

South Boulder Creek Flood Mitigation Planning Study Overview

WRAB
July 21, 2014



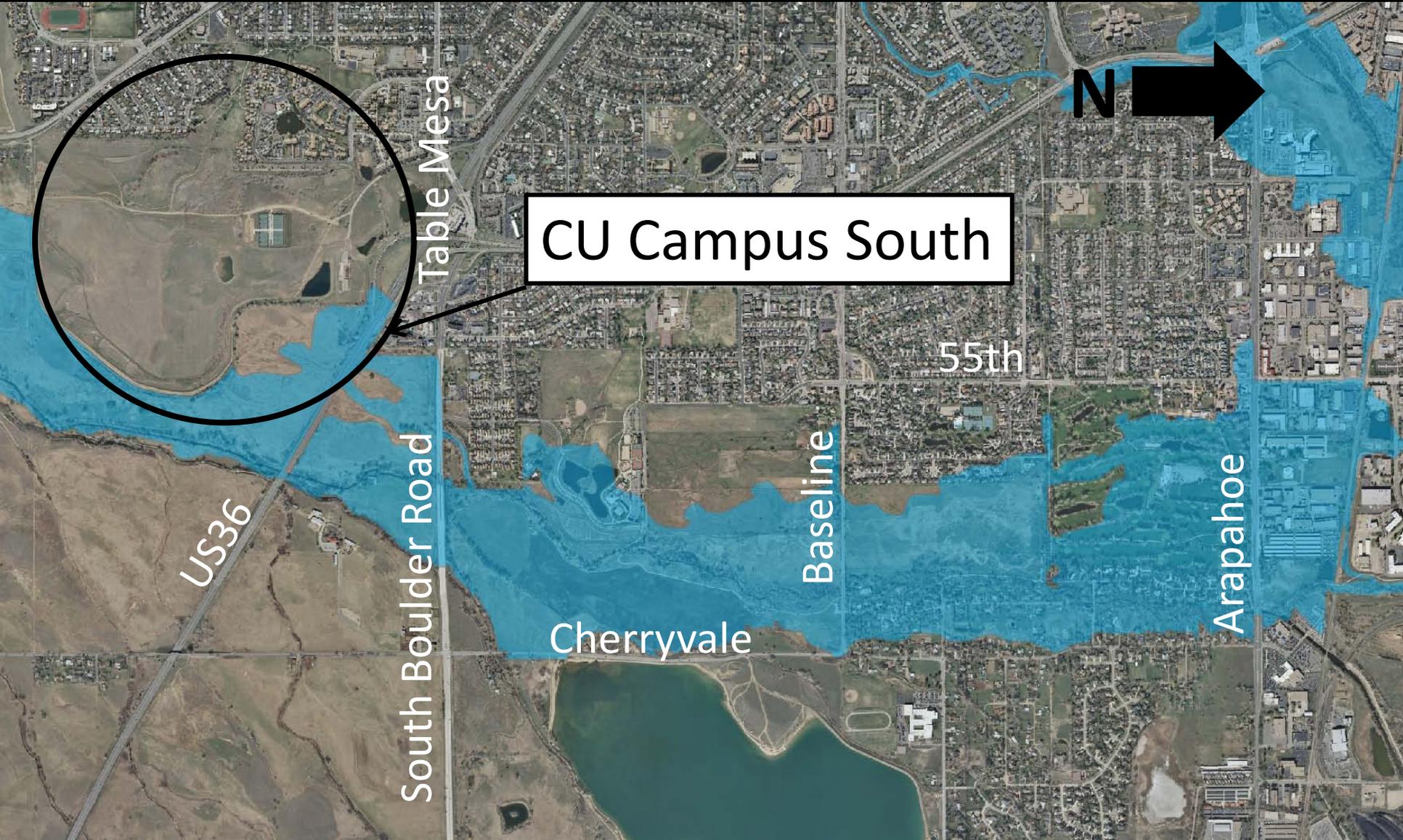


Agenda

- Background / History
- Current Study Alternatives
- Study Recommendation
- Next Steps



