



Water Planning Update

LUTI

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4.13.2021

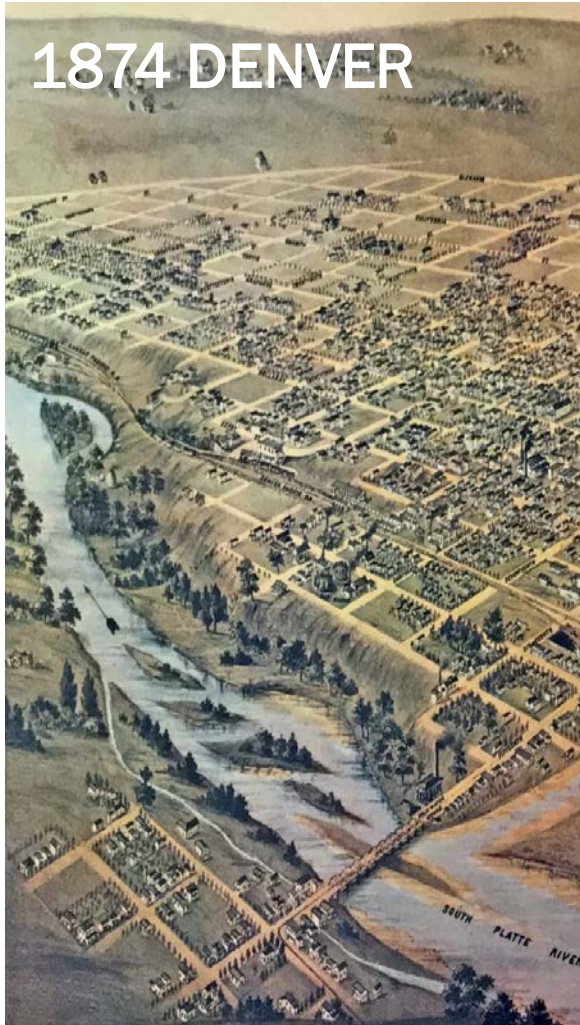
Agenda

Update on comprehensive water planning activities across the City, including the South Platte River

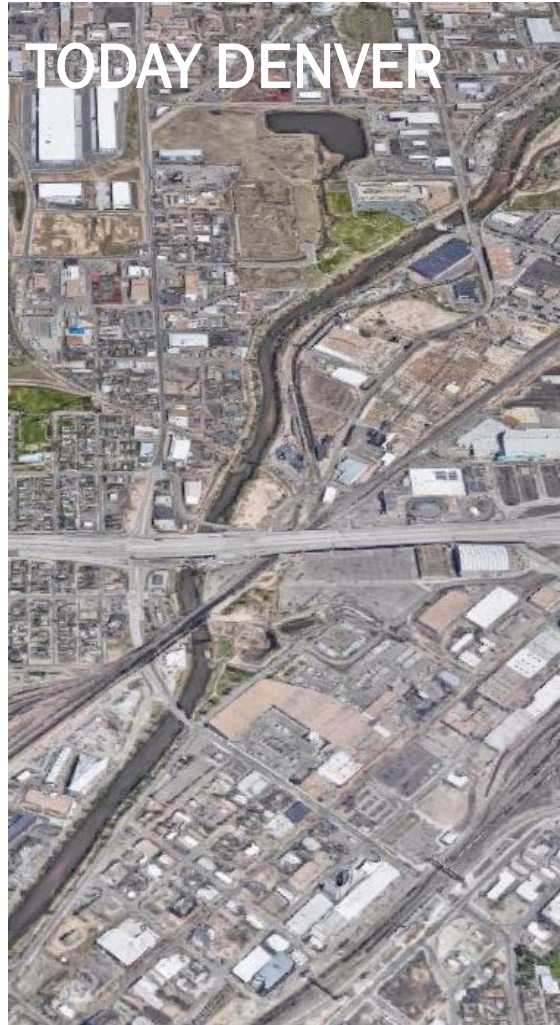
1. History of the River
2. Existing Plans
3. One Water
4. SPR Needs Assessment
5. Next Steps
6. Open Discussion

