

2025 Storm Drainage Master Plan (SDMP)

Transportation & Infrastructure Committee November 5, 2025

Presented by:

DOTI Citywide Infrastructure | Environmental Implementation Division



RESOLUTION 25-1628

A Resolution approving the adoption of the 2025 Storm Drainage Master Plan as the official master drainage plan of the City and County of Denver.



D.R.M.C. Sec 56-110

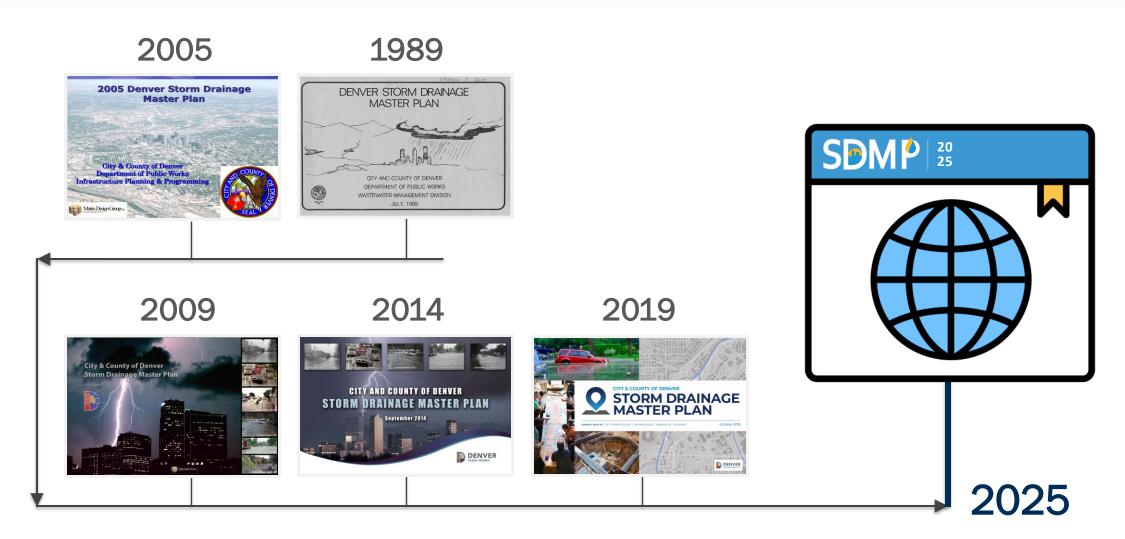
Requires City Council adoption every 5 years







The SDMP evaluates Denver's existing urban flood risk and identifies future capital improvements to reduce flood damages and increase safety.



Purpose

 Identifies, without prioritizing, <u>ALL NEEDS</u> for upgrading & installing existing storm drains to comply with the City's current Drainage Criteria



INVENTORY SYSTEM



EVALUATE FLOOD RISK



IDENTIFY NEEDS

- <u>DOES NOT</u> Evaluate capacity of open channels
- **DOES NOT** Prioritize capital projects
- DOES NOT Allocate funding for projects

SYSTEM FACTS

- >1,000 mi. of pipes (6-in. to 120-in.)
- >40 mi. of open channels
- 29,000+ inlets
- 17,000+ manholes
- 100+ water quality and detention ponds
- Average age >40+ years old
- > 25% existing pipes are too small
- >4,500 buildings have Non-FEMA Urban Flood Risk (Local Flooding)





Storm Master Plan is created for:



City Agencies

- DOTI Capital Projects
- Wastewater Operations
- Denver Permitting Office
- Regulatory Floodplain Team
- Community Planning and Development



Engineers &Developers



Council Offices & Communities





Organizational Planning Framework



Lead Agency & Internal Stakeholders



Citywide Infrastructure Environmental Implementation Division

- Right of Way Services Engineering & Regulatory
- **Wastewater Operations**
- **Development Engineering Service**