Background



CU Campus South

Table Mesa

55th

Baseline

Arapahoe

South Boulder Road

US36

Cherryvale

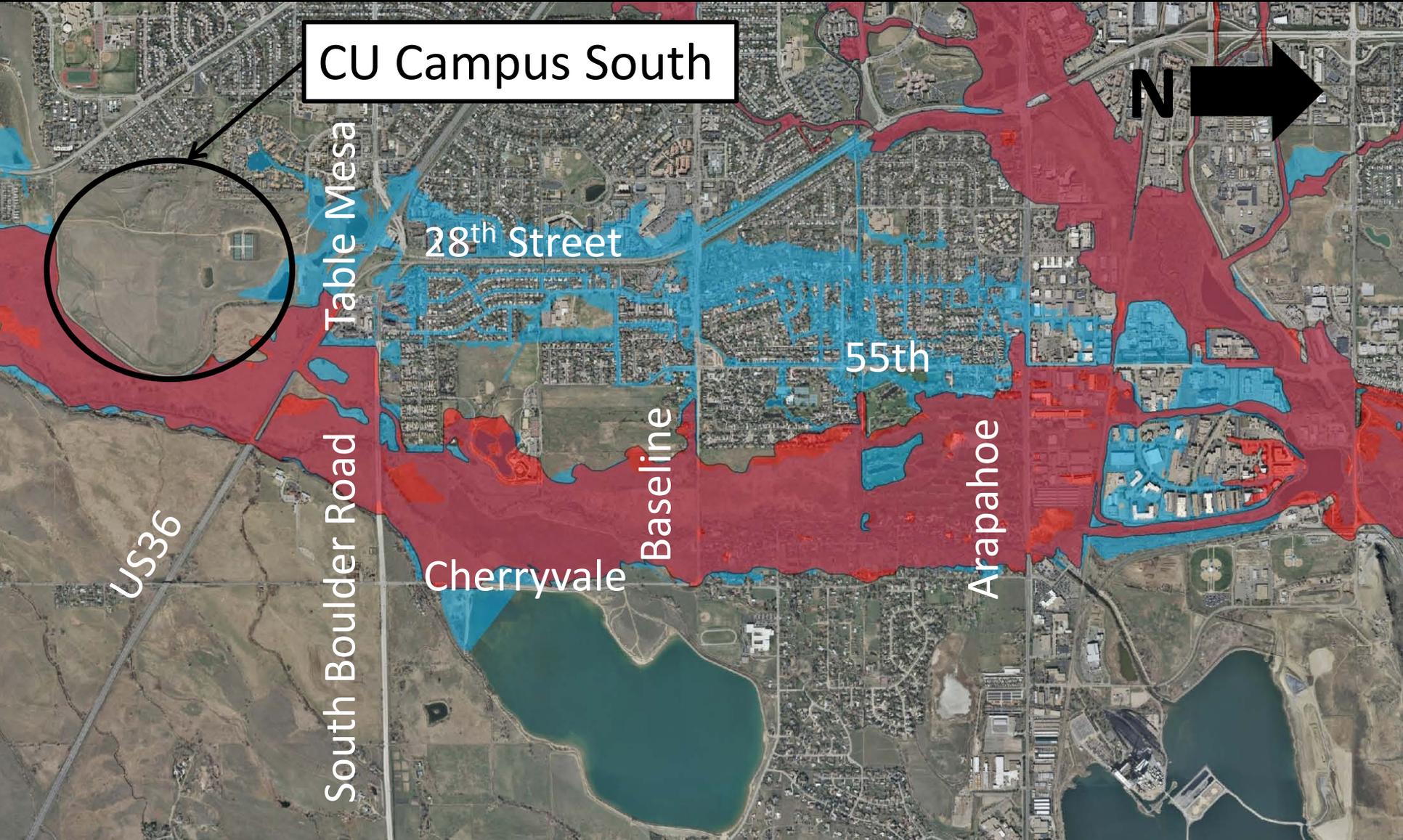
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Background

- 1997 First study initiated
- 2002 Floodplain study initiated
- 2008 City adopts revised floodplain
- 2009 Risk Assessment Completed
- 2012 FEMA adopts revised floodplain