South Platte River

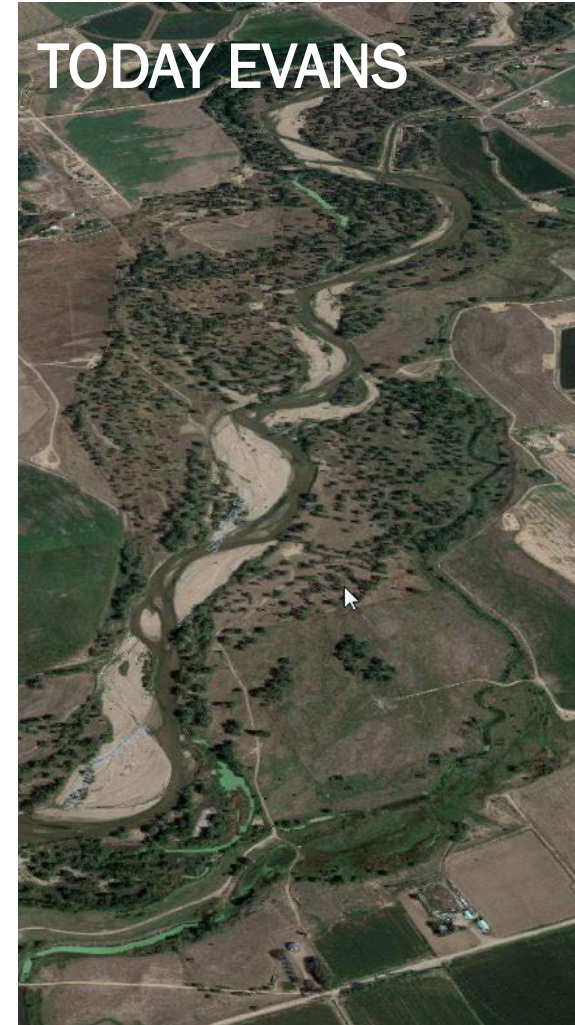
1874 DENVER



TODAY DENVER



TODAY EVANS

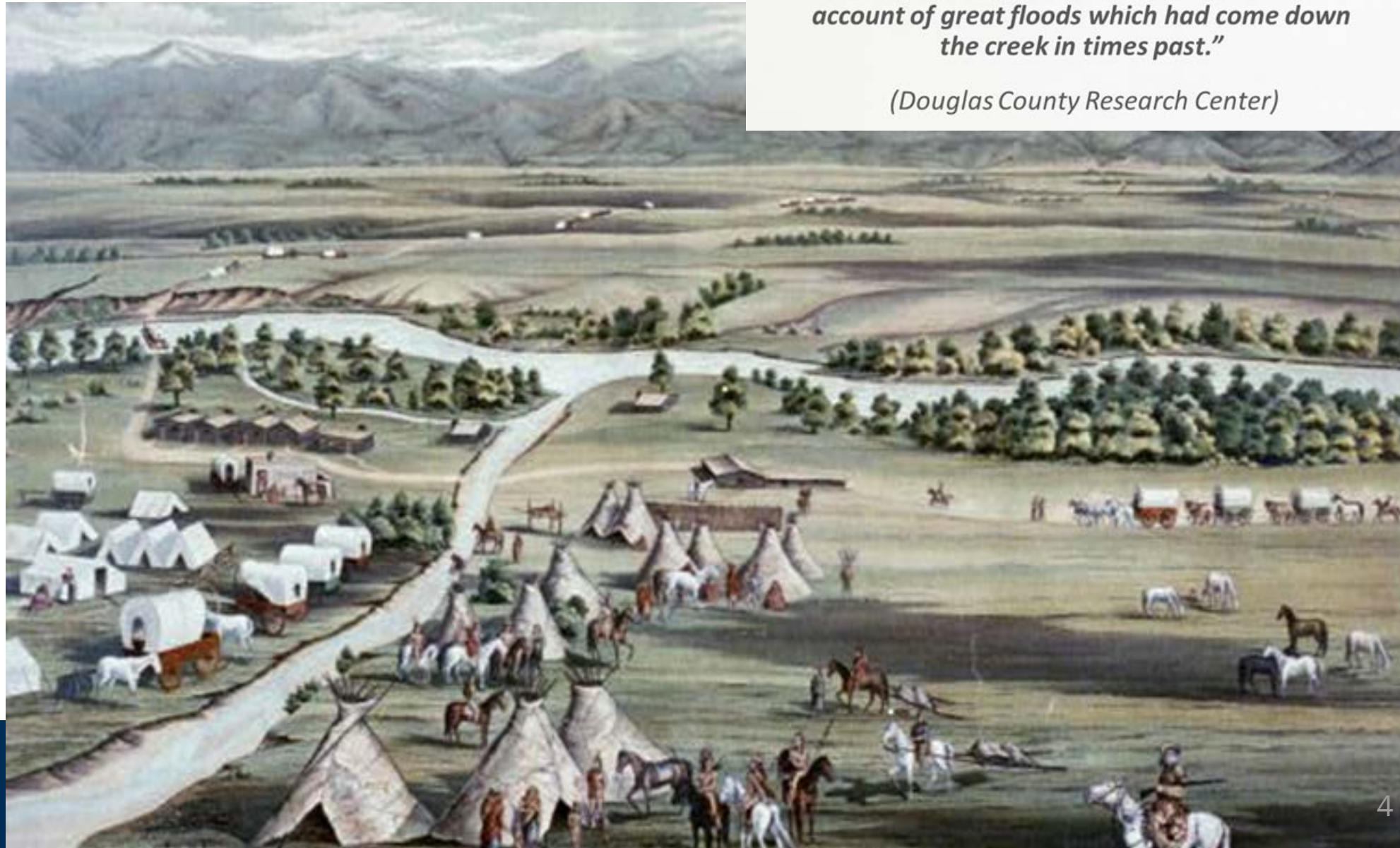


South Platte River History

“When the permanent settlers first reached the mouth of Cherry Creek, friendly Indians warned them against camping in the bottoms on account of great floods which had come down the creek in times past.”

