



COLFAX & FEDERAL  
INTERCHANGE  
TRANSFORMATION



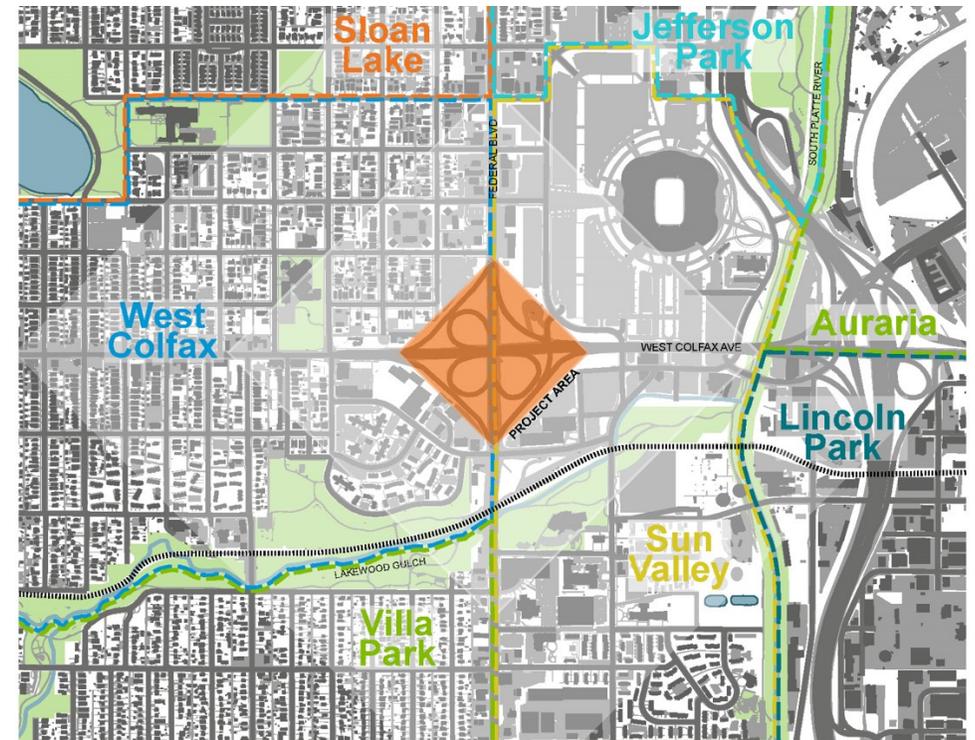
NEWSLETTER TOPIC: **STORMWATER**

# E-NEWSLETTER

*This e-newsletter is the second in a series introducing the Colfax & Federal Interchange Transformation project. In this newsletter, you will learn about stormwater and its impacts on the study area.*

## Get involved and stay up to date!

Please visit the [project website](#) to learn more about the study and to find out about upcoming engagement opportunities. Also, don't forget to check out [newsletter #1](#) to learn about mobility and transportation.



Project Planning Area Map

# Vision Element Statements for Stormwater

The statements **evaluate stormwater and environmental considerations through four lenses: Equity, Resiliency, Connectivity, and Health & Safety.** They were developed by reviewing 23 prior studies and from stakeholder input and **will guide decision-making throughout the design process.**

## Environmental & Stormwater

### Equity

Manage local and regional stormwater to reduce flooding risks for existing properties and future development. Increase community education and awareness of flood risks.

- Reduce local flooding
- Improve water quality
- Consider stormwater needs with development

### Resiliency

Implement stormwater strategies that enable the community to recover quickly after storm events. Implement green infrastructure that addresses water quality, biodiversity, heat island effects and reduces the impacts of climate change.

- Increase community of flood concerns and stormwater strategies
- Implement functional green infrastructure and stormwater amenities
- Reduce effects of climate change
- Reduce heat island effect

### Connectivity

Implement stormwater improvements that are compatible with and enhance mobility goals and development opportunities.