Background



CU Campus South



US36

South Boulder Road

Table Mesa

28th Street

Cherryvale

Baseline

55th

Arapahoe



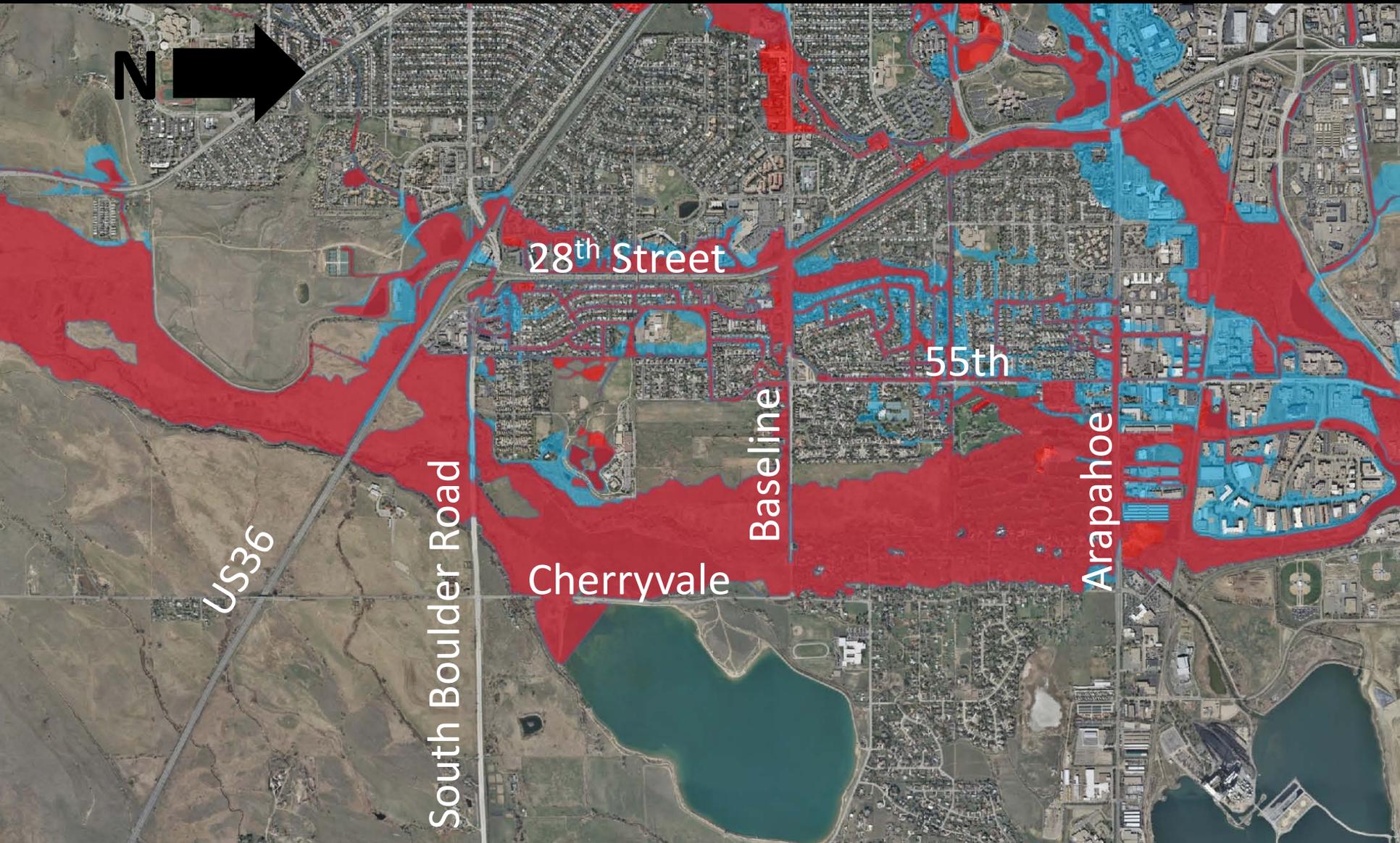
Flood History

- 1938
- 1950s
- 1969
- 2013



1969 Flood Event - Thunderbird Lane Apartments

2013 Flood Event



28th Street

55th

Baseline

Arapahoe

Cherryvale

US36

South Boulder Road

2013 Flood Event

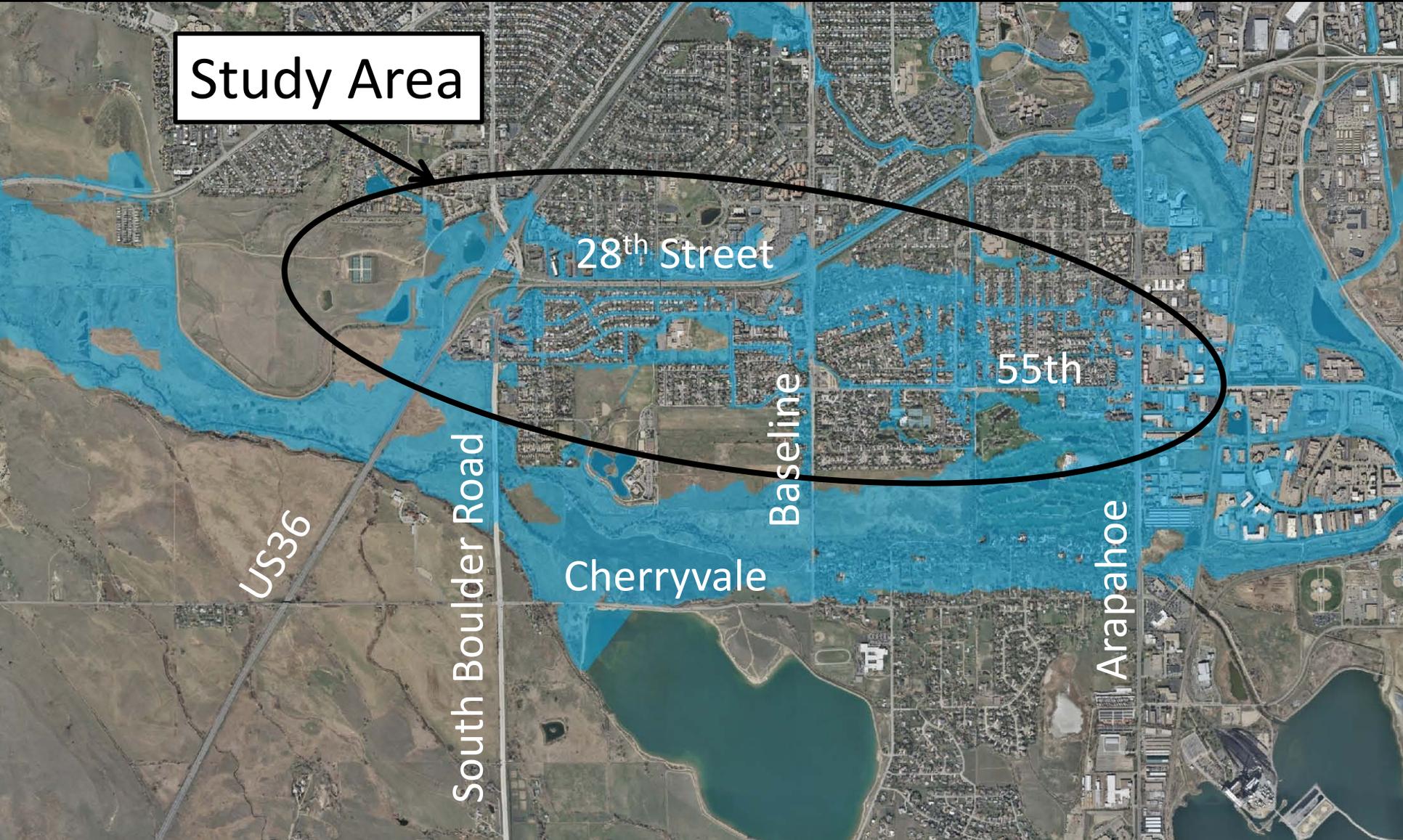


\$45.3 million in reported damages





Current Study



Study Area

28th Street

55th

Baseline

Cherryvale

Arapahoe

US36

South Boulder Road

Alternative Development



Numerous concepts in matrix format



Public meeting March 2010



Concepts into 15 Alternative Plans



Refined to 9 Best Alternative Plans



Public meeting (Sept. 2010) and WRAB (Dec. 2010)



4 Final Alternatives

Screening of Alternatives

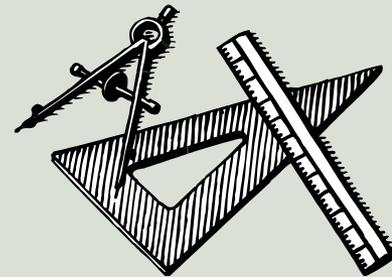


- Status Quo
- HHZ Mitigation
- US36 Regional Detention
- Regional Detention at US93
- Distributed Regional Detention
- Mainstem Flow Containment
- Dry Creek Ditch No. 2 Pipeline
- Bear Canyon Creek Pipeline
- Nuisance-Level Flood Improvements