(Douglas County Research Center)

Painting of early Denver at the confluence of South Platte River and Cherry Creek (Wikipedia)



- 1858 First Settlers
- 1864 Cherry Creek Flood
- 1875 Cherry Creek over banks
- 1878 Cherry Creek over banks
-
- 1909 South Platte River flood (west)
- 1921 Colorado Floods (Pueblo and Denver)
- Flood Prevention
- 1924
- Flood Control Projects
- 1927
- 1933 Cherry Creek Flood
- Cherry Creek Dam
- 1950
- 1965 Denver Floods
- UDFCD
- 1969
- PRDC
- 1974
- Chatfield Dam
- 1975
- Bear Creek Dam
- 1982
-
- Flood Control (Levee)
- 2008

The Taming of the Treacherous Platte

No More Floods for Globeville

Platte River Protection and a New Bridge



Platte River Flood Protection in Progress Near Globeville

“While the river washes out a channel readily this channel soon is obstructed with sand bars, and upon the bars willows and cottonwoods spring up with surprising rapidity. Soon the channel is again blocked, the river cuts a new route, and the process is repeated.”

Denver Municipal Facts Vol 6 No. 6-7 (June-July 1923)



1933 Cherry Creek Flood (Denver Public Library)



1965 South Platte River Flood near Park Ave and Delgany St



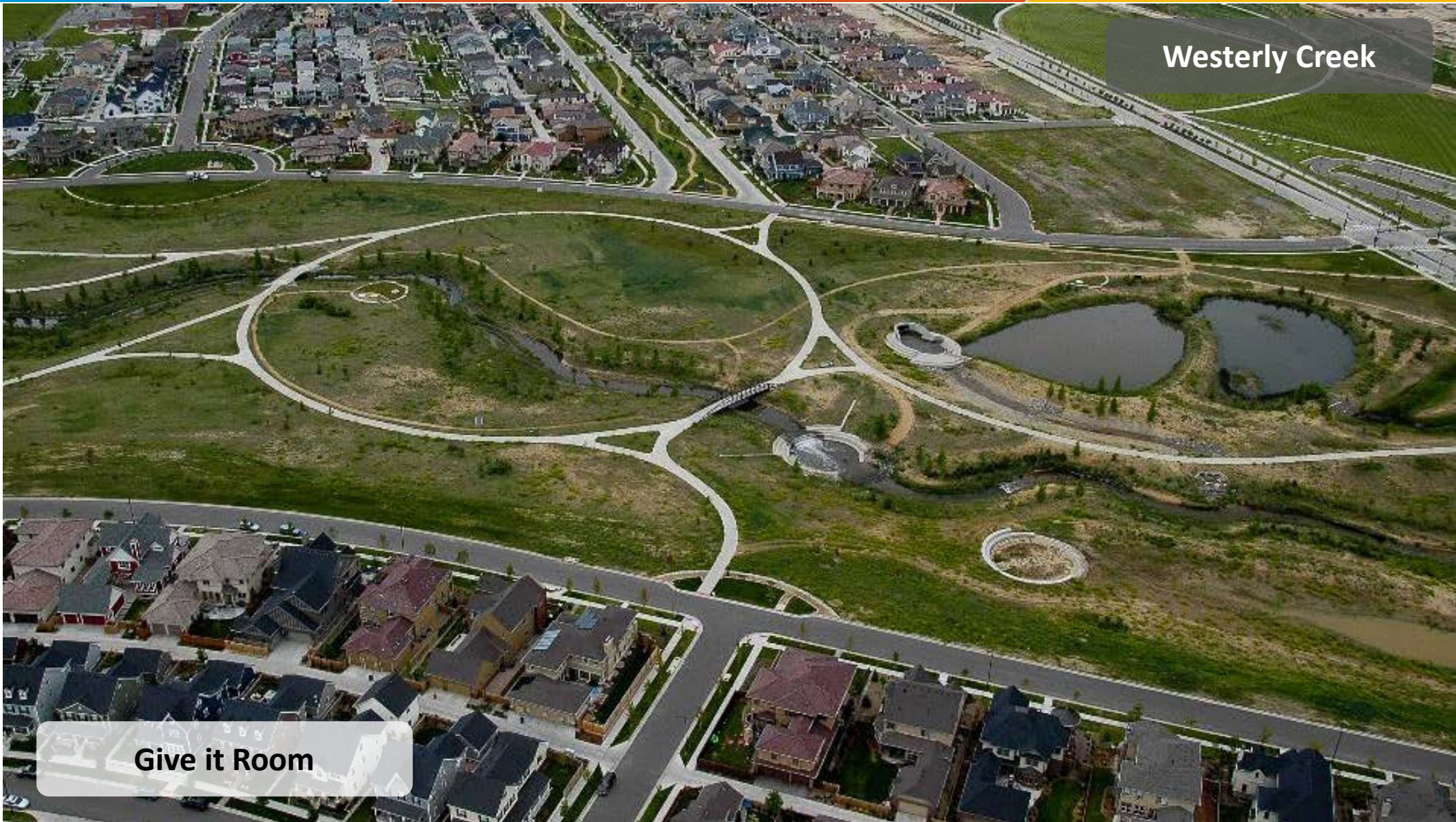
1950 Cherry Creek Dam



1975 Chatfield Dam



1982 Bear Creek Dam



Westerly Creek

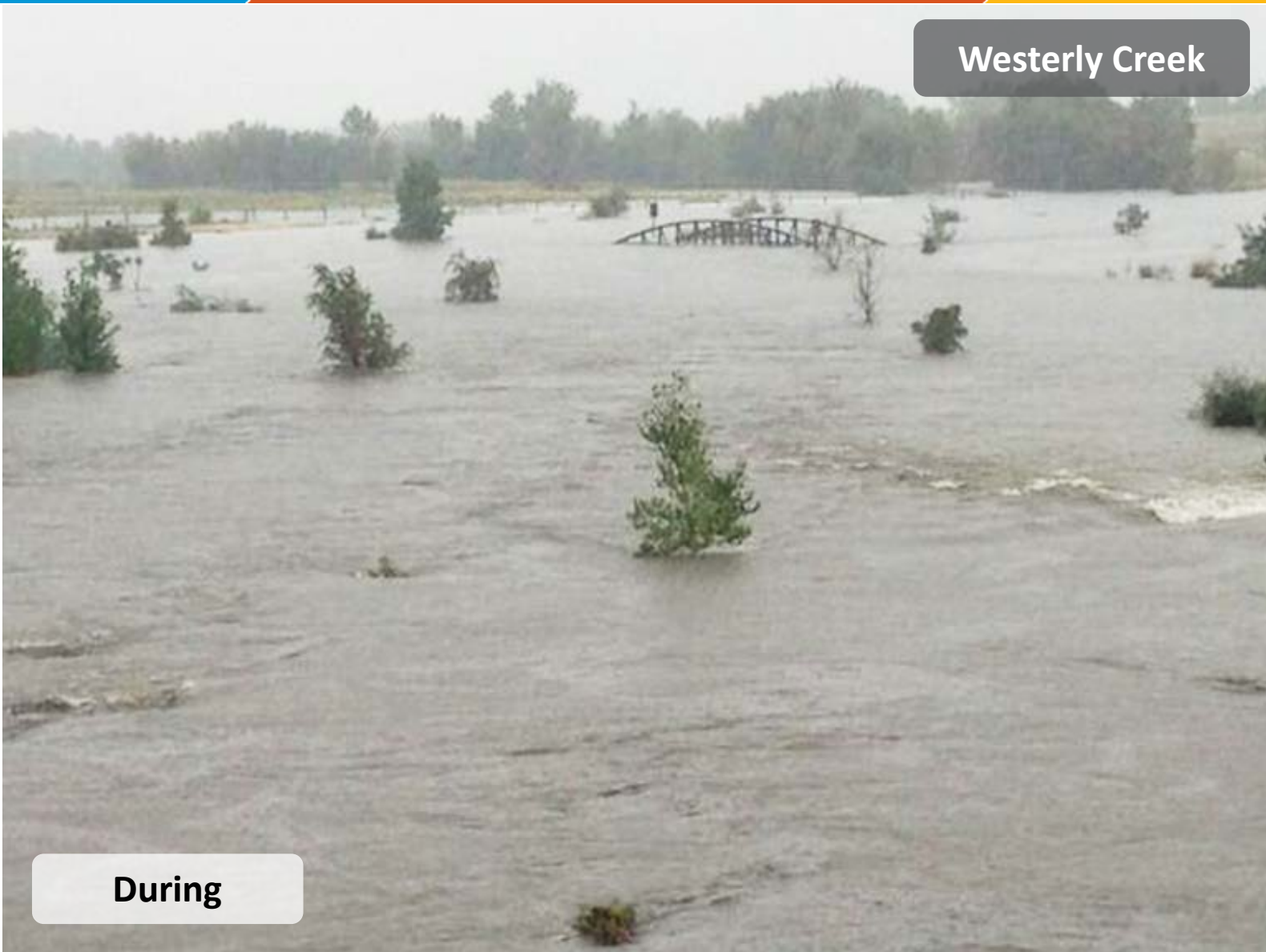
Give it Room

Westerly Creek



Before

Westerly Creek



During

Westerly Creek

