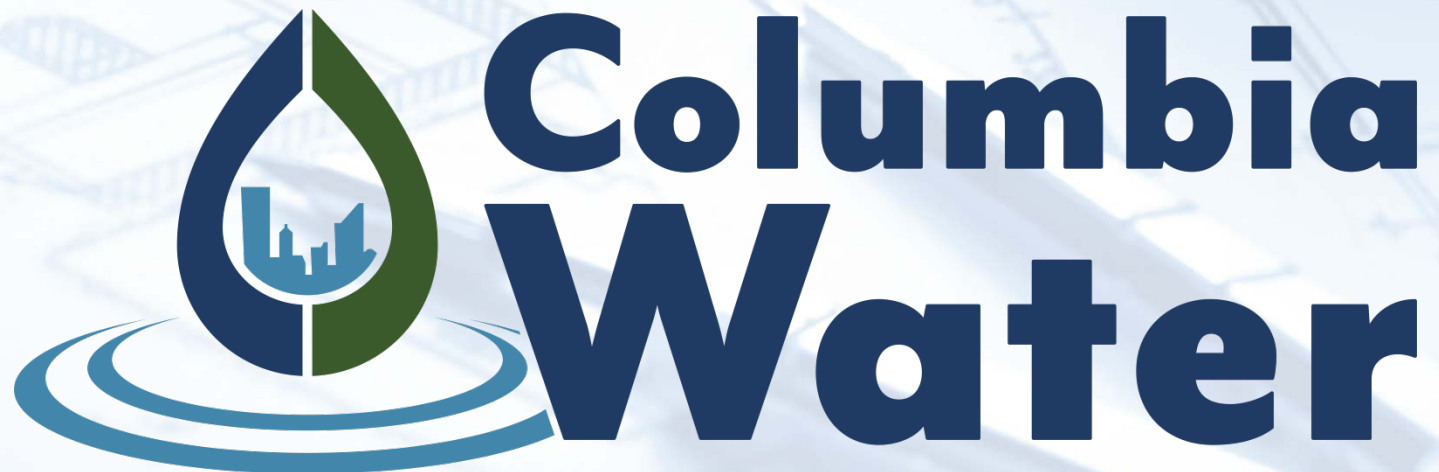


Responding to Flooding in Shandon: A Community Discussion

Dana Higgins, PE, Director of Engineering
Robert Anderson, Director of Public Works