Short Listed Alternatives

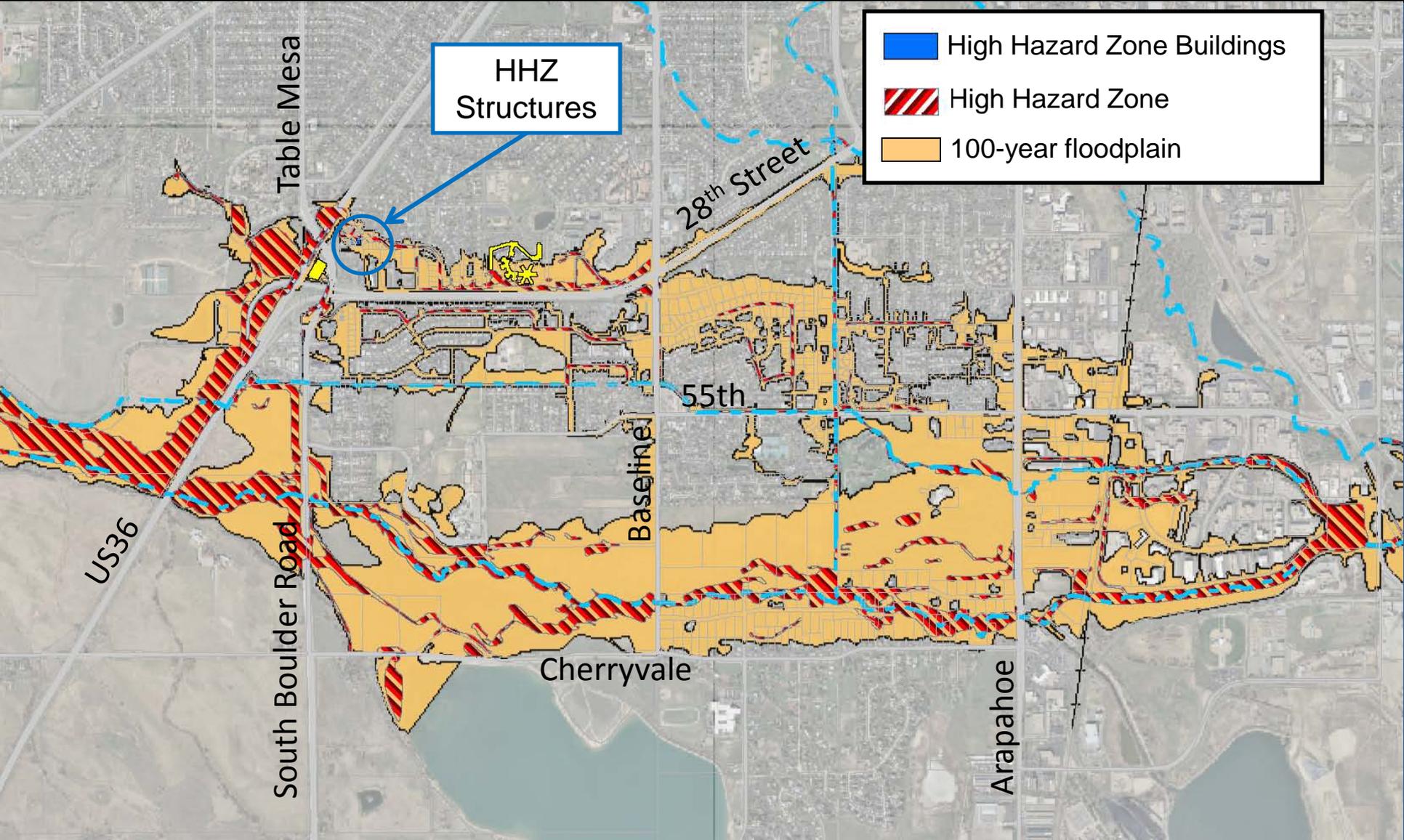


- Status Quo
- High Hazard Mitigation
- Distributed Regional Detention
- Regional Detention at US 36