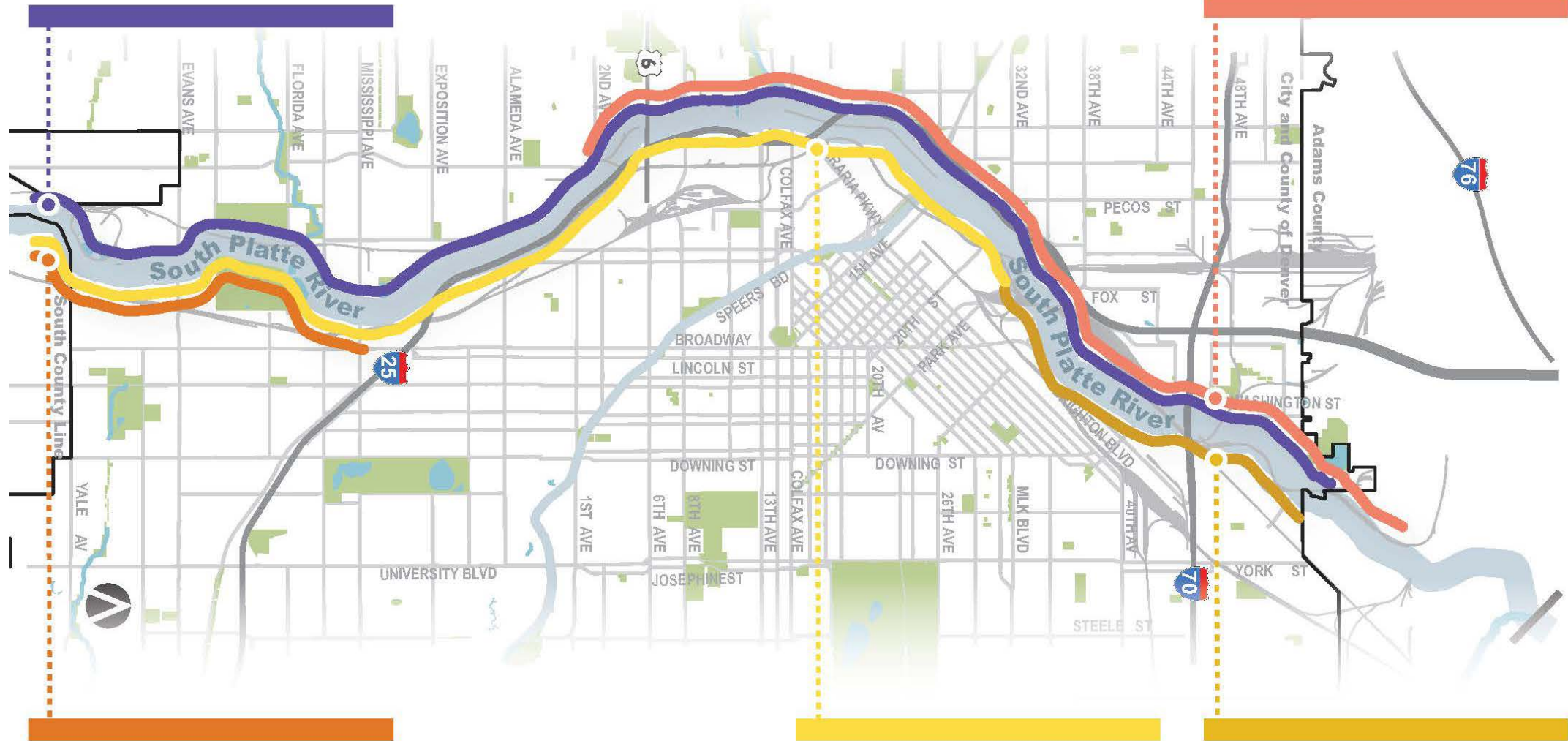


After

Existing South Platte River Plans

Urban Waterways South Platte River
Feasibility Report and EIS (2019)

SPR Long Range Mgt Framework (2000)



Ecosystem Restoration Study (2018)

River South Greenway MP (2010)

River North Greenway MP (2009)

Denverright.

Your Voice. Our Future.

- Embrace stormwater as an asset
- Swimmable and fishable waterways
- Prepare a multi-disciplinary water plan
- Enhance and protect the South Platte River

Blueprint Denver

A BLUEPRINT FOR AN INCLUSIVE CITY

- Protect communities from future flood risk
- Encourage adaptable, multi-functional stormwater facilities
- Provide room for our waterways to help restore natural functionality

