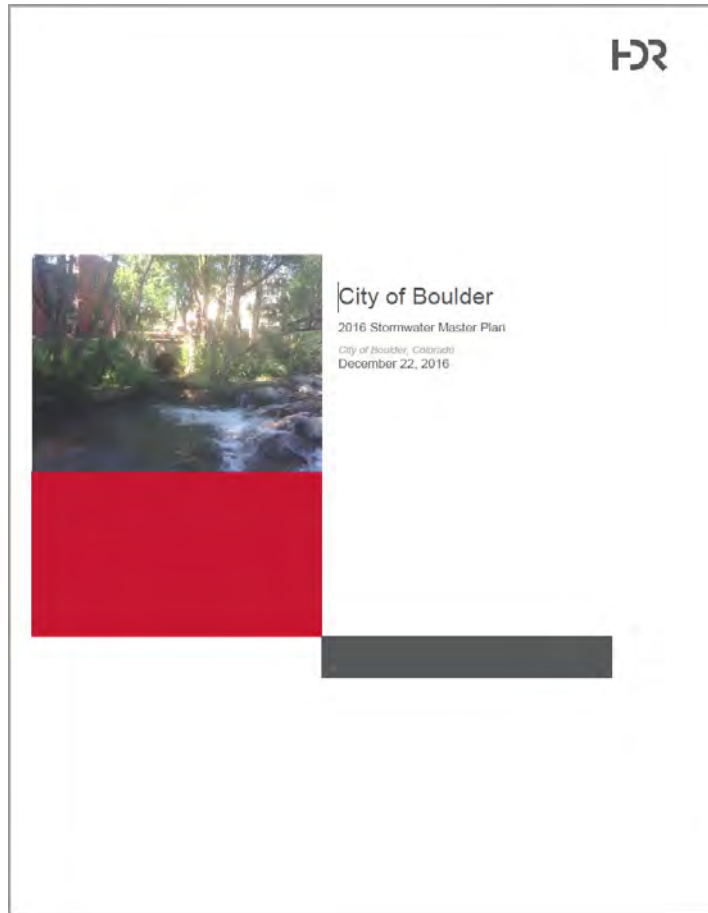
Skunk Creek



Baseline Rd.

Creek Overview

Skunk Creek, Bluebell Canyon Creek, King's Gulch



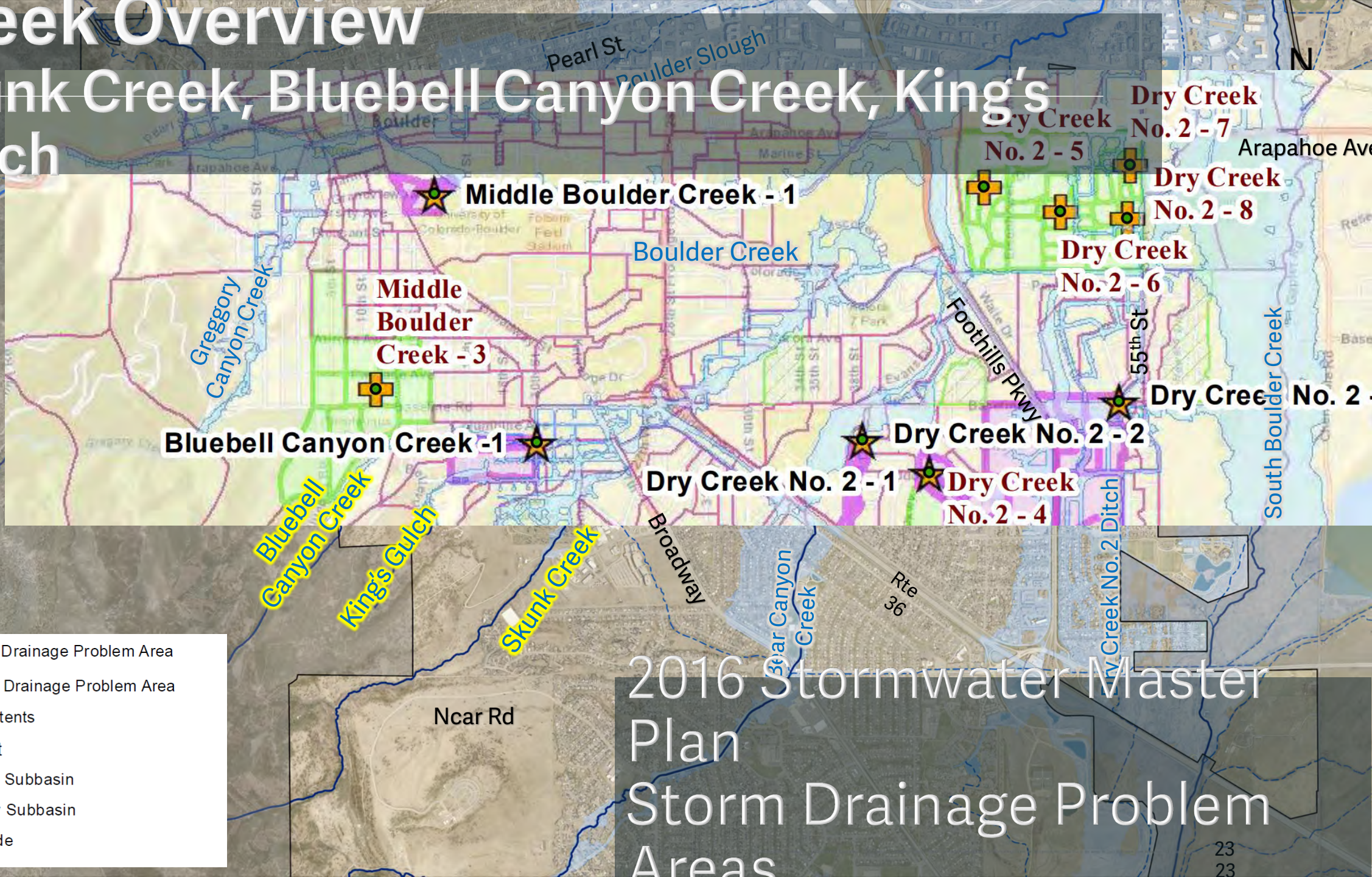
Stormwater Master Plan



Drainageway Mitigation Plans

Creek Overview

Skunk Creek, Bluebell Canyon Creek, King's Gulch



★ Type A - Local Drainage Problem Area

✚ Type B - Local Drainage Problem Area

2013 Flood Extents

Subcatchment

Type A Priority Subbasin

Type B Priority Subbasin

Type B Override

2016 Stormwater Master
Plan
Storm Drainage Problem
Areas

Creek Overview | Mitigation Planning

Skunk Creek, Bluebell Canyon Creek, King's Gulch



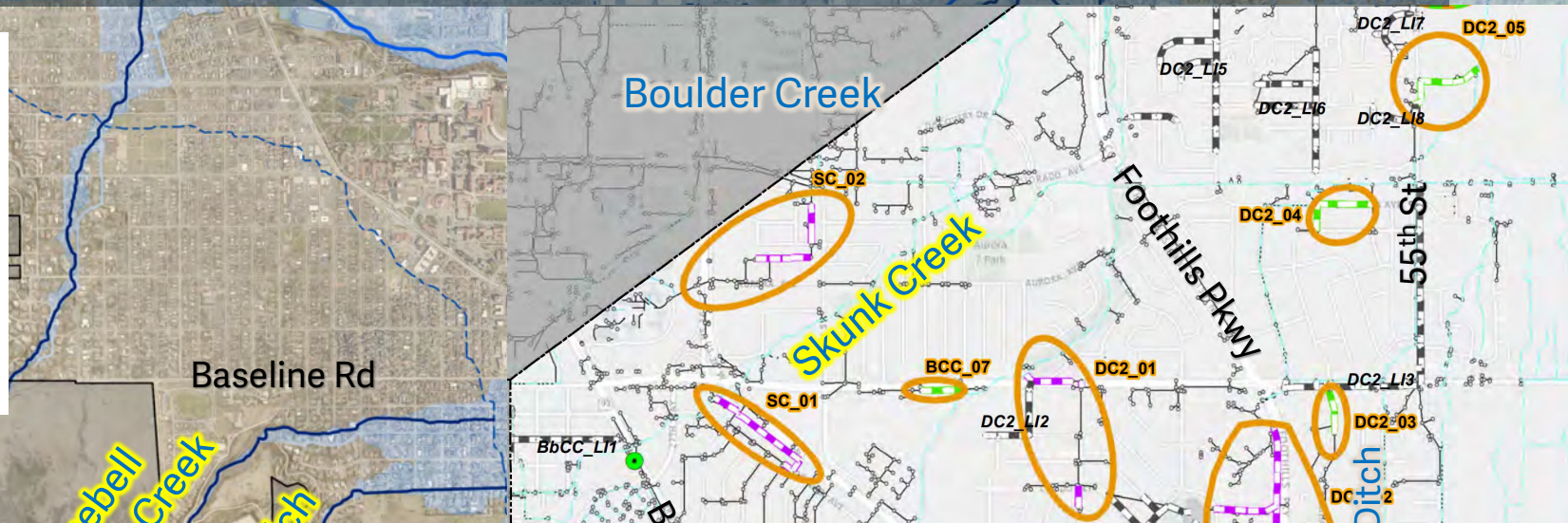
2016 Stormwater Master
Plan
Water Quality Concerns

Creek Overview | Mitigation Planning

Skunk Creek, Bluebell Canyon Creek, King's Gulch

Collector Storm Sewer System Improvements

- Tier I Pipes
- Tier II Pipes
- Tier III Pipes
- Water Quality Manholes
- Water Quality Surface BMP



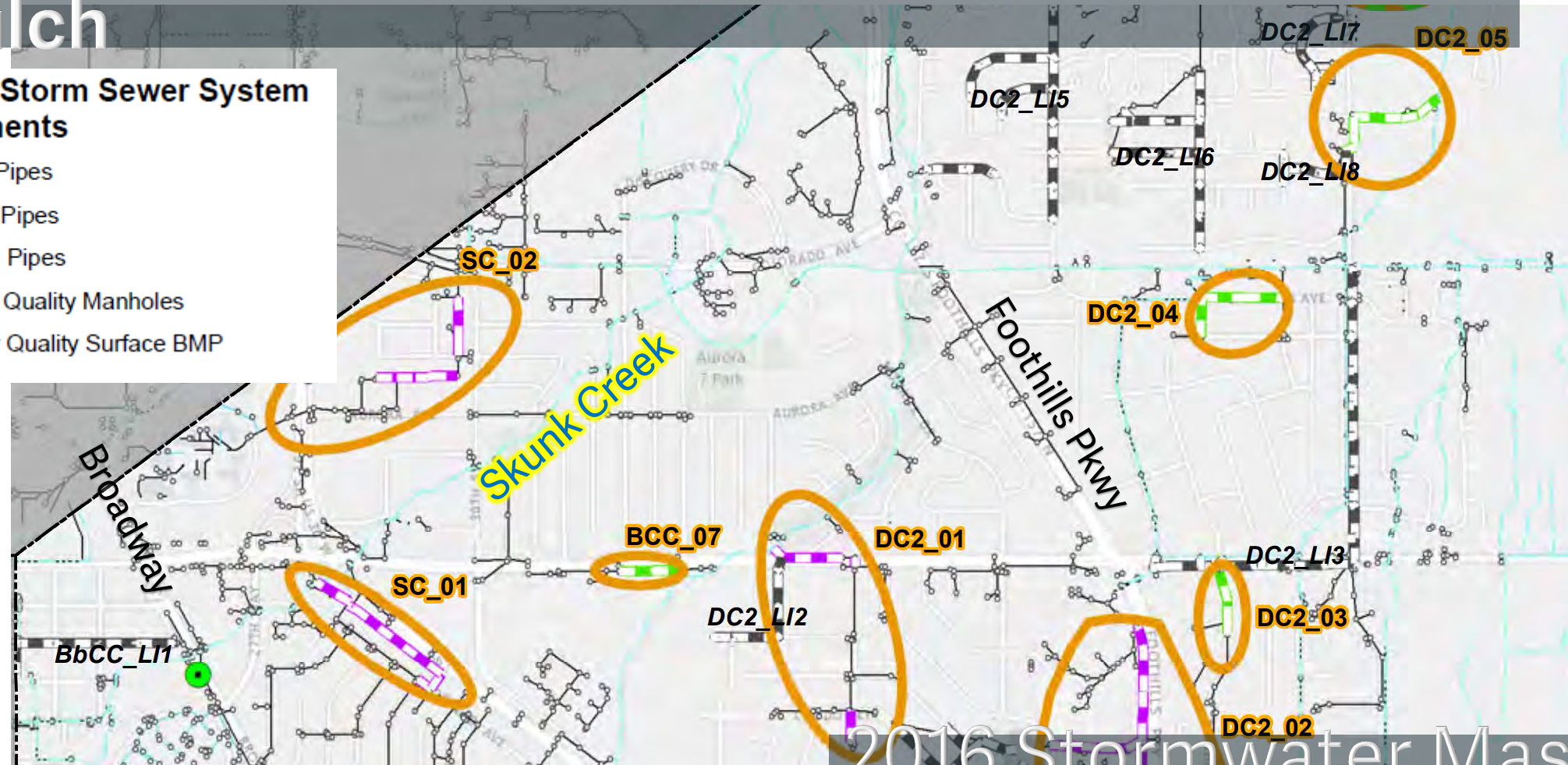
2016 Stormwater Master Plan Recommendations