Consultant





































Data Collection Complete

H&H Modeling Complete

Portal Complete **New Study** Initiated

December 2023

March 2024

May 2024

October 2024

December 2024

March 2025

2025 Storm Drainage Master Plan - GOAL

TECHNICAL UPDATE

IDENTIFY FLOOD RISK & DEVELOP NEEDS

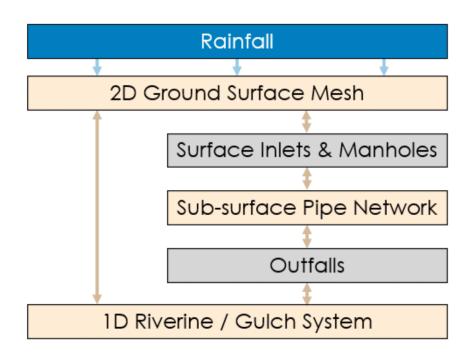
ENGAGEABLE TRANSPARENT FRAMEWORK





TECHNICAL UPDATE

- Best-in-class hydrologic and hydraulic (H&H) modeling software & modeling approach;
- All inclusive H&H model w/ High level of detail





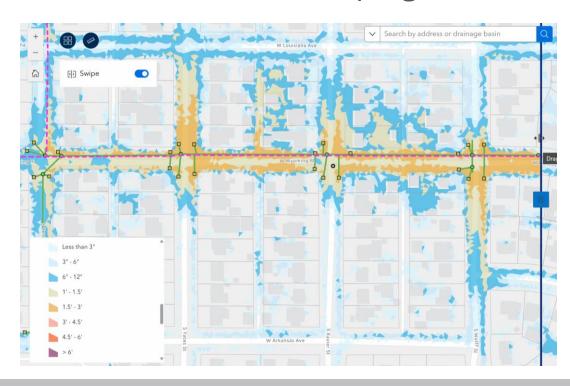
Denver's Storm Drainage Design Criteria





TECHNICAL UPDATE (cont'd)

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- All inclusive H&H model w/ High level of detail









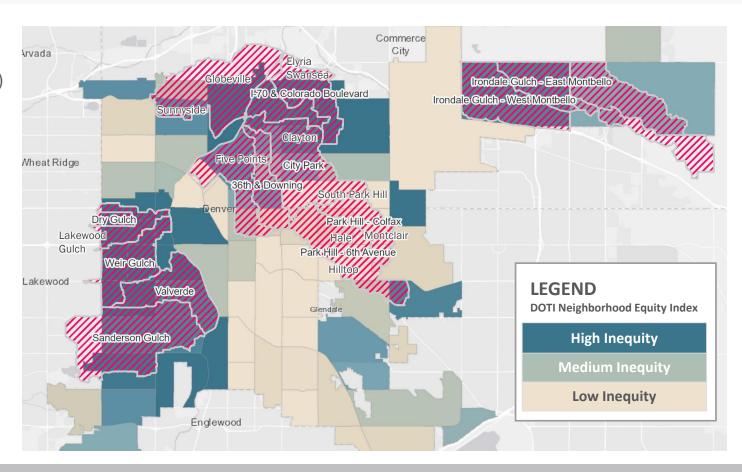
IDENTIFY FLOOD RISK & DEVELOP NEEDS

New Urban Flood Risk Modeling for:

- Montclair Basin (Platte to Park Hill, Central 70)
- I-70 & York Basin
- I-70 & Colorado Blvd Basin
- Dry Gulch Basin
- Weir Gulch Basin
- Lakewood Gulch Basin
- Sanderson Gulch Basin

Inclusion of new Mile High Flood District studies:

- Irondale Gulch Outfall System Plan
- Valverde Basin Outfall System Plan







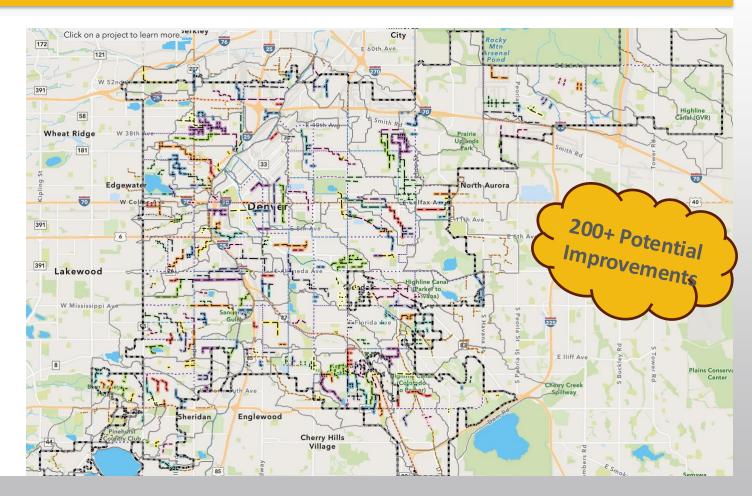
IDENTIFY FLOOD RISK & DEVELOP NEEDS (cont'd)