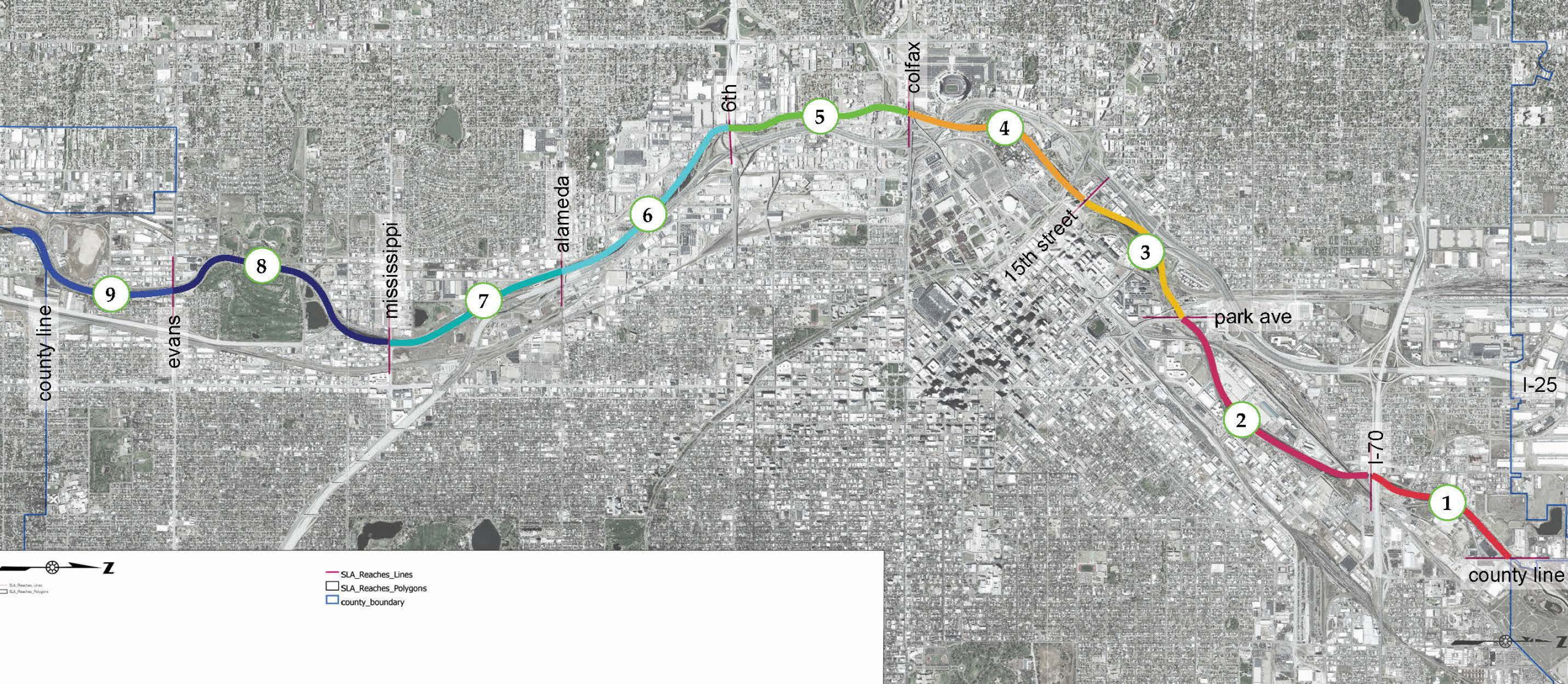
Game Plan

- Protect water quality and manage water use
- Restore functional ecosystems emphasizing healthy waterways and lakes
- Effectively treat urban runoff and reduce flood risk



“An integrated planning and implementation approach to managing finite water resources for long-term resilience and reliability, meeting both community and ecosystem needs”