Creek Overview | Mitigation Planning

Skunk Creek, Bluebell Canyon Creek, King's Gulch

Collector Storm Sewer System Improvements

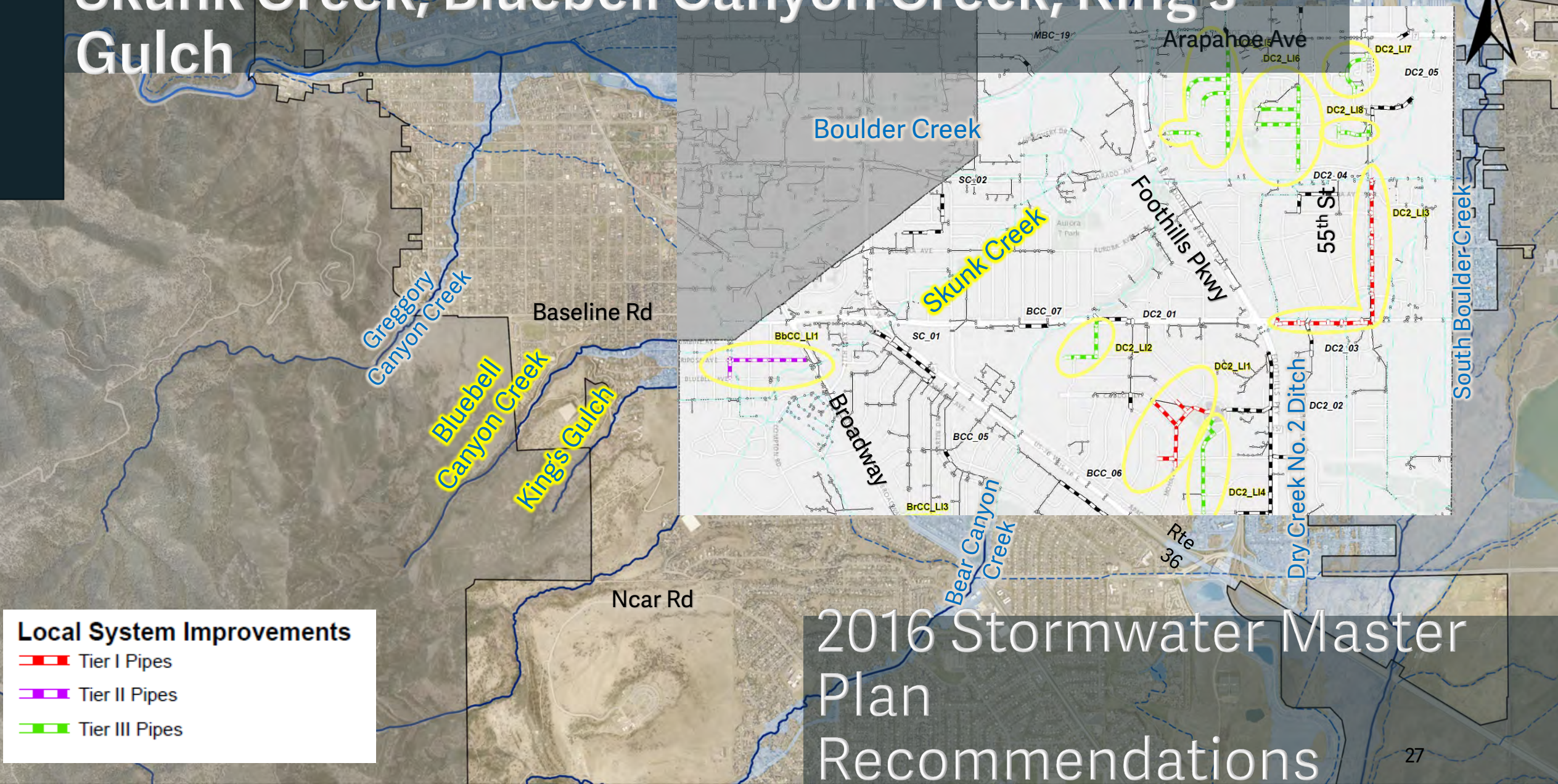
- Tier I Pipes
- Tier II Pipes
- Tier III Pipes
- Water Quality Manholes
- Water Quality Surface BMP