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Montclair Basin New Analysis

Signature CIP Projects:

- Globeville Landing Outfall/Park
- 39th Greenway Open Channel
- Park Hill Detention
- City Park Golf Course Integrated Detention
- Central 70: I-70 improvements between Brighton Blvd and Chambers Rd

100-Year Flooding in City Park Neighborhood

Pre-P2P

6" - 12"

1' - 1.5'

1.5' - 3'

3' - 4.5'

4.5' - 6'

> 6'



Post-P2P



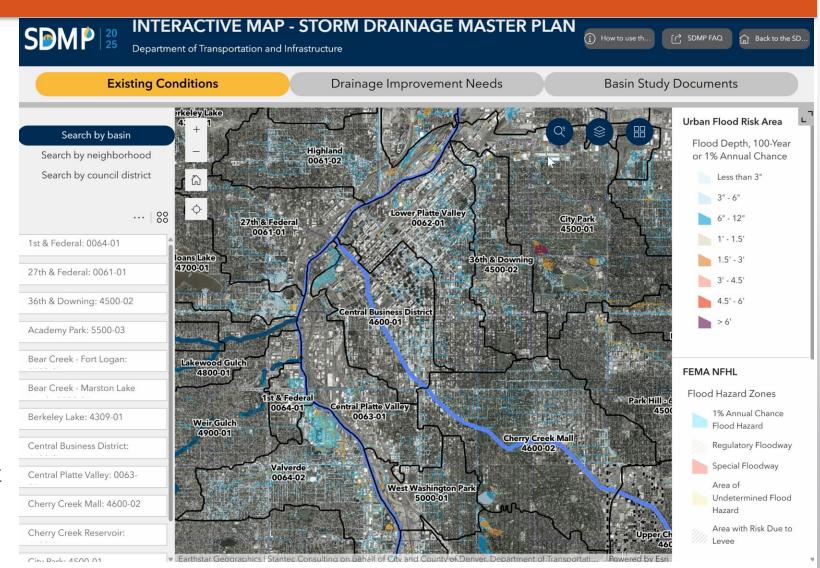


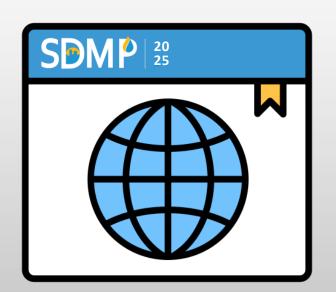


ENGAGEABLE & TRANSPARENT FRAMEWORK

Key Features:

- One-stop shop for drainage concerns
- ✓ Fully Online & Interactive
- ✓ Educational & Engageable
- ✓ Intuitive Online Maps
 - City-mapped Urban Flood Risk
 - FEMA Flood Risk
 - Potential Improvements
 - Technical Analysis
- ✓ ADA Compliant & Language Access
- ✓ Enable Continuous Improvement & Frequent Update





Online Master Plan DEMO

https://DenverGov.org/Stormwater

Scan QR Code to Visit 2025 Storm Drainage Master Plan Website:









Colorado Association of Stormwater and Floodplain Manager

2025 Engineering Excellence Award

Thank You.

Questions?

Blackman, Thomas E. - DOTI Engineering Supervisor
DOTI INF INFRA Env Design & Planning
Thomas.Blackman@denvergov.org

Meng, Jun - DOTI Engineer-Architect Specialist
DOTI INF INFRA Env Design & Planning
Jun.Meng@denvergov.org



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