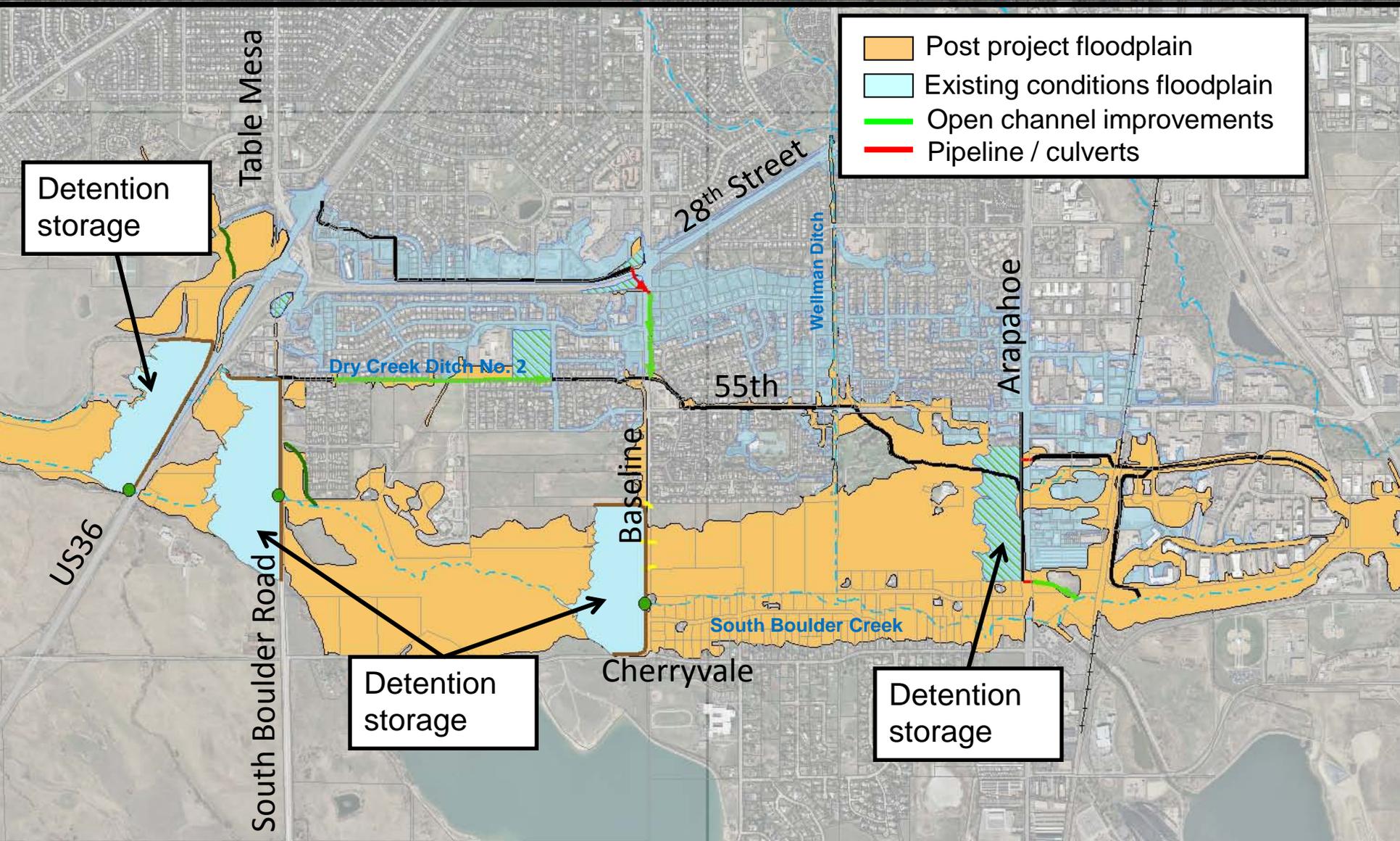
High Hazard Mitigation

\$0.14 million



Distributed Regional Detention

\$48 million*



- Post project floodplain
- Existing conditions floodplain
- Open channel improvements
- Pipeline / culverts