2016 Stormwater Master Plan Recommendations

Creek Overview | Mitigation Planning

Skunk Creek, Bluebell Canyon Creek, King's Gulch



Creek Overview | Mitigation Planning

Skunk Creek, Bluebell Canyon Creek, King's Gulch



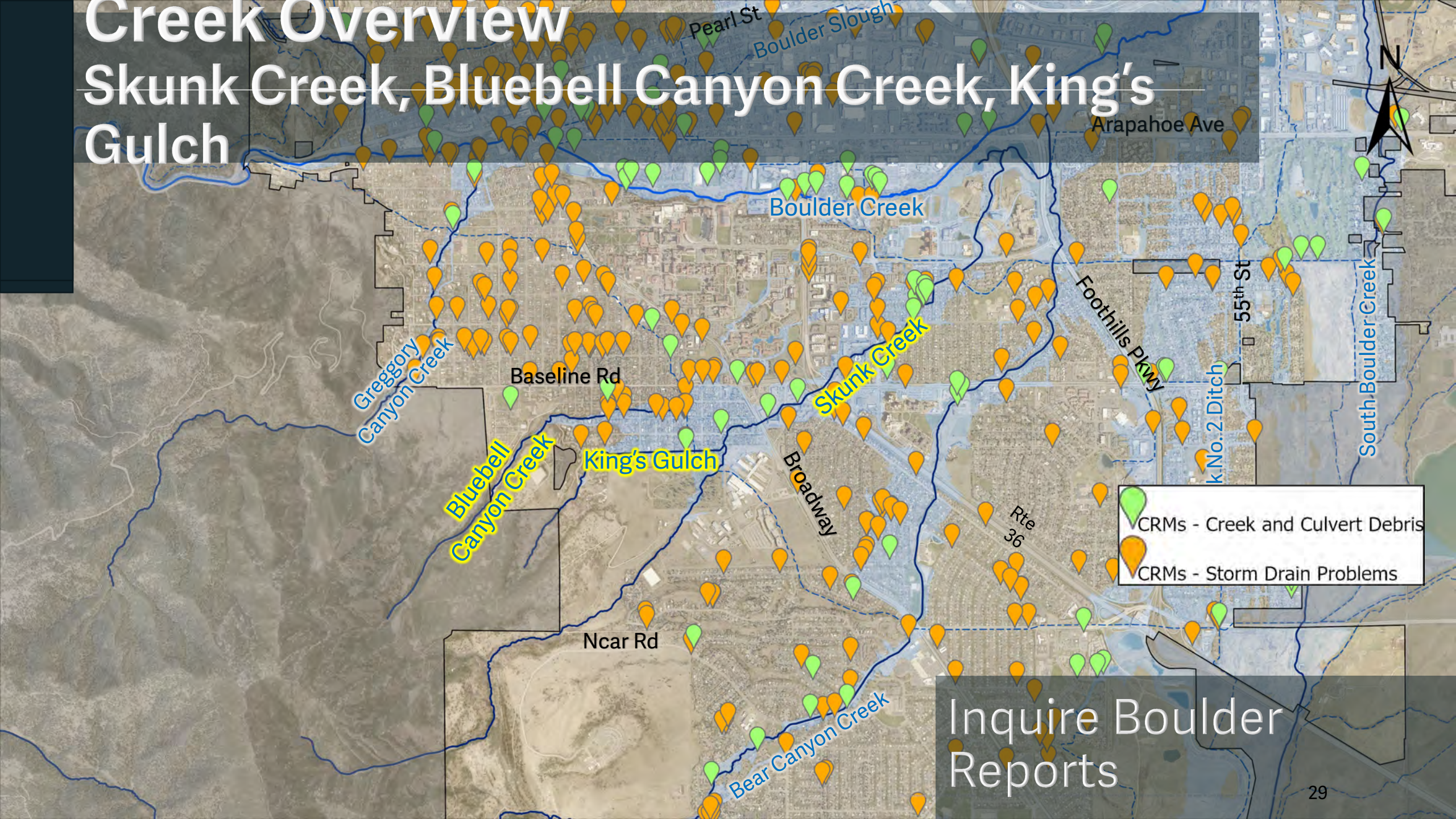
Local System Improvements

- Tier I Pipes
- Tier II Pipes
- Tier III Pipes

2016 Stormwater Master Plan Recommendations

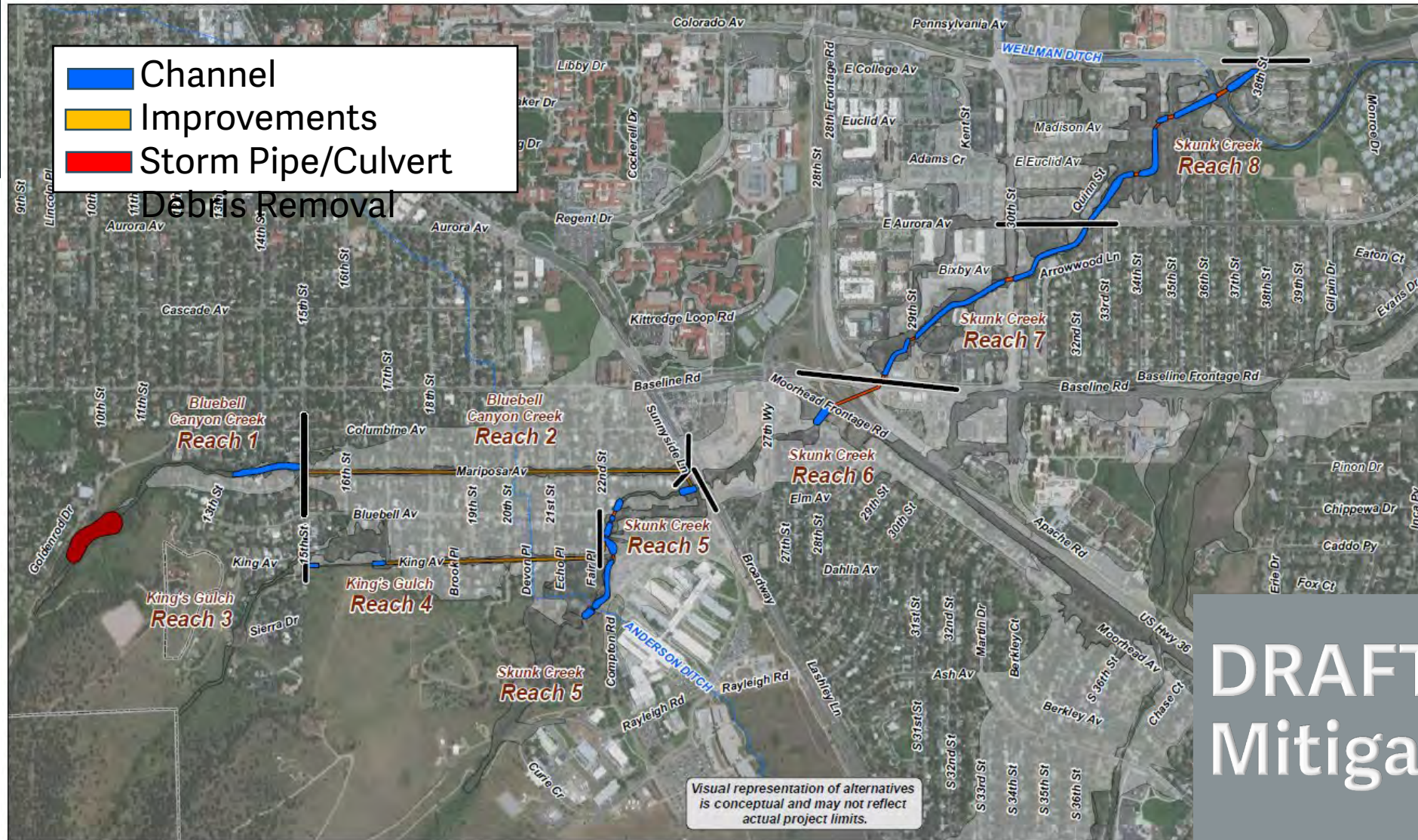
Creek Overview

Skunk Creek, Bluebell Canyon Creek, King's Gulch



Creek Overview | Mitigation Planning

Skunk Creek, Bluebell Canyon Creek, King's Gulch



DRAFT
Mitigation Plan

Creek Overview | Current Issues

Bluebell Canyon Creek at 15th St



Creek Overview | Current Issues

King's Gulch at 15th St



Creek Overview | Current Issues



King's Gulch
17th St

Creek Overview | Current Issues

Skunk Creek



South of King Ave.



West of 29th St.

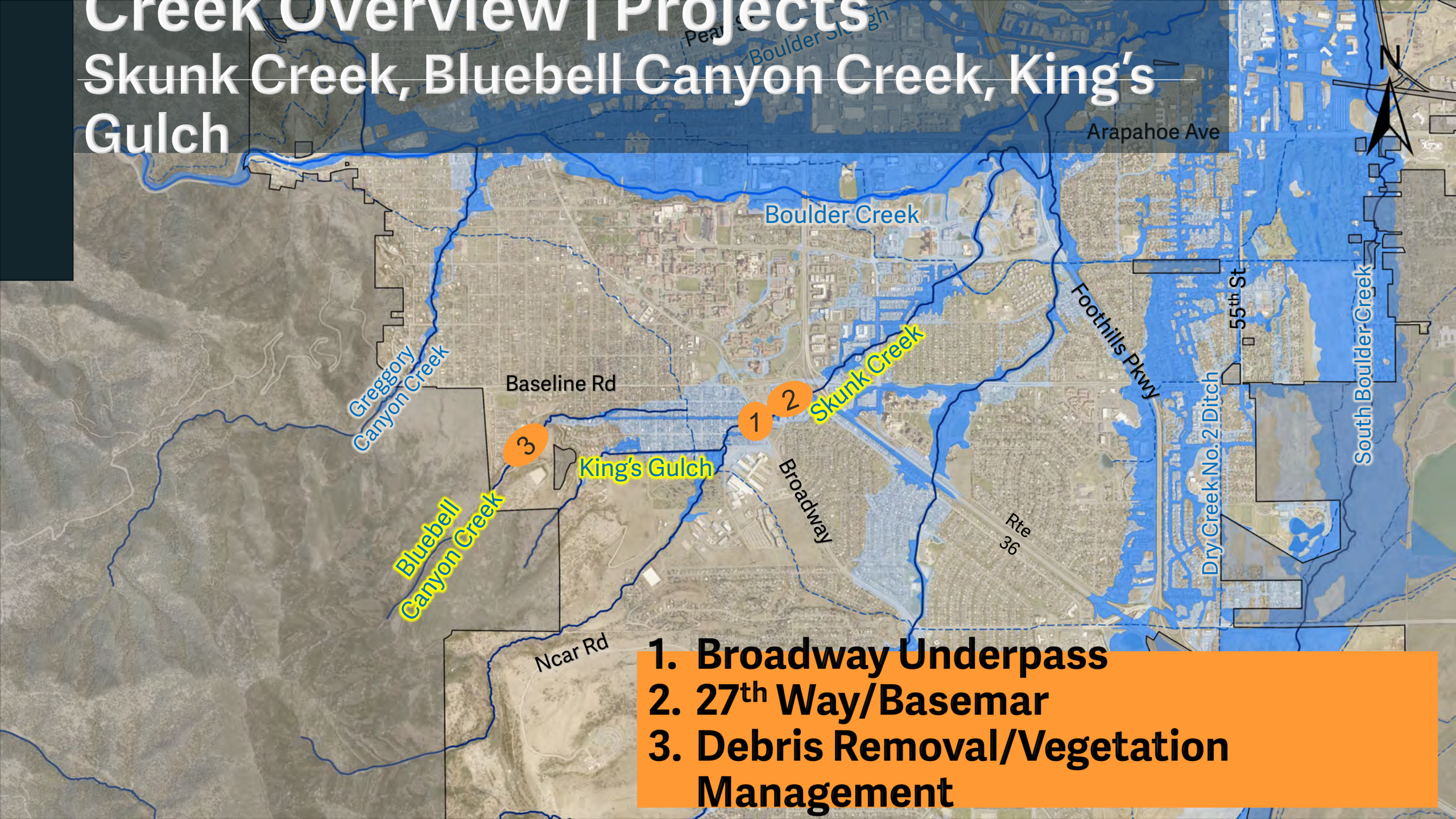
Creek Overview | Current Issues



Skunk Creek

Creek Overview | Projects

Skunk Creek, Bluebell Canyon Creek, King's Gulch



1. Broadway Underpass
2. 27th Way/Basemar
3. Debris Removal/Vegetation Management

Creek Overview | Projects



Skunk Creek
Broadway

Creek Overview | Projects



**Skunk Creek
BaseMar Shopping Center**

Creek Overview | Projects



**Bluebell Canyon Creek
Debris Removal/Vegetation Management**

**Policy &
Program
Evaluation** + **Community
Input** + **Existing
Creek
Plans**



**Inform Policy
Recommendations**

**Develop Project
Prioritization
Framework**

Project Prioritization Criteria

Life Safety

Ability to
Implement

Efficiency & Cost

**Social Impact,
Equity & Fairness**

Protect Property

Cultural
Resources

Environmental
Resources

Infrastructure
Resiliency

Protect Critical
Facilities

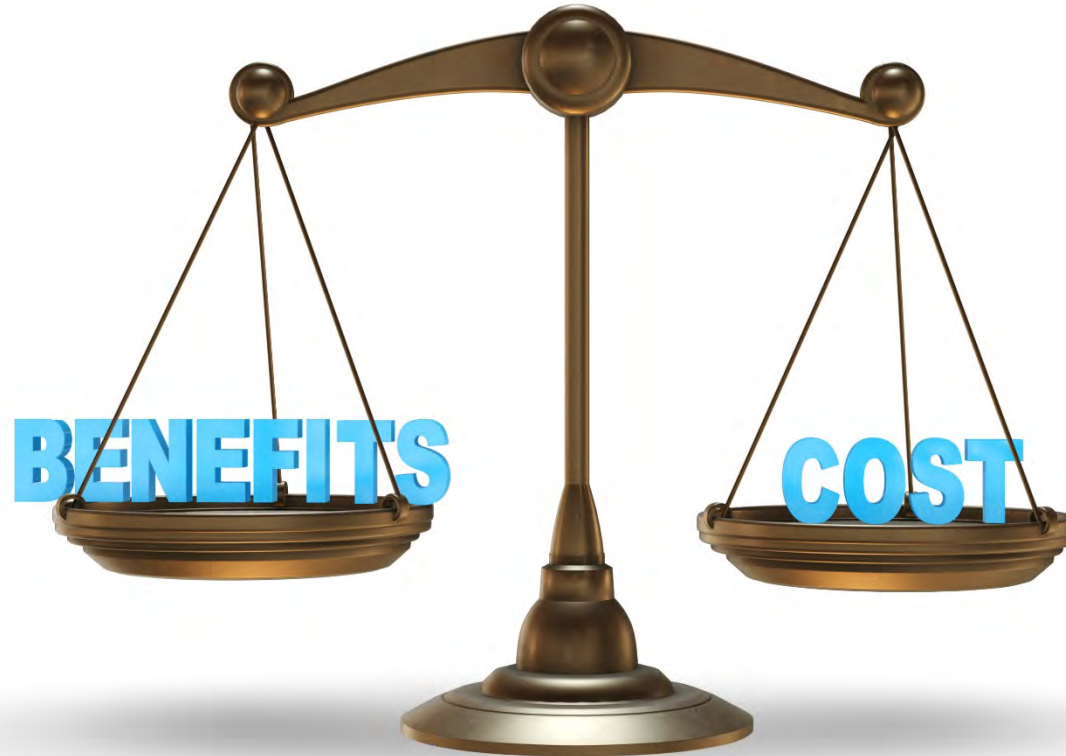
Equity



When one's identity cannot predict the outcome.

Source: OEHR.

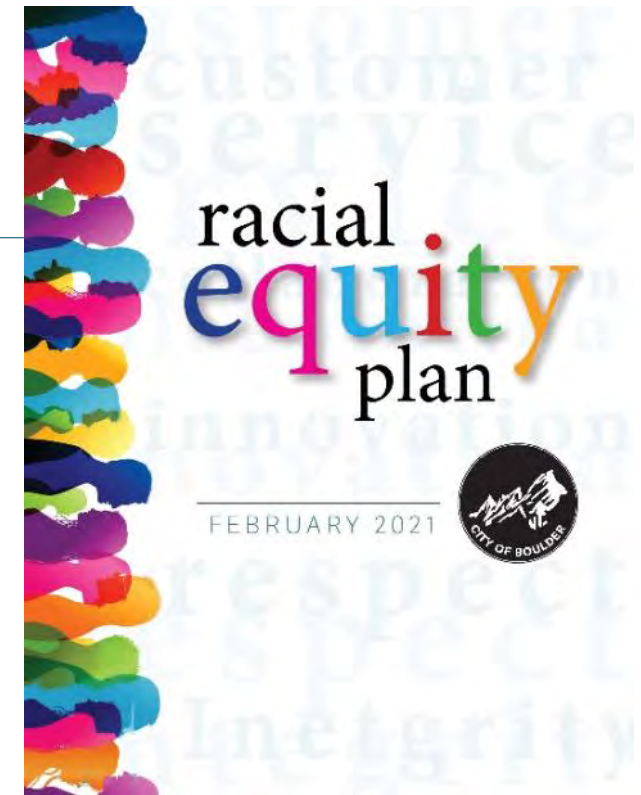
Project Prioritization Criteria



Racial Equity

When race does not determine or predict the distribution of resources, economic/political/social opportunities, and burdens for group members in society.