- Link green street opportunities with mobility options
- Ensure sidewalks do not flood during local events

### Health & Safety

Design stormwater improvements that increase public safety by mitigating both local and regional flood risks. Integrate landscapes which improve water quality and create a healthy environment.

- Increase tree canopy
- Mitigate environmental hazards

YOUR INPUT



## Did you know?

**The Colfax/Federal interchange area has been subject to historic flooding.** Therefore, stormwater management is a key consideration in the future redesign of this interchange and the surrounding area.

Photo: View of **South Platte River flood damage in Denver, 1965.** The photo shows warehouses, smokestacks, power poles, water, railroad tracks, and the Colfax Avenue viaduct.

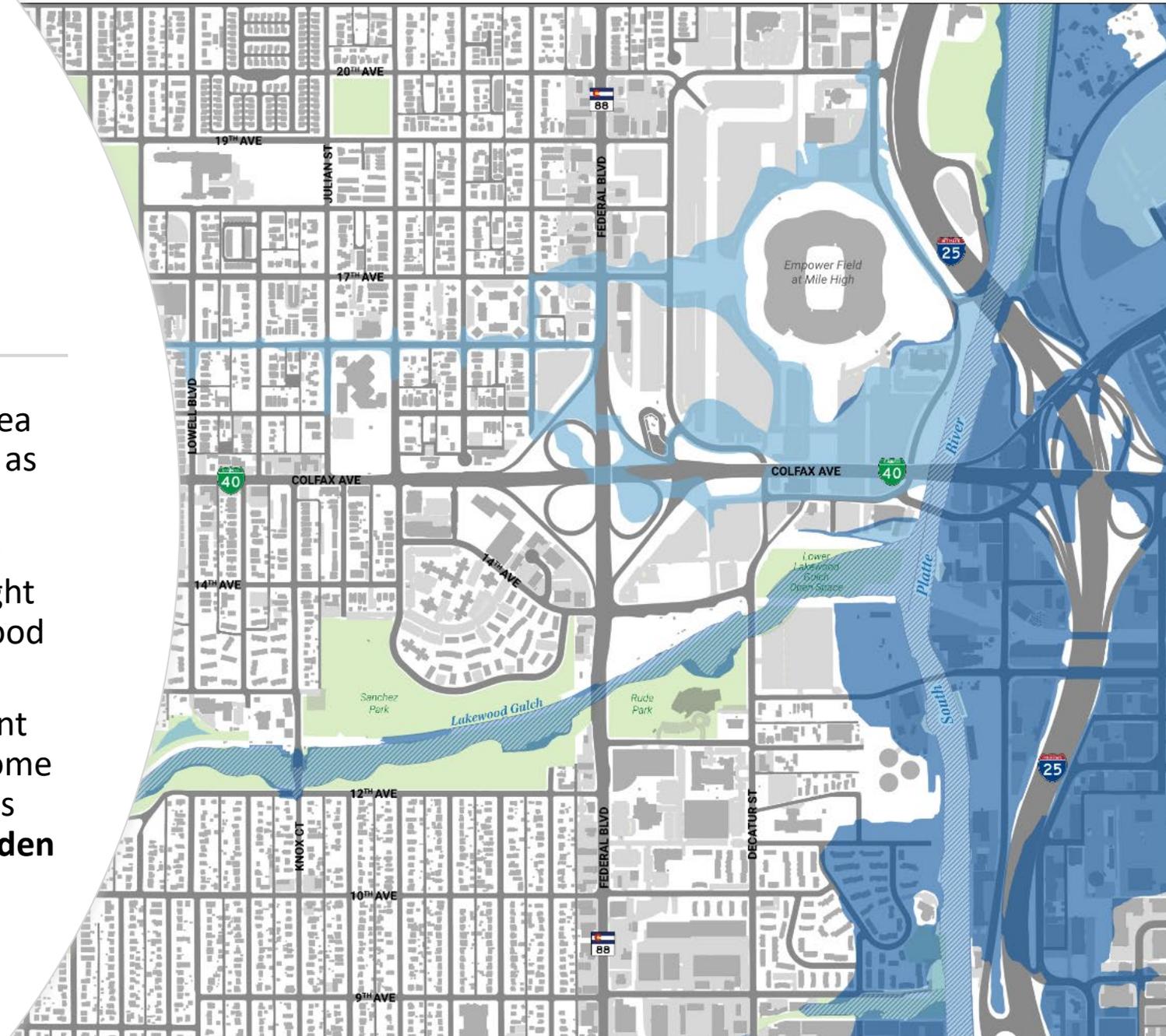


The Colfax/Federal Interchange project area experiences local flooding during larger rain events.