August 4, 2017



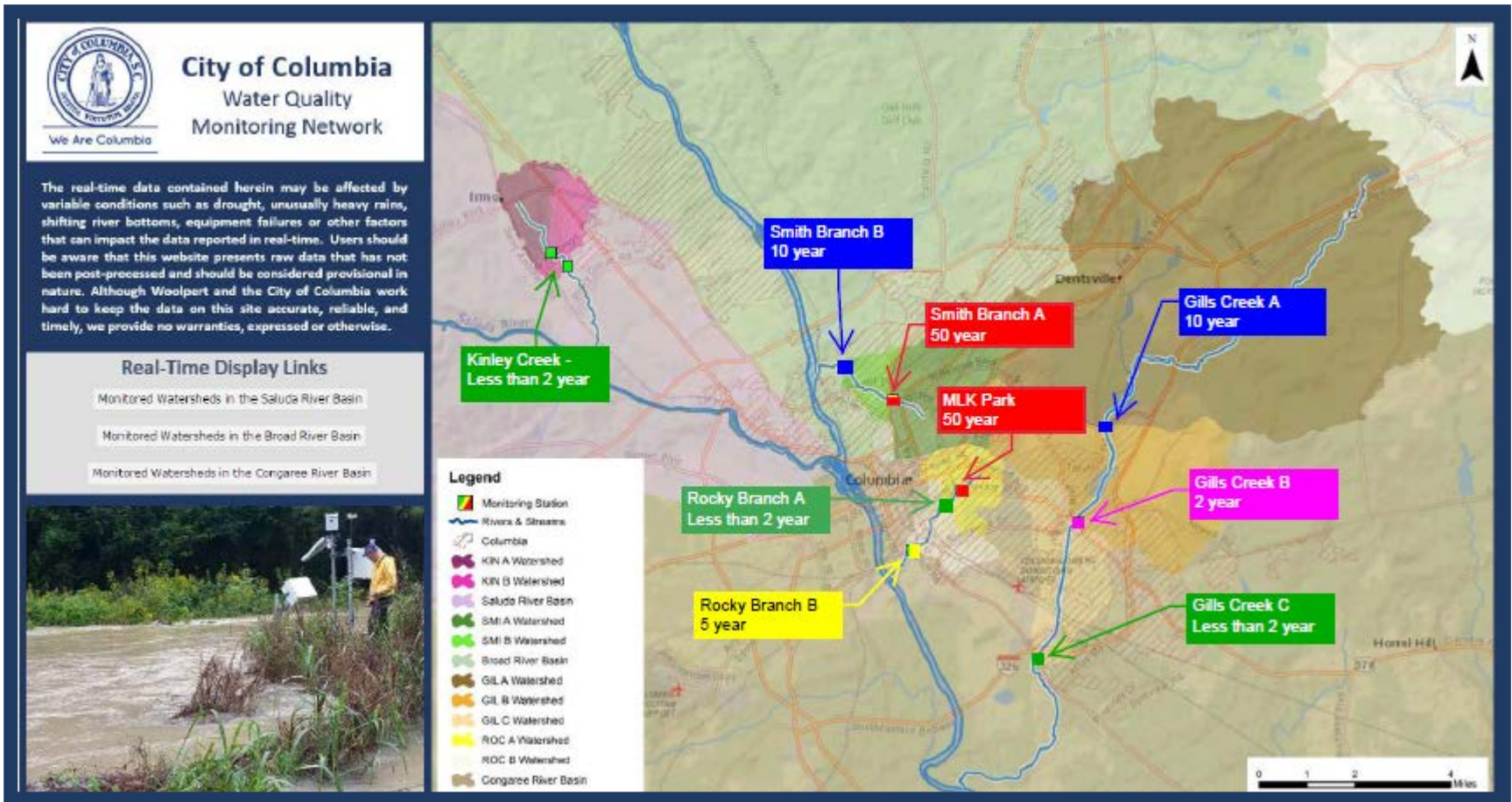
Drinking Water • Wastewater • Stormwater



Overview

- The Sunday storm
- Flooding studies
- Long range solutions
- Issues during flooding
- Short range solutions
- Discussion
- One-on-one map review

The Sunday Storm



- Design storm: 10 year

Flooding Studies: 2011 Cox & Dinkins

- Shandon Rosewood watershed is 750+ acres
- East watershed is 400+ acres
- West watershed is 350+ acres
- Intersections identified with storm problems

East Watershed

- Wheat at Amherst
- Monroe at Ravenel
- Monroe between Ravenel & Walker
- Heyward between Ravenel & Walker

West Watershed

- Shandon north of Wilmot
- Monroe at Maple

Flooding Studies: 2011 Cox & Dinkins

East Watershed

- Recommended solution
 - New 54" RCP trunk line along Ott Street from Devine to Rosewood
- Cost
 - \$1,000/ LF * 4,000 LF = \$4.0 million



Flooding Studies: 2011 Cox & Dinkins

West Watershed

- Recommended solution
 - New 36" RCP trunk line along Maple Street from Wilmot Ave. to Burney, east along Burney to Sloan, then to Rosewood.
 - New 36" RCP trunk line along Woodrow Street from Monroe to Rosewood
- Cost
 - $\$830/\text{LF} * 6,700 \text{ LF} = \5.5 million



Flooding Studies: 2012 Fuss & O'Neill

- Used 2011 Cox & Dinkins Study
- Proposed Low Impact Development within two pilot areas
 - **East Watershed:** included Amherst from Blossom to Wheat
 - **West Watershed:** included Maple from Wilmot to Duncan