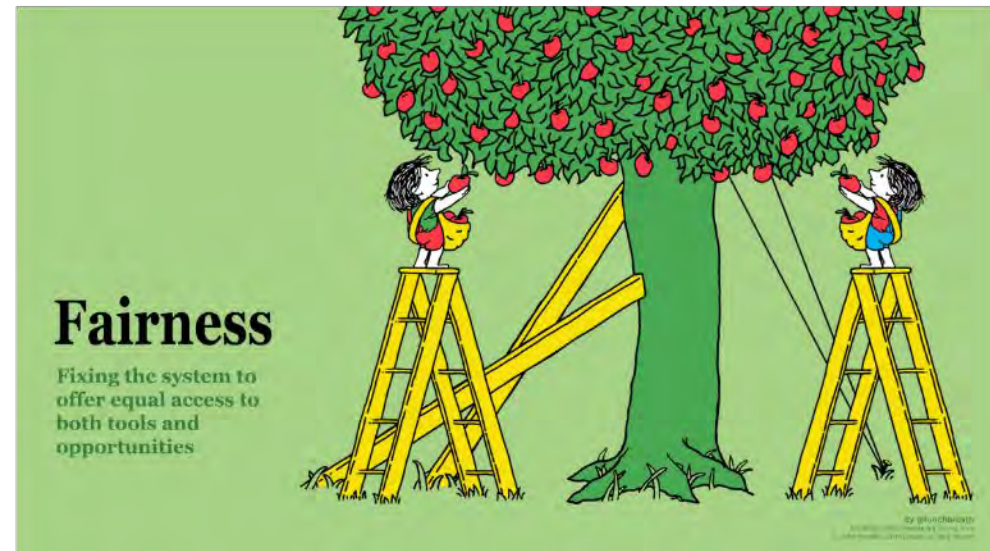
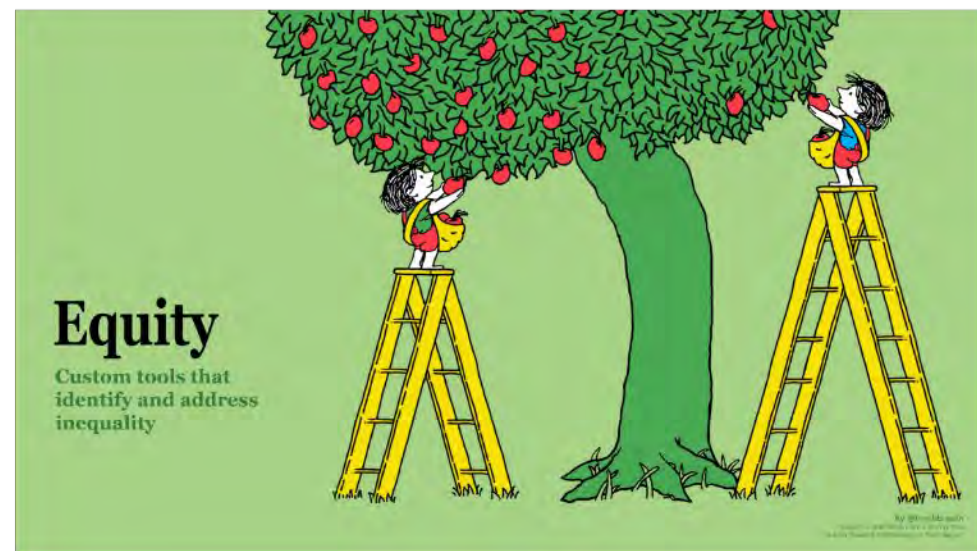
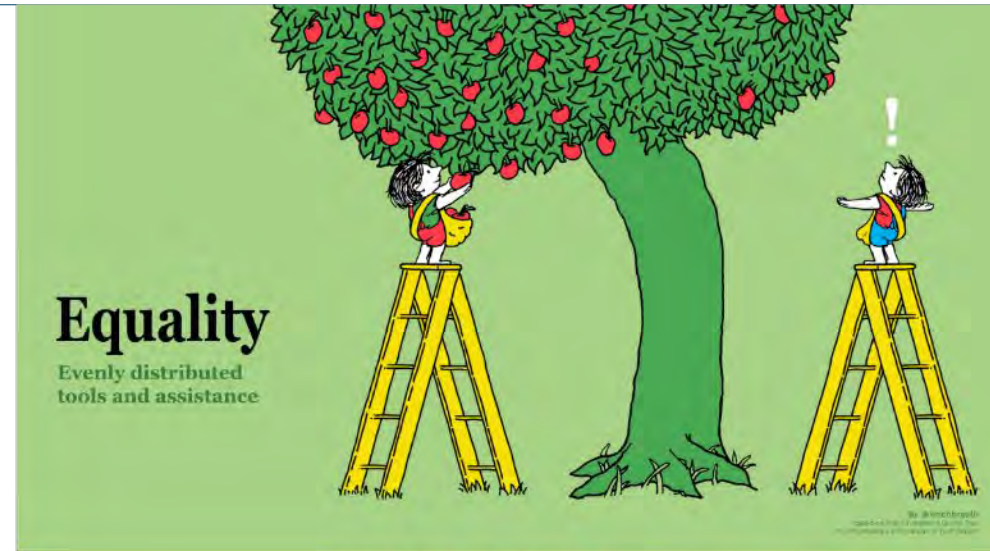
Source: OEHR and Seattle RSJI.



City of Boulder Racial Equity Plan, 2021



What does *Equity* mean?

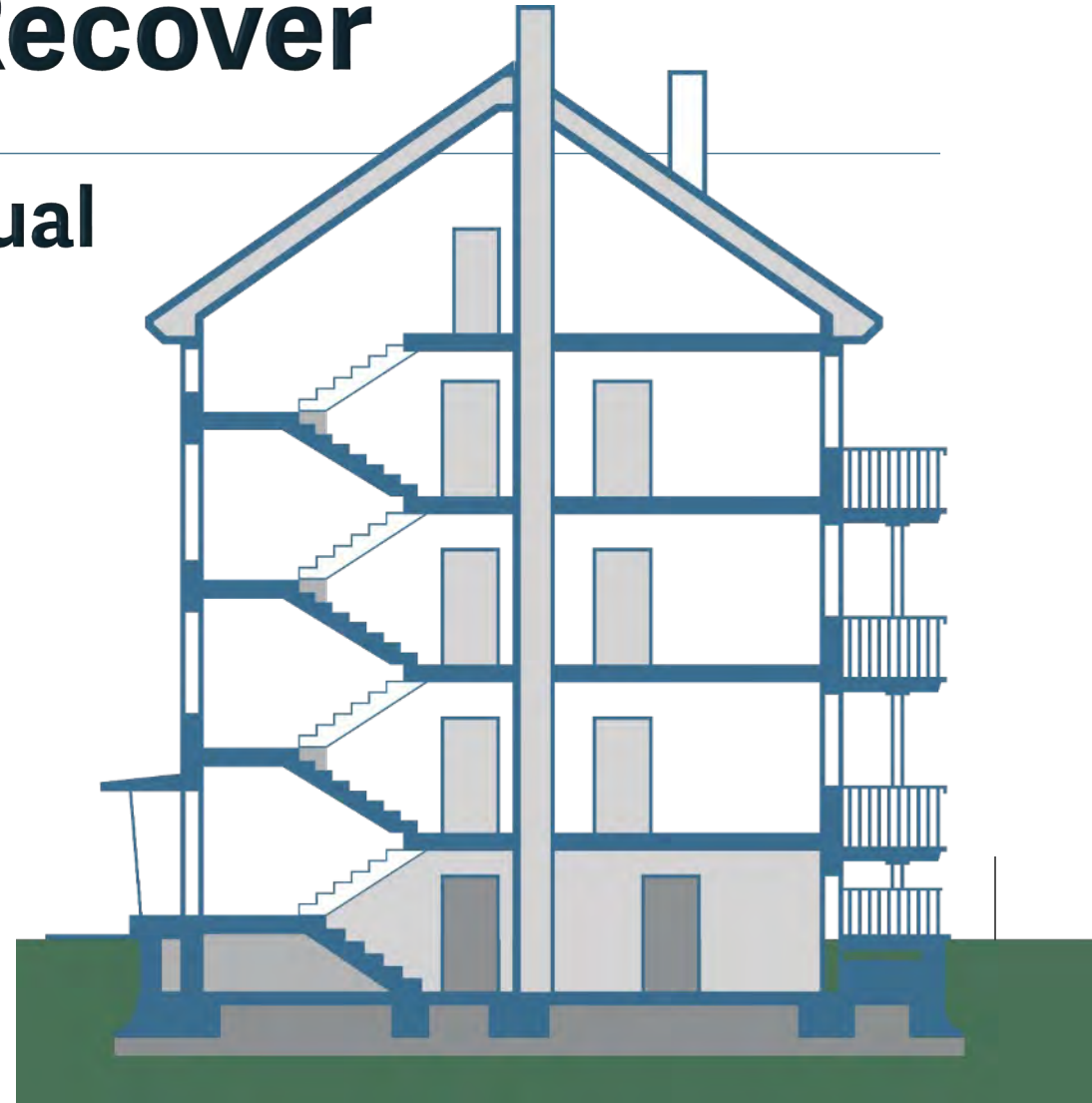
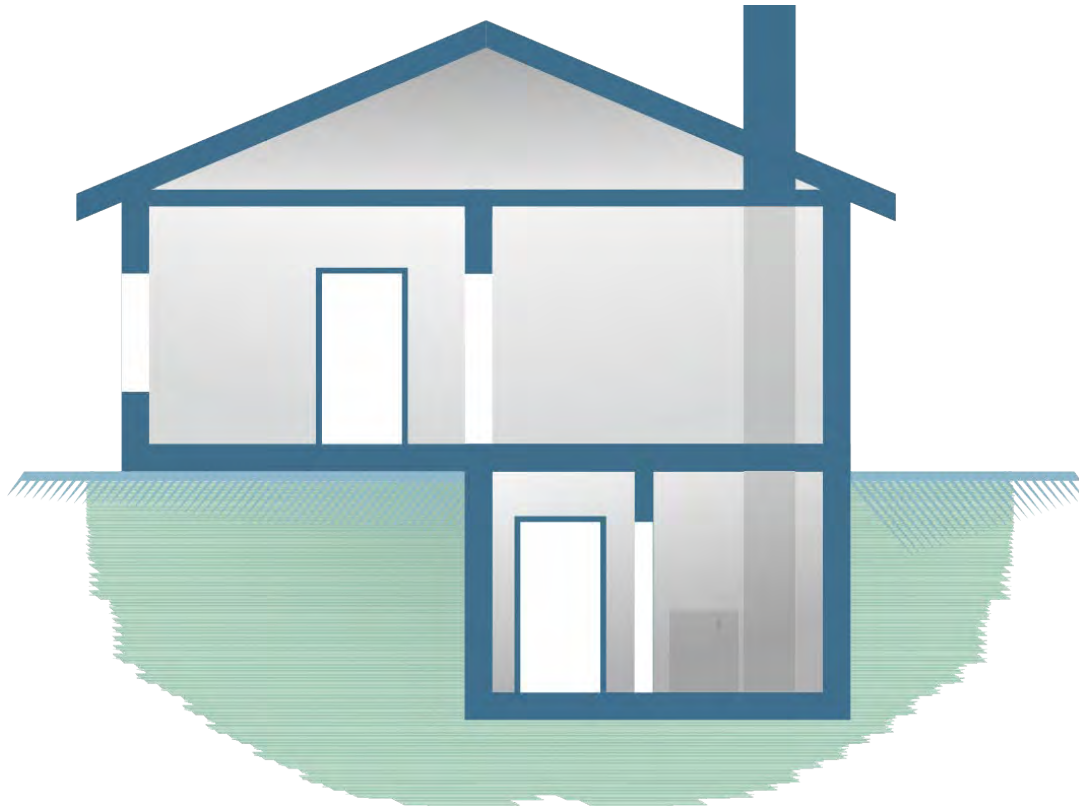


How do we prioritize projects with equity and fairness in mind?