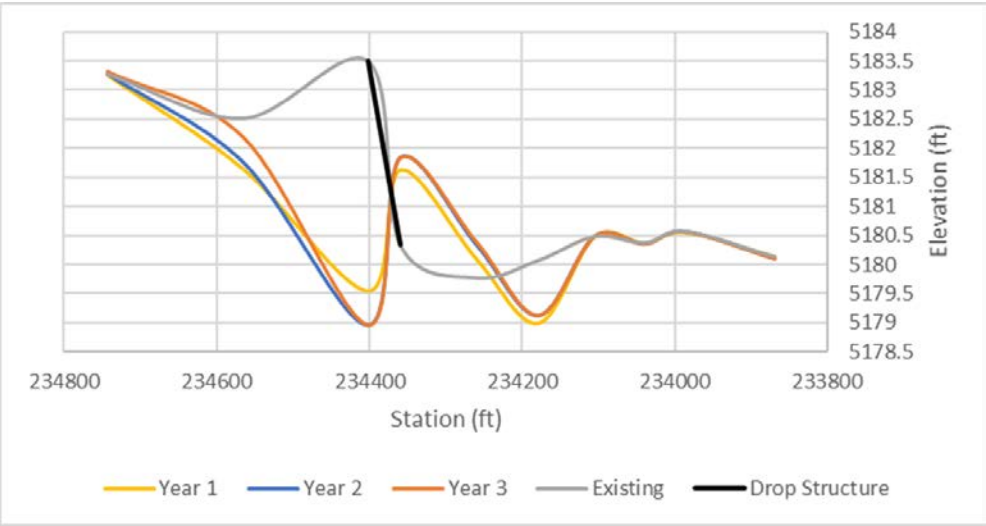
South Platte River Needs Assessment



MHFD Floodplain Update



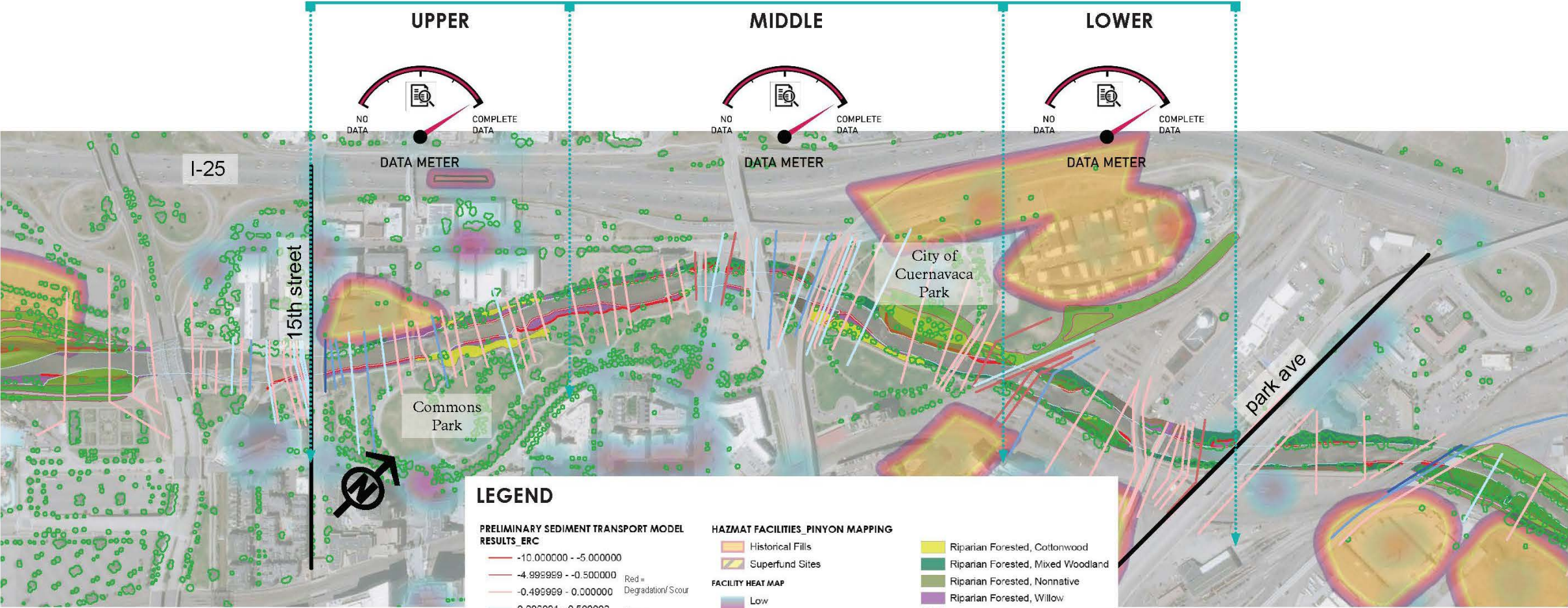
Sediment Evaluation



SOUTH PLATTE RIVER SEDIMENT TRANSPORT PRELIMINARY RESULTS



Natural Systems Evaluation



LEGEND

PRELIMINARY SEDIMENT TRANSPORT MODEL RESULTS_ERC

- 10.000000 - -5.000000 Red = Degradation/Scour
- 4.999999 - -0.500000 Blue = Aggradation/Deposition
- 0.499999 - 0.000000
- 0.000001 - 0.500000
- 0.500001 - 5.000000
- 5.000001 - 10.000000