Flooding Studies: 2012 Fuss & O'Neill

East Watershed



Flooding Studies: 2012 Fuss & O'Neill

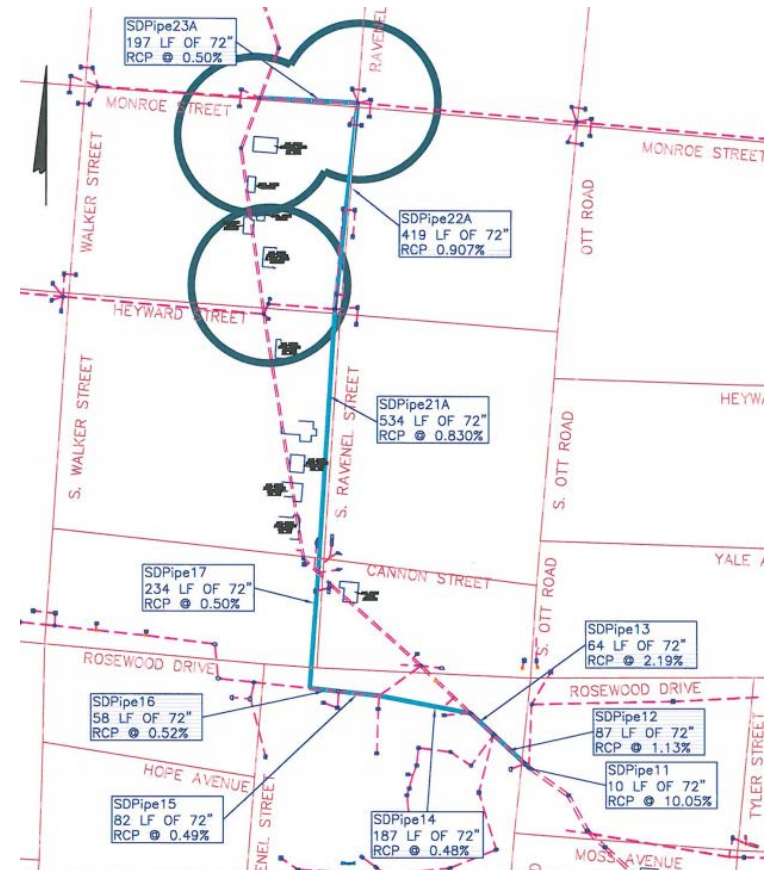
West Watershed



Flooding Studies: 2014 Review With LID

East Watershed

- Recommended solution
 - New 72" parallel trunk line along S. Ravenel from Monroe to south of Rosewood
- Cost
 - \$2.8 million

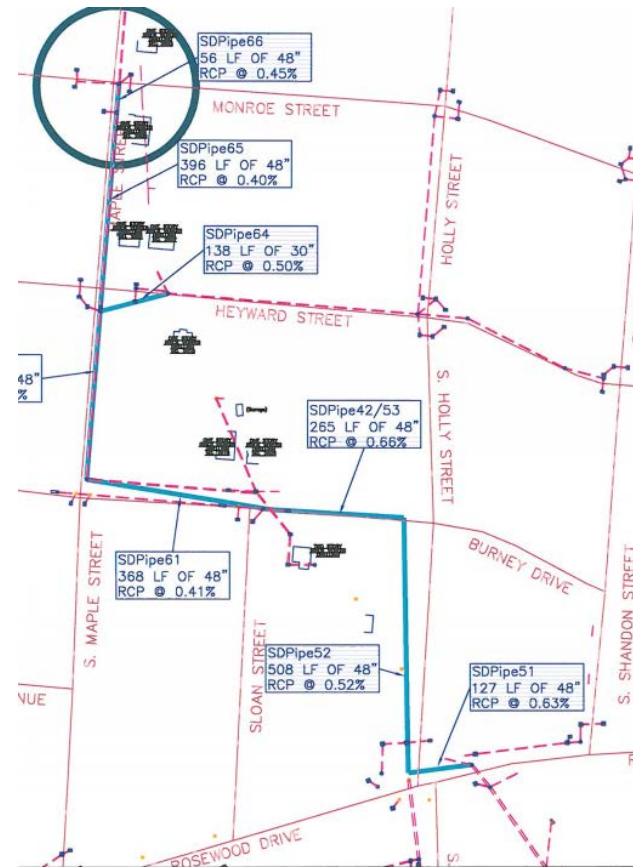


EAST BRANCH - 2A IMPROVEMENTS

Flooding Studies: 2014 Review With LID

West Watershed

- Recommended solution
 - New 48" parallel trunk line along Maple from Monroe to Burney and along S. Holly from Burney to Rosewood
- Cost
 - \$2.2 million