Resiliency & Ability to Recover

Impacts from flooding are not equal



Equity, Fairness and Resiliency

Variation in creeks and drainage areas



Boulder Creek



Gregory Canyon Creek



Bluebell Canyon Creek

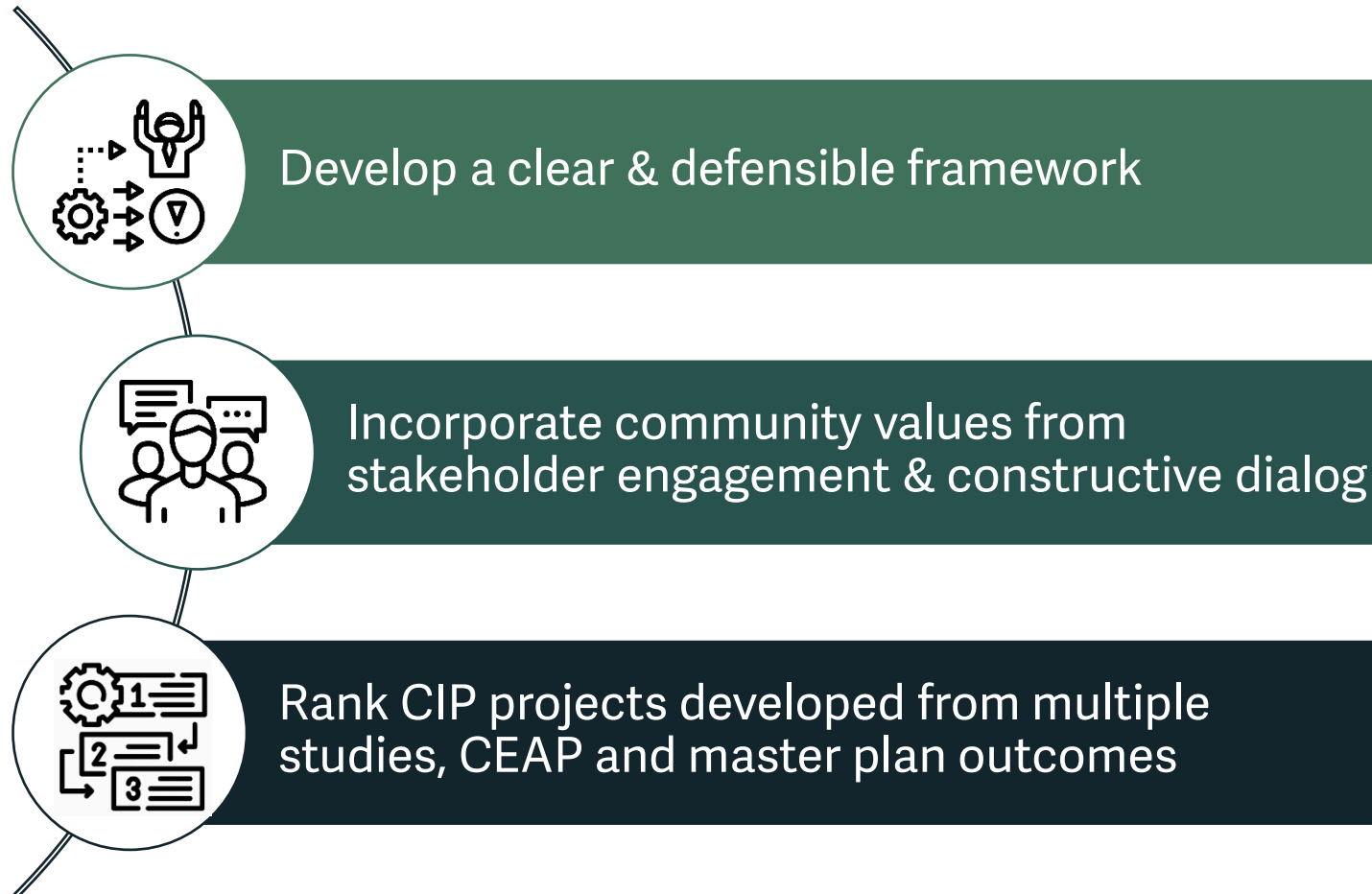


Project Prioritization Framework to Aid Good Decision Making

Building projects that align with community values & meet the Utility's goals and objectives

Project Prioritization Framework to Aid Good Decision Making

Building projects that align with community values & meet the Utility's goals and objectives



CIP Project Prioritization | Background

Historic Criteria Sets Used in Boulder

- Stormwater and Flood Management CIP Prioritization Guiding Principles
- Mitigation Planning Evaluation of Alternatives
- Community & Environmental Assessment Process (CEAP) Criteria



Other County & City CIP Prioritization Criteria

Stormwater and Flood Management Project Prioritization Goals

Stormwater and flood management projects should...

- *Protect people from harm, educate the community, reduce risks, and...*
- *Preserve, protect, and restore the natural resources associated with creeks and wetlands for the multiple benefits they provide to support a resilient community*
- *Provide resilient infrastructure that addresses uncertainty, including climate change considerations*
- *Provide access for emergency response and recovery efforts*
- *Minimize property damage*
- *Provide efficient and cost-effective solutions*

... in ways that are mindful and equitable to our entire community.

As we evaluate flood mitigation projects and approaches, we are committed to mutually respectful conversations about these issues in a way that is productive and safe for all involved.

Project Prioritization Criteria

Life Safety

Ability to
Implement

Efficiency & Cost

Social Impact,
Equity & Fairness

Protect Property

Cultural
Resources

Environmental
Resources

Infrastructure
Resiliency

Protect Critical
Facilities

LIFE SAFETY

- Consequence of Failure
- Reduce/Eliminate High Hazard Zone Areas or Residential Structures
- Maintain Emergency Access for First Responders

ABILITY TO IMPLEMENT

The background of the slide features a close-up, warm-toned photograph of several hands working together to assemble a wooden jigsaw puzzle on a wooden surface. The puzzle pieces are light-colored wood, and some are already in place, while others are being held or moved by the hands. The lighting is soft and directional, creating a sense of focus and teamwork.

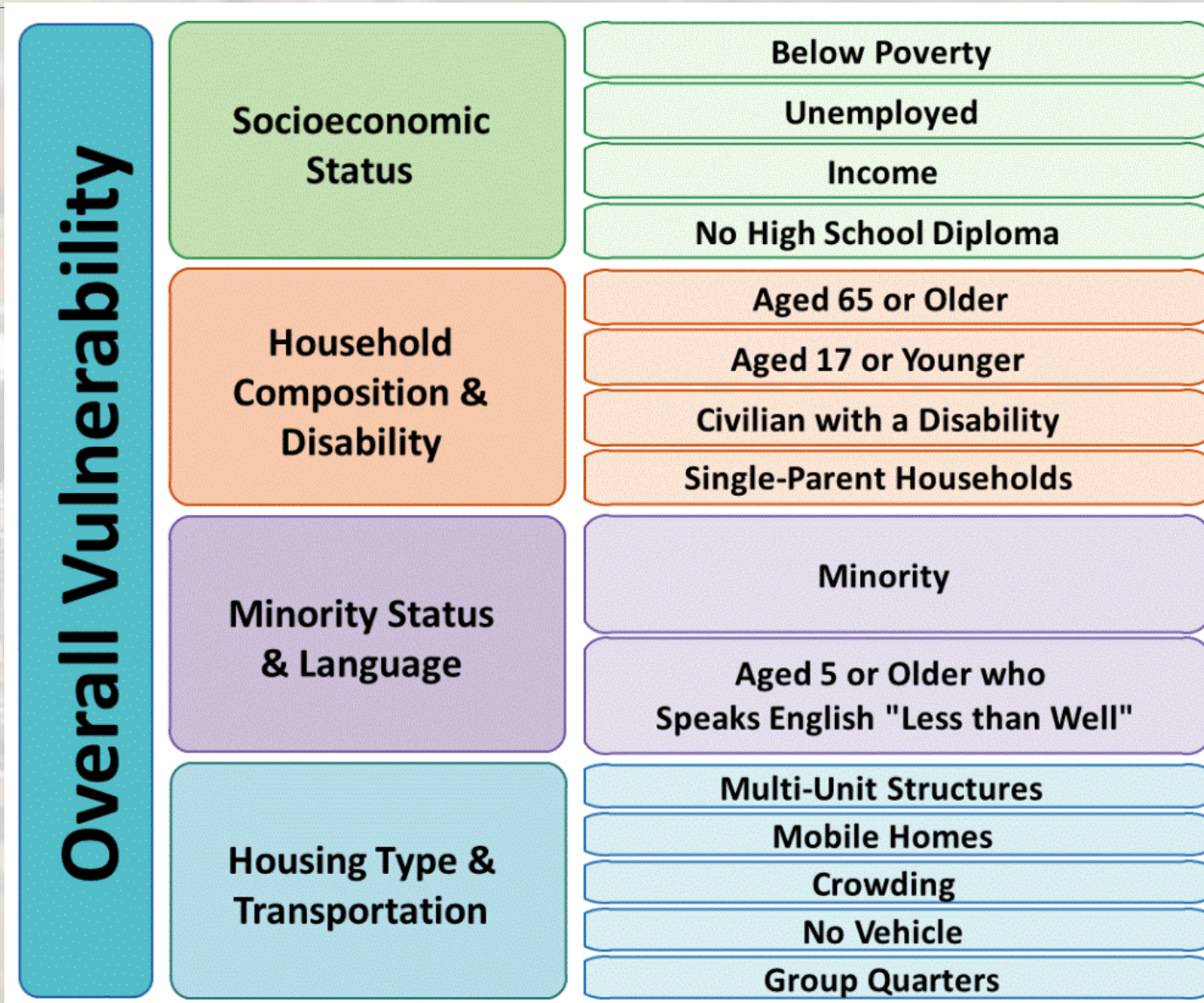
- Minimal Constraints: Institutional, Legal, Land ownership, etc.
- Community Acceptance/Support
- Project Readiness
- Ease of Construction

EFFICIENCY AND COST

- Capital Cost
- Operations and Maintenance Cost
- Ability to Leverage Funding



Social Impact, Equity and Fairness



PROTECT PROPERTY

- Protect from Physical Damage
- Reduce Economic Loss



CULTURAL RESOURCES

- Protect Historic Structures
- Protect/Provide Community Amenities



ENVIRONMENTAL RESOURCES


- Protect/Restore Floodplains and Wetlands
- Protect/Improve Water Quality
- Increase Habitat Connectivity

INFRASTRUCTURE RESILIENCY

- Reduce Damage to Existing Infrastructure: Roadways, Water & Sewer Lines, Utility Services, etc.
- Increase Infrastructure Capacity
- Reduce/Mitigate Channel Migration and Erosion
- Disconnect Storm Flows from Irrigation Ditches

PROTECT CRITICAL FACILITIES

- Schools, Daycares, Hospitals, Senior Living Facilities, etc.
- Essential Services: Fire, Police, Water Treatment, etc.
- Hazardous Materials Facilities



Breakout Discussion

Criteria Weighting Exercise

CIP Project Prioritization Tool | Criteria Voting

Step 1: Enter your name

Step 2: Click "Join"

The image shows a mobile application interface for a project prioritization tool. At the top, there is a text input field labeled "Enter your name to participate" with a yellow "Join" button to its right. Below this is a yellow header bar with the word "Chat" and a speech bubble icon. Under the chat header is a large white text area for chat messages. At the bottom of the screen, there is a section titled "Participants 1" which lists "Laurel Olsen".