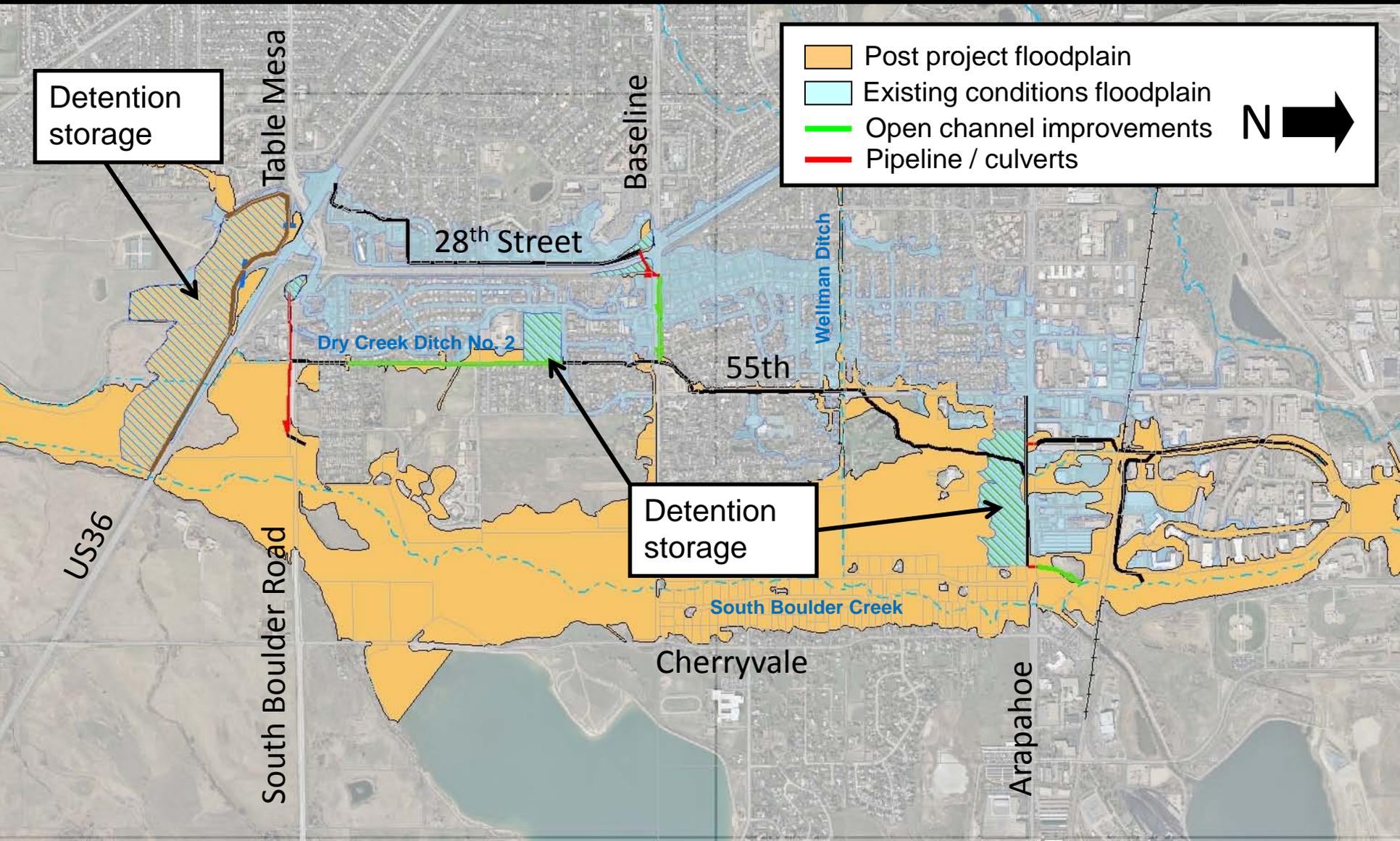
Detention storage

Detention storage

Detention storage

Regional Detention at US36

\$46 million



Regional Detention at US36

Renderings – US36 and Table Mesa Drive



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Existing Conditions



US36 Berm

Comparison of Alternatives



Alternative	Flood Mitigation	+ Benefit / Cost Ratio	Cost	Environmental Impacts
Status Quo	N/A	N/A	N/A	N/A
High Hazard Mitigation	3	N/A	1	1
Distributed Detention	1	✓	3	3
US36 Detention	1	✓	2	2

Study Recommendation



Regional Detention at US36 (\$46 million)

Potential Phasing:

1. US36 Regional Detention facility (\$23 million)
2. West Valley improvements (\$11 million)
3. Arapahoe Avenue detention (\$12 million)

Study Recommendation



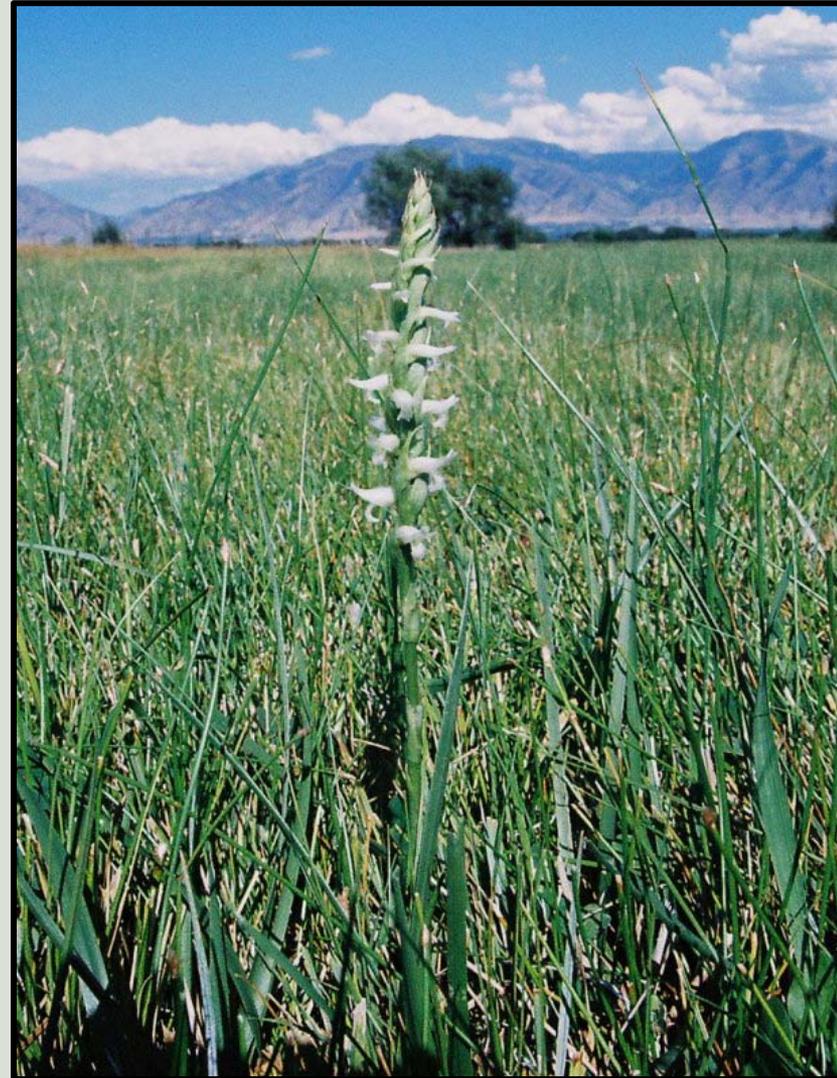
- Construction would:
 - Eliminate overtopping of US36
 - Eliminate 100-year flood risk affecting 700 structures and 1,200 dwelling units
- At an estimated cost of \$46 million
- Project could be phased

Study Recommendation



Issues:

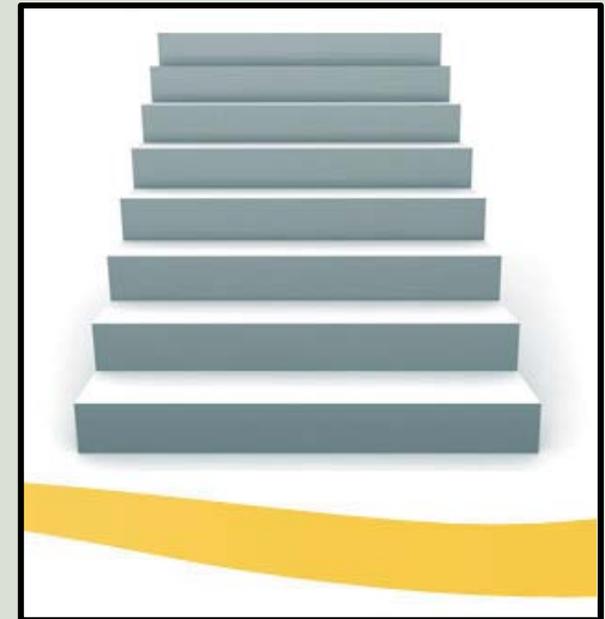
- Impacts to threatened and endangered species
- Wetlands
- Open Space Lands
- Regulated by State as High Hazard Dam



Next Steps



- Open House and 2nd WRAB
- OSMP Board of Trustees meeting
- City Council Study Session



Discussion

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