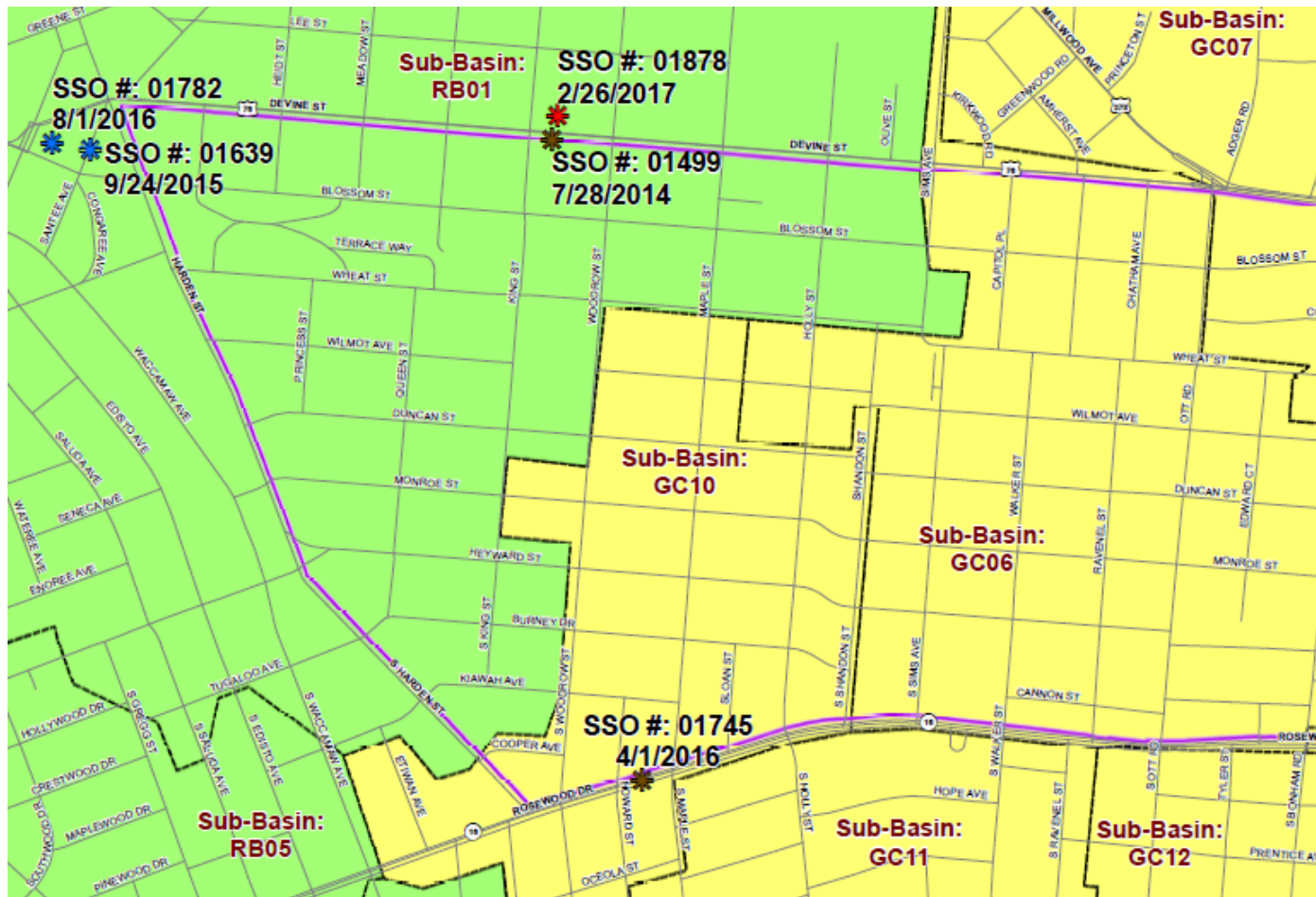
Long Range Solutions

- \$93 million stormwater bond
- Estimated schedule for hiring a feasibility study consultant
 - August 6, 2017: RFQ advertised
 - October 17, 2017: Estimated council agenda
 - November 17, 2017: Estimated NTP
- Feasibility study – approximately 1 year

Issues During Flooding

- Response Time
- Vehicles In Intersections
- Water Quality During Flooding

Water Quality



- SSO - Cause**
- COLLAPSED LINE
 - ROOTS
 - WET WEATHER
 - Shandon Neighborhood
 - Gills Creek Sewer Basin
 - Rocky Branch Sewer Basin



Short Range Solutions

- Vehicle Management
 - Alternate routes for emergency response
 - Fines for going around barricades
- Drainage Inlets

Items For Discussion

- Pocket Parks
- Vehicles in Intersections
- Updates to Flood Map (BREAKOUT SESSION)

THANK YOU!