CIP Project Prioritization Tool | Criteria Voting

Click light grey dots to vote

16 votes available
Private Voting

Enabled ☐

Infrastructure Resiliency

- Reduce Damage to Existing Infrastructure: roadways, water & sewer lines, utility services, etc.
- Increase Infrastructure Capacity
- Reduce/Mitigate Channel Migration and Erosion
- Disconnect Storm Flows from Irrigation Ditches

4

0

Environmental Resources

- Protect/Restore Floodplains and Wetlands
- Protect/Improve Water Quality
- Increase Habitat Connectivity

0

0

Cultural Resources

- Protect Historic Structures
- Protect/Provide Community Amenities

0

0

Efficiency & Cost

- Capital Cost
- Operations & Maintenance Cost
- Ability to Leverage Funding

0

0

Red dots tally your total votes for the card

Click yellow dots to remove a vote

Click here for more information on the card

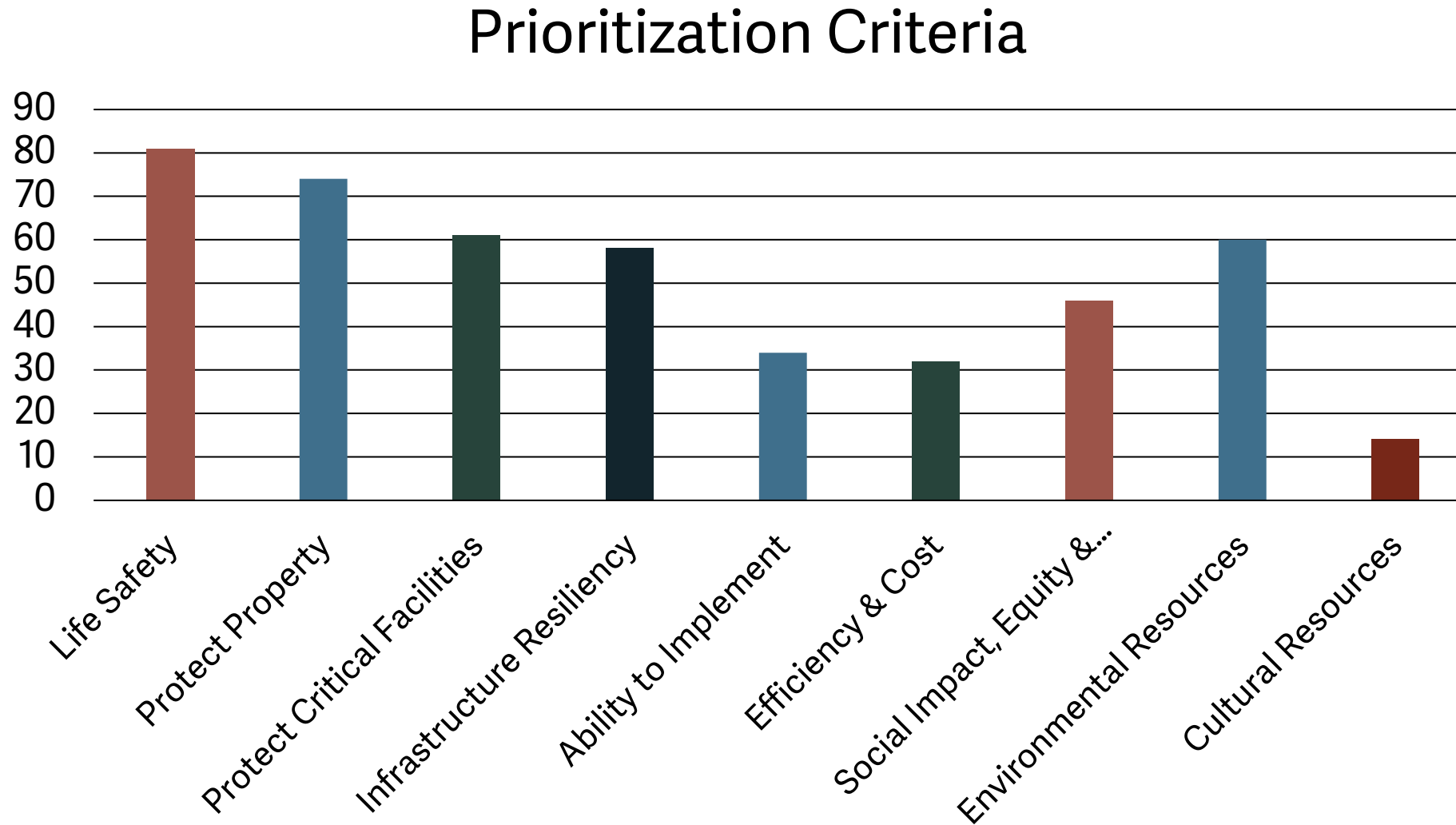
You're done when all 20 votes have been applied (0 votes available)

A diverse group of people, including men and women of various ethnicities, are seated in a classroom or lecture hall. They are all looking towards the front of the room. In the foreground, a woman with curly hair is raising her right hand. To her left, a man is smiling. Other people in the background are also looking attentively. The overall atmosphere is one of an engaged audience.

Poll Question

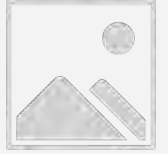
Did your thinking evolve over the course of the discussions and activities?

Dotstorming Results





Comprehensive
**Flood and
Stormwater**
Master Plan



Wrap Up

Comment Form on project webpage (link in chat)
Questions? Email: cfsinfo@bouldercolorado.gov



Comprehensive Flood and Stormwater Master Plan





Comprehensive Flood and Stormwater Master Plan





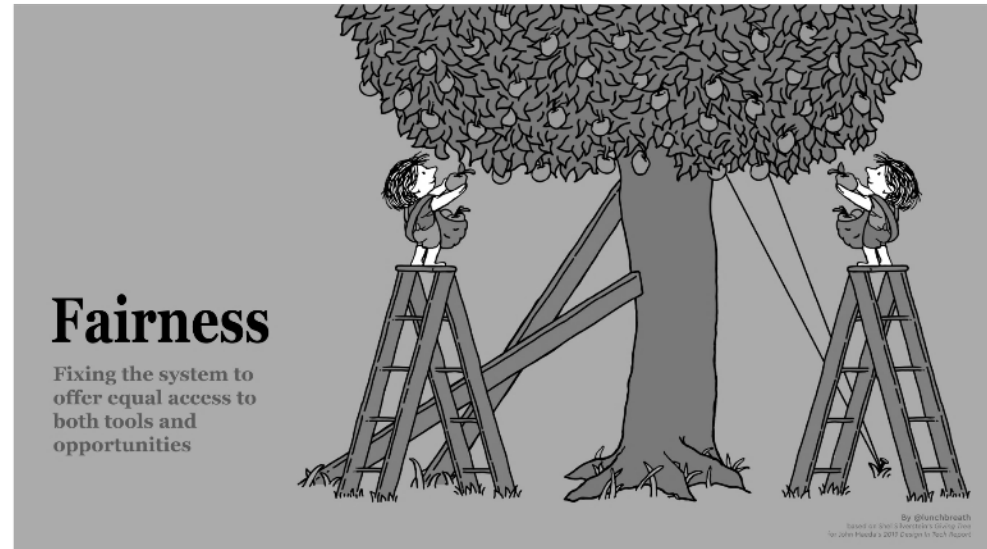
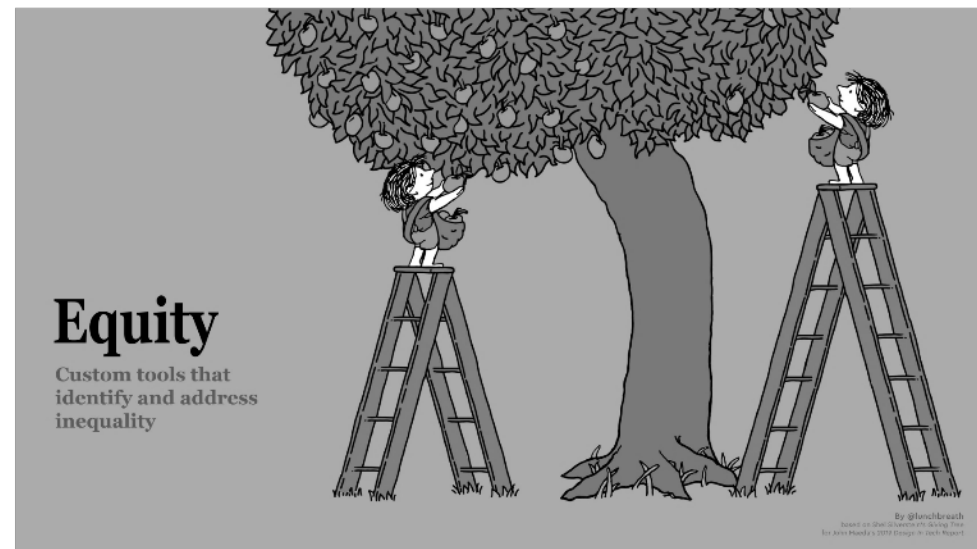
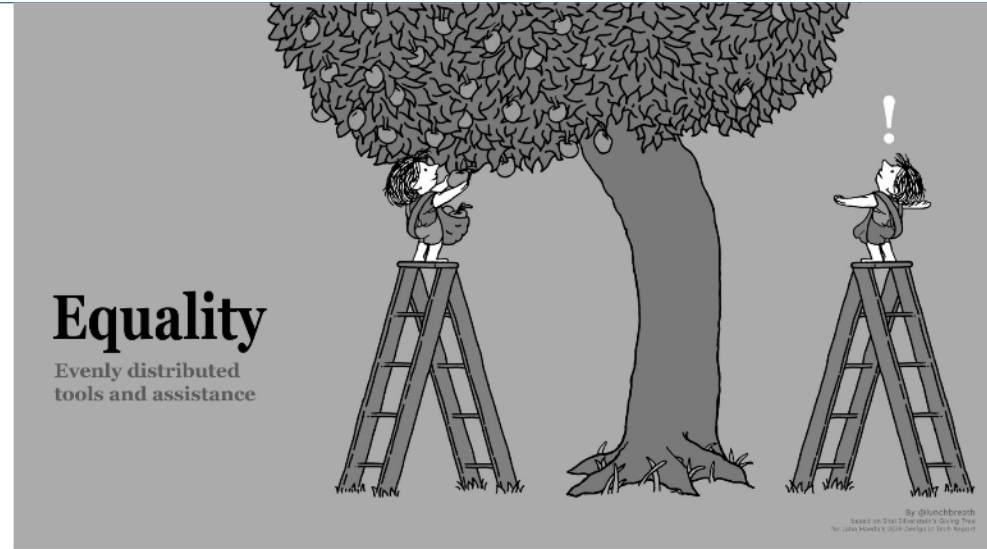
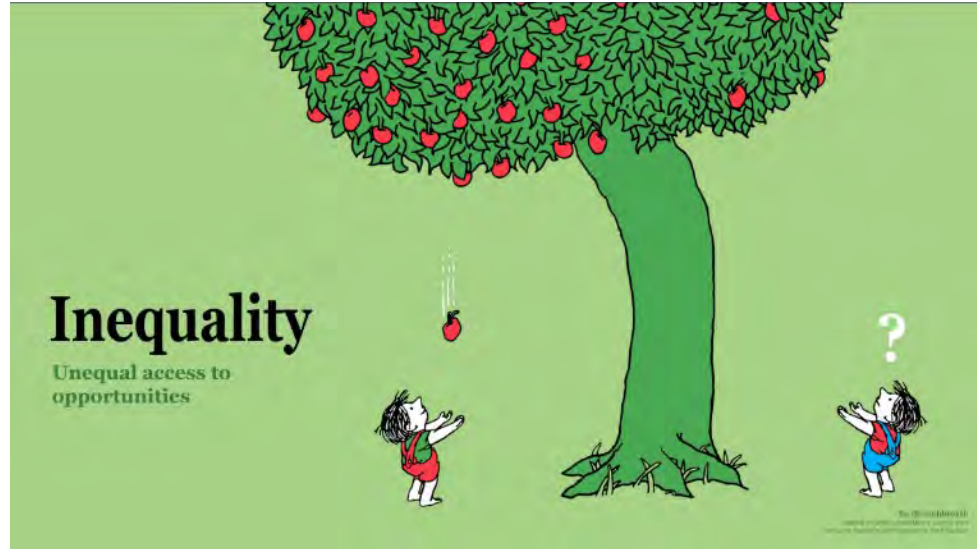
Breakout Discussion