PROPOSED HABITAT_URBAN WATERWAYS PLAN

- Riparian
- Submerged Wetland
- Upland
- WUS
- Wetland

HAZMAT FACILITIES_PINYON MAPPING

- Historical Fills
- Superfund Sites

FACILITY HEAT MAP

- Low
- High

TREE CANOPY_CCD LAYER

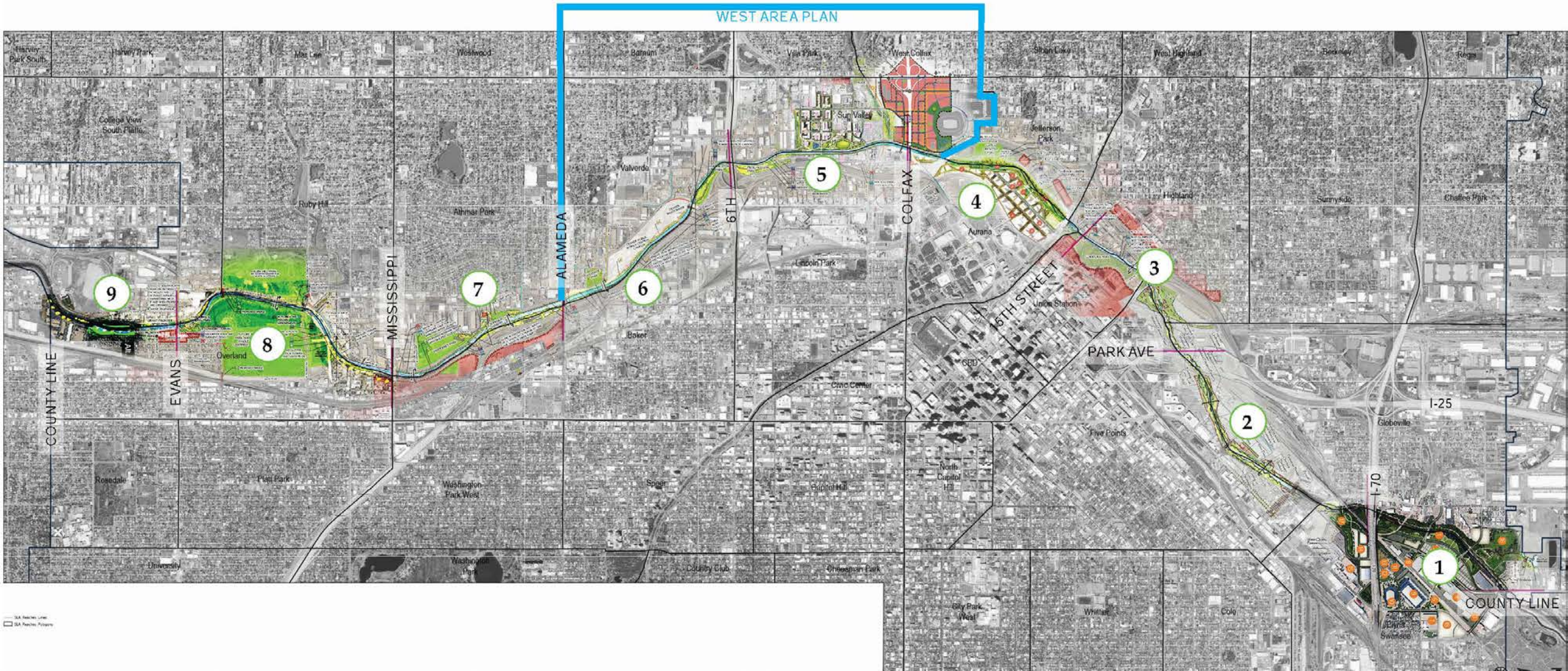
- tree_canopy_2014

EXISTING VEGETATION_ERO MAPPING

- Wetland
- Herbaceous Wetland
- Herbaceous Wetland, Native
- Herbaceous Wetland, Nonnative

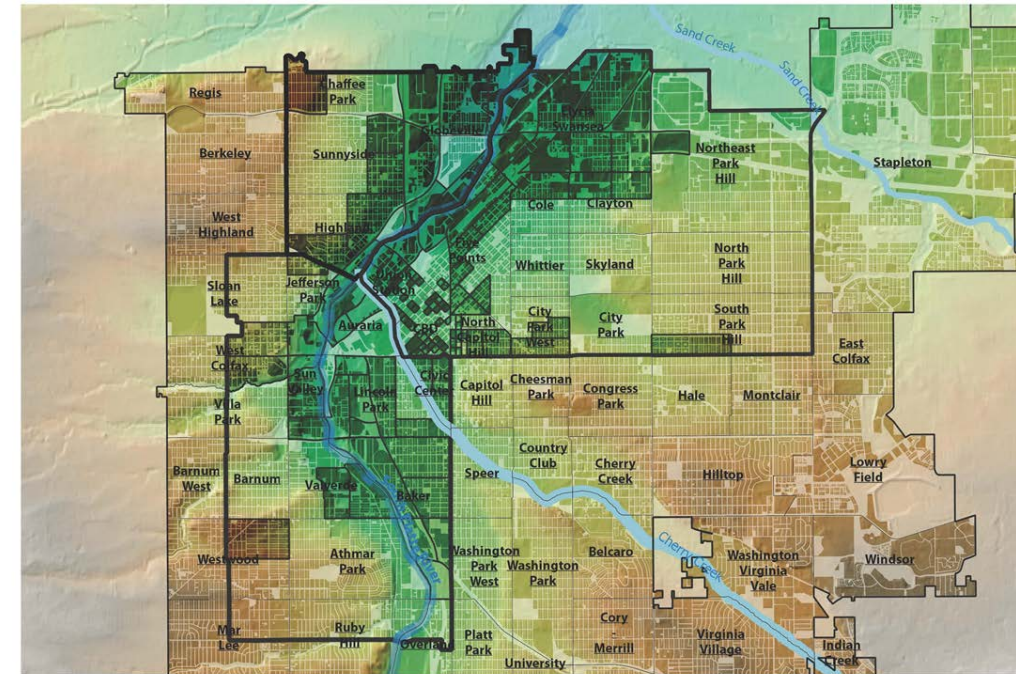
- Riparian Forested, Cottonwood
- Riparian Forested, Mixed Woodland
- Riparian Forested, Nonnative
- Riparian Forested, Willow
- Riparian Herbaceous, Native
- Riparian Herbaceous, Nonnative
- Upland Forested
- Upland Herbaceous, Nonnative
- Bluegrass Forested
- Disturbed Area
- Traditional Park
- Active Work Zone/Tree Removal

Adjacent Land Use/Mobility Needs



Next Steps

- One Water Framework + SPR Needs Assessment = Comprehensive Master Plan for the South Platte River
 - Safety
 - Equity
 - Mobility
 - Environment
 - Recreation
- Implementation considerations



TOPOGRAPHY - 1980-2019 AND GROWTH AREAS

Legend:

- statistical_neighborhoods
- Study Area Boundary
- Elevation
 - 5196 ft
 - 5396 ft
 - 5597
 - 5298 ft
 - 5498 ft
 - 5700 ft +
- Growth Areas