



Little Dry Creek entering Arapahoe Rd box culvert, 9/13/13

September 10-15, 2013

Assessing Storm Event Impacts

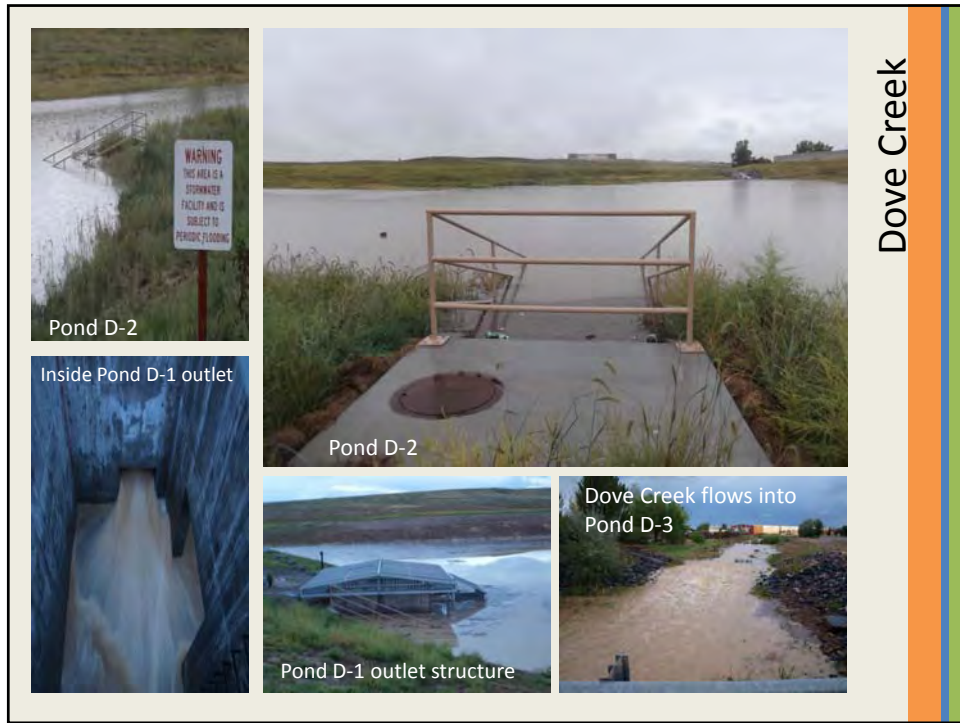


Regional Pond W-6/7, 9/13/13

Fortunately, the eastern part of Centennial that experienced the most intense and sustained rain of the week-long storm event, has Regional detention and water quality ponds.

These ponds are built to hold back collected rainfall and release at a specified release rate for a large storm event, and they accomplished the goal of not contributing to the significant volume of rain already flowing in swollen creeks.

Let's see what some Regional ponds looked like during the storm event...





Regional Ponds are very effective at detaining peak flows, protecting downstream facilities from higher and more erosive flows....



The Cottonwood Creek Stream Stabilization project would have benefitted from a master planned, but not yet completed Regional pond, immediately upstream @ Easter.

SEMSWA CIP Program has this Regional pond In design now in response to increased Inverness area development....



Little Dry Creek @ Arapahoe, downstream of road

While the flows in Centennial were not of the magnitude as those experienced in the northern part of the State and in neighboring Aurora and Parker, the antecedent rains from early in the week saturated the ground and caused the later rains to immediately runoff and increase flows in our creeks. This type of storm, regardless of intensity, often results in damage to downstream facilities.

Let's see how recent SEMSWA projects handled the flows...



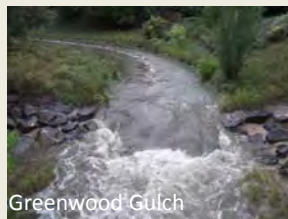
Cherry Creek @ Eco Park



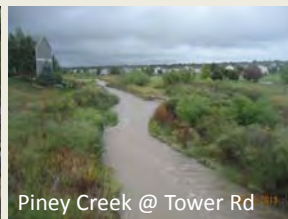
Little Dry Creek @ Arapahoe Road



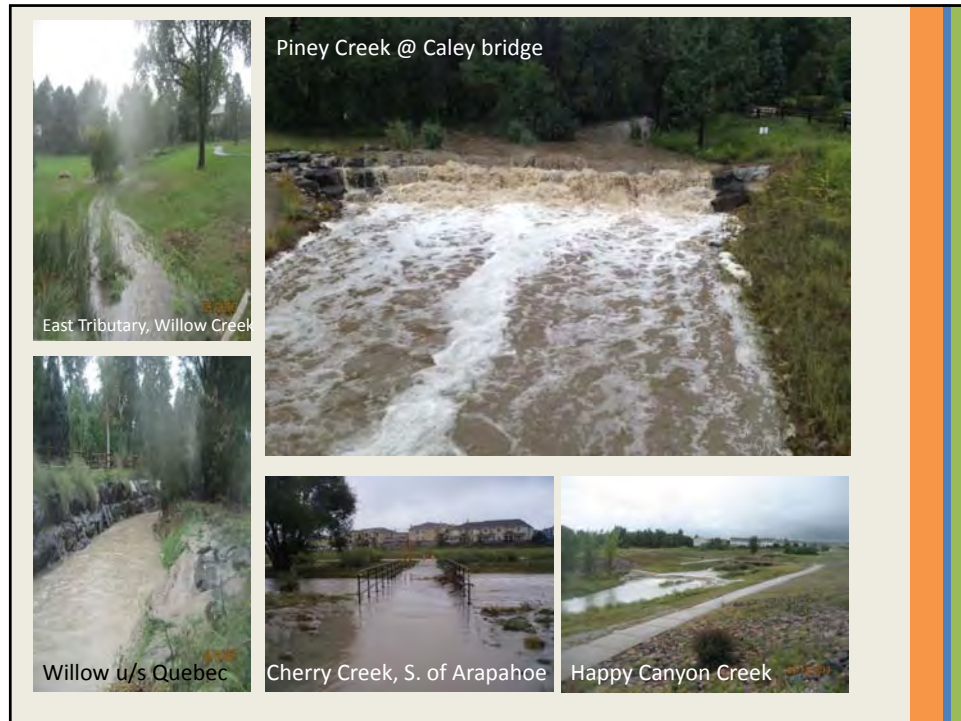
Windmill Creek



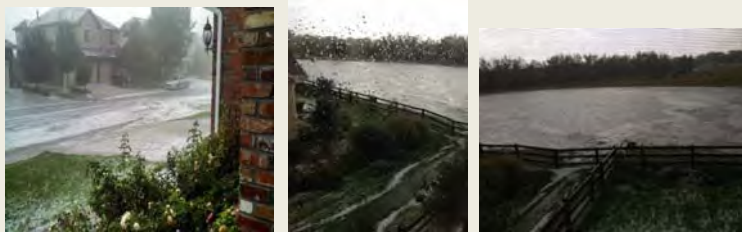
Greenwood Gulch



Piney Creek @ Tower Rd



Pictures sent in by Stephanie Piko, Centennial Council Member, showing the drainage swale SEMSWA completed in 2007.



Council Member Piko noted how well the swale worked, taking the significant street flows to the detention pond, and how well the pond released flows to Piney Creek and took on new flows from the swale throughout the storm event.

Piney Creek @ Orchard Valley subdivision