How do we best protect our community so that all of us recover from flooding?

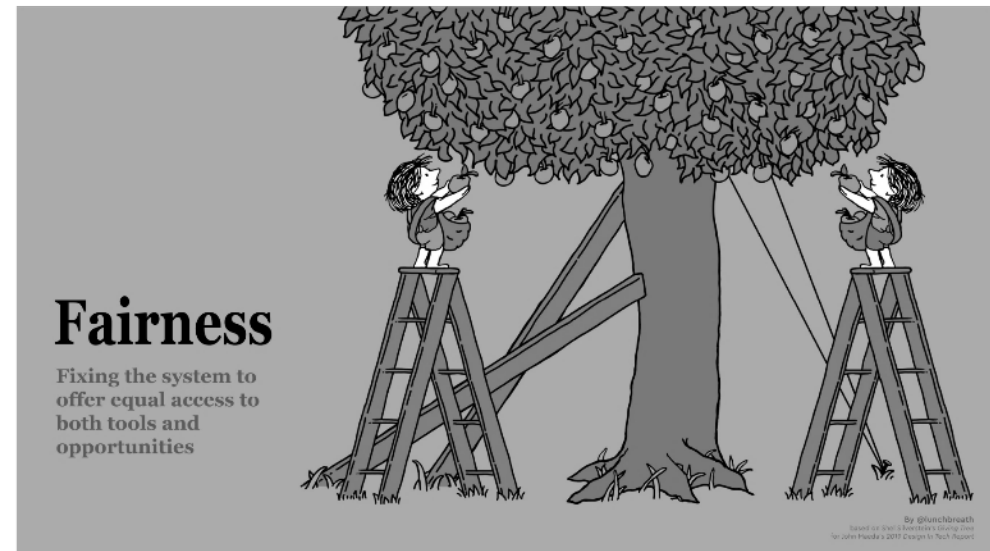
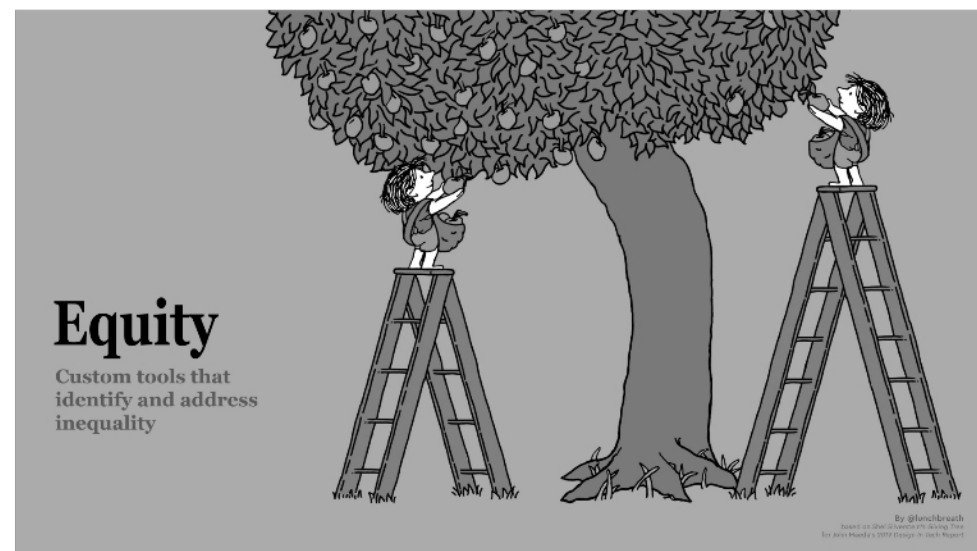
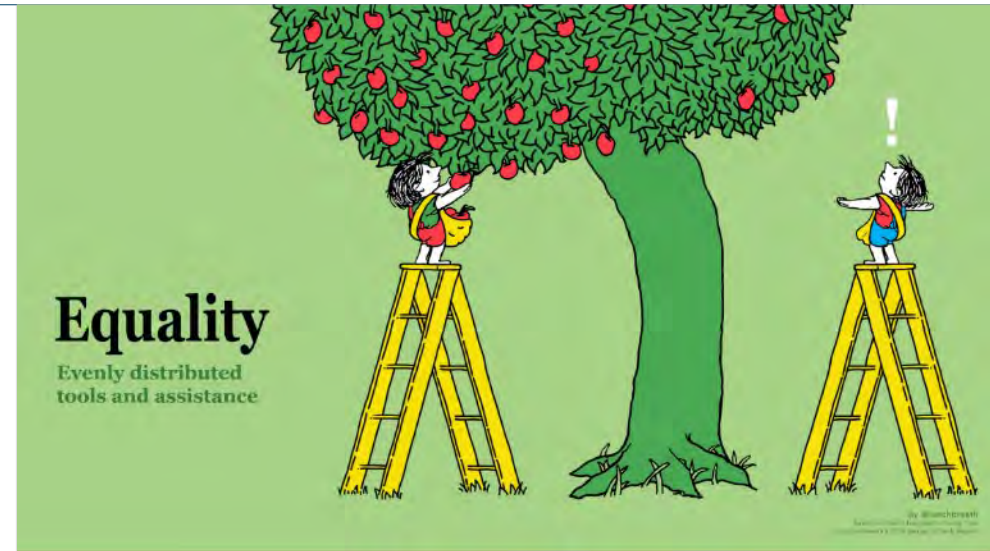
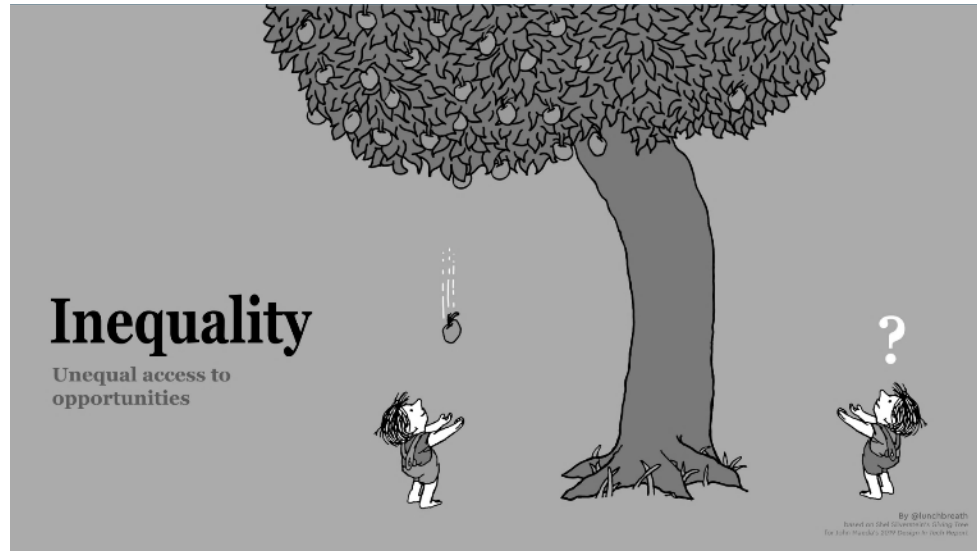
Given the examples provided, what is the city's role and what is the community's role?

Prepare to share one surprising/important thing that was discussed.

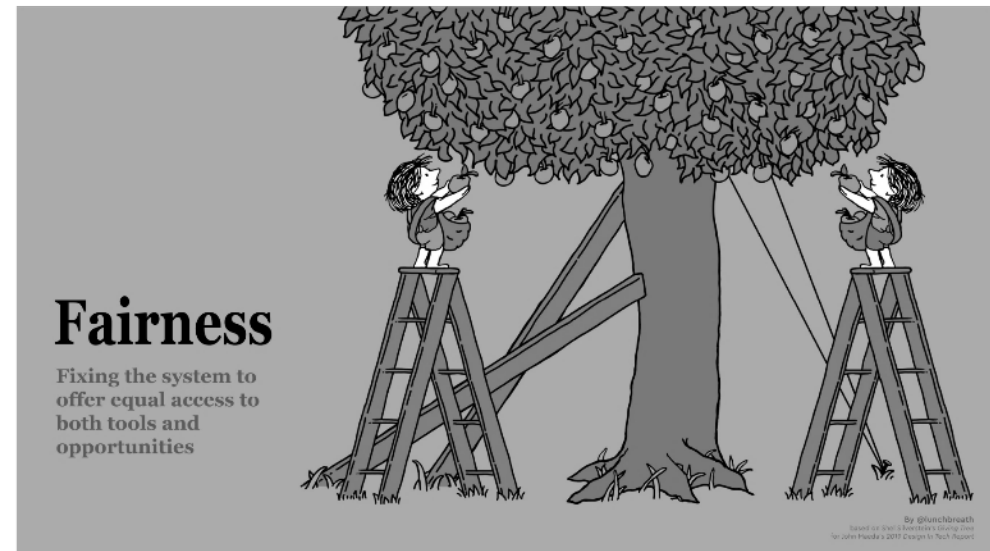
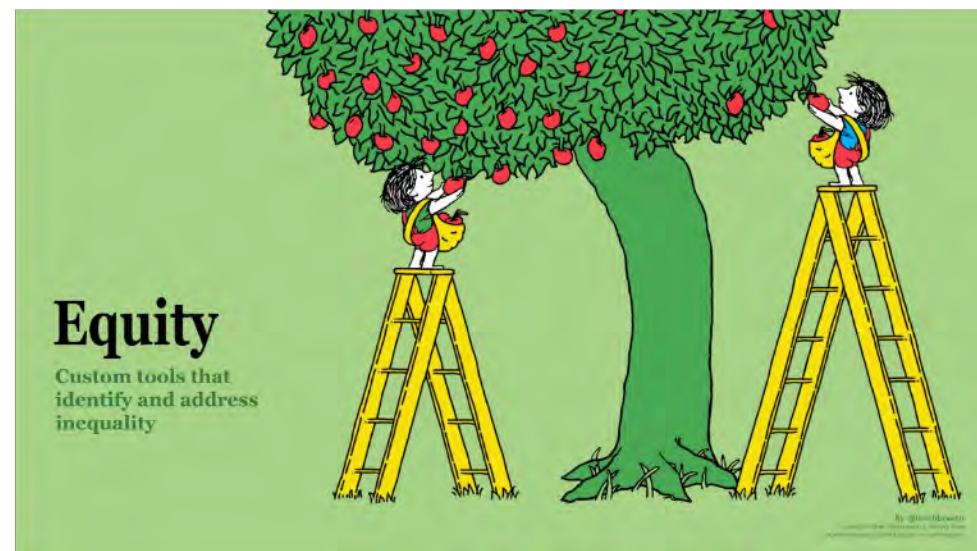
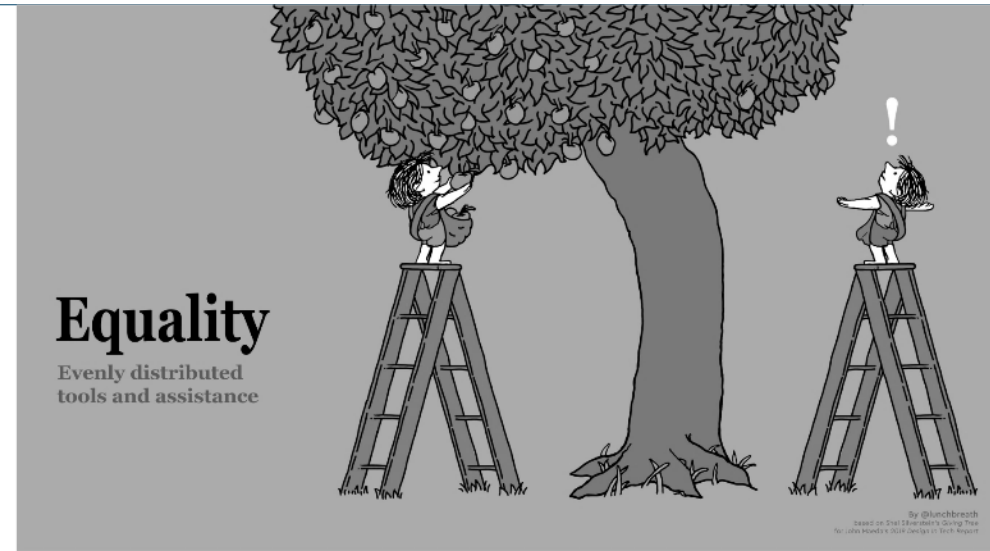
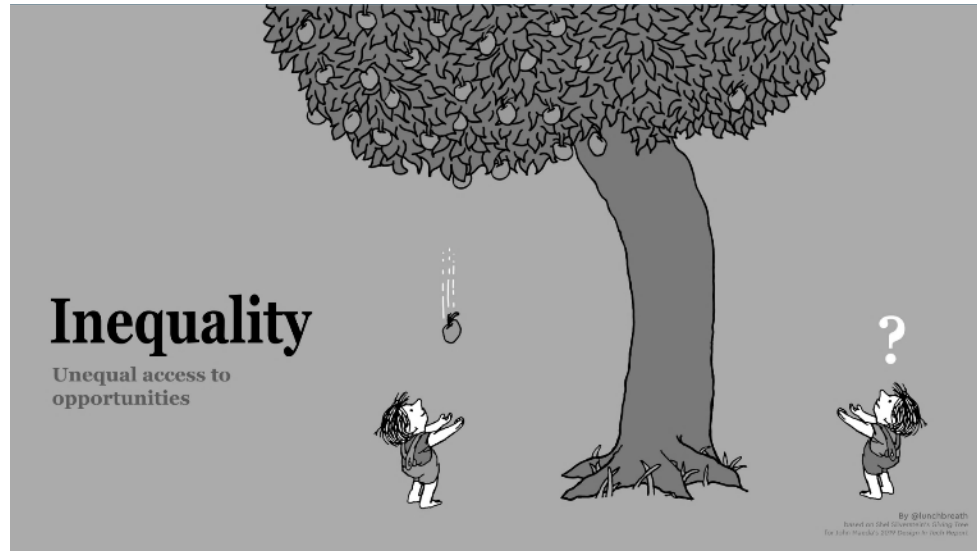
Inequity



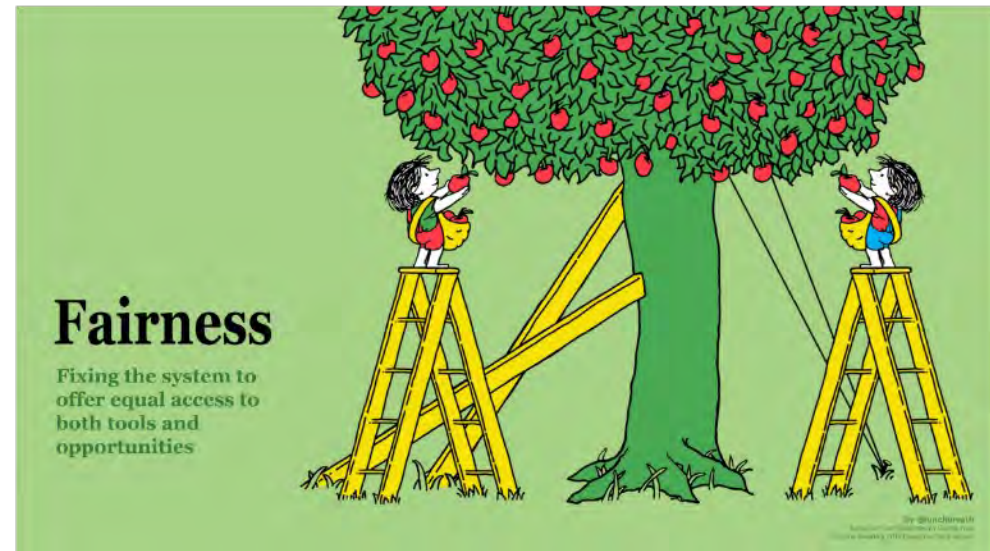
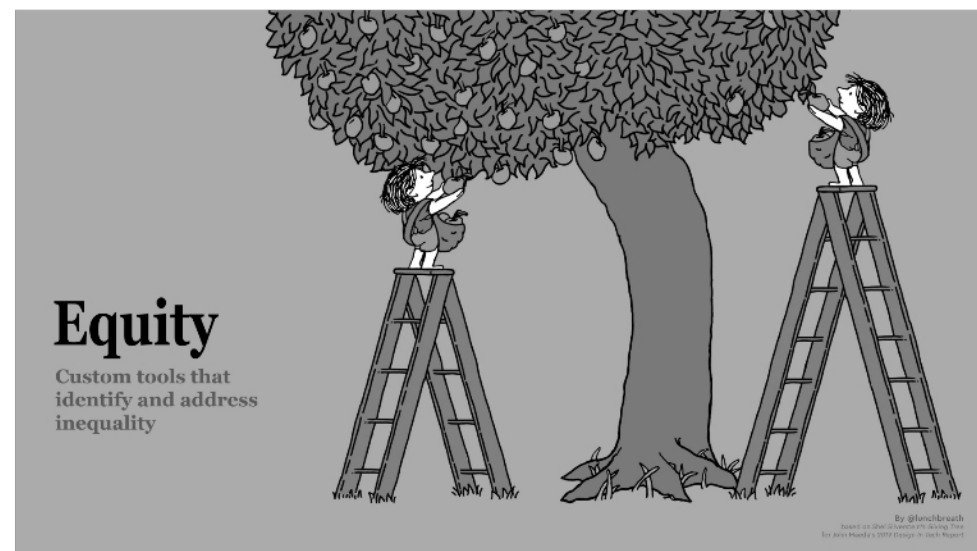
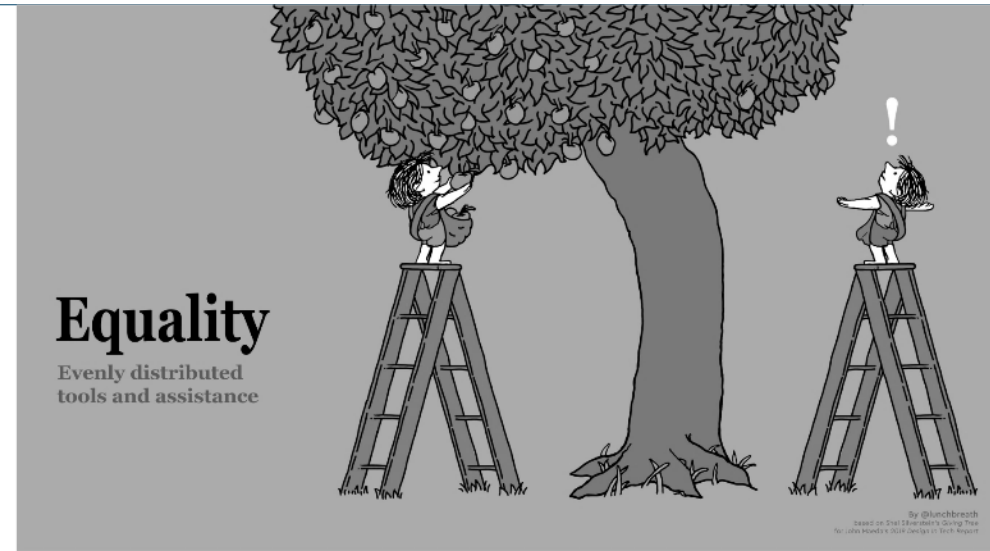
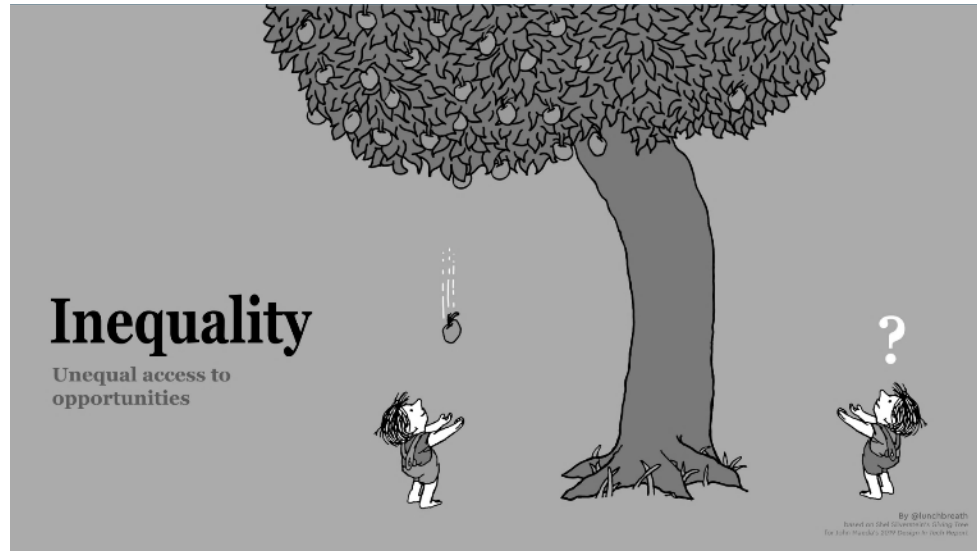
Equality



Equity



Fairness



Equity and Fairness