- Stormwater flows from the Sloan's Lake area (shown in the photos above), east along 17th Avenue and toward the interchange and surrounding Stadium District area as it makes its way to the S. Platte River.
- During a major storm event, the existing stormwater pipe infrastructure could be overwhelmed, causing excess water to flow through the streets and across the project area.

# Floodplain Mapping

- The **floodplain** is any land area susceptible to being inundated as the result of a flood.
- **On the map to the right, the floodplain is shown in blue.** Light blue areas are more likely to flood than dark blue.
- During a 100-year storm event about 400 cfs of water could come through the project site, which is equivalent to about **14,500 garden hoses** on at the same time.



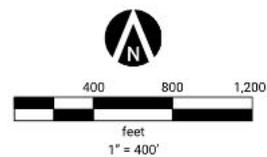
Federal and Colfax Interchange  
Flood Hazard Zones

Flood Hazard Zones

- 100-Year Floodplain (Zones A, AE, AO, AH)
- 100-Year Floodplain, Floodway (Zone AE)
- 500-Year Floodplain (Zone X)

Other Features

- Building Roofprints
- Roadway Pavement Area
- Parking and other Impervious Areas
- Parks and Open Space



# The way we build our communities has a direct impact on flood conditions.

- One of the contributing factors to urban flooding is the amount of impervious surface - or paved surfaces - present within the area. Hard or paved surfaces do not absorb stormwater runoff, but tree canopy and vegetation can work to slow the flow of stormwater over the area and provide increased absorption of runoff into the soil.
- The lack of tree canopy and vegetative diversity results in less absorptive capacity and greater surface water runoff which can increase flooding. The photo to the right reveals that the project area is comprised primarily of grasses and other weeds, yet lacks trees and diverse plant species.



# Stormwater Best Management Practices

Stormwater management is the effort to reduce runoff of rainwater or melted snow into streets, lawns or other sites.

Improving the water quality of that runoff can be an important practice that enhances the quality of our natural ecosystems and reduces the risk of property damage in the event of a storm.



# Green Infrastructure

Green infrastructure design mimics nature and uses vegetation, soils and roots to slow, filter and treat stormwater runoff.

Examples include: rain gardens, retention basins, bioswales, permeable pavers, green roofs, and creation or preservation of wetlands and open spaces. Visit the [EPA website](#) to learn more about the above mentioned best practices.



Rainwater collected in planter box then channeled into rain garden  
Boulder, CO



Irrigation by disconnected downspout  
Denver, CO



Green roof  
Salt Lake City, UT



Vegetative swale  
Fort Carson, CO



Pervious pavement sidewalk  
Sioux City, SD



Retention pond  
Seattle, WA



Green Infrastructure Photos

# Green infrastructure is also key to managing water quality within the area.

Runoff from our homes, driveways and streets carries pollutants to our drainage infrastructure and to the S. Platte River or gulches. By increasing the level of vegetation within our local environments, we can minimize the pollutants that are carried to our waterways.



As stormwater washes over impervious surfaces, it collects and carries pollutants such as trash, bacteria, automobile fluids, and nutrients into our storm drain system. This then flows directly into our lakes, streams, and river.

*As we think about the future of this area, we must consider how future development will work in harmony with the natural environment.*





There are a lot of potential design choices for how we use land and manage water on this site. What can you imagine in the redesign of these 29-acres?

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Thank you for your time!!

Please visit the project website for updates and evolving details!

[Click here to visit the Project Website.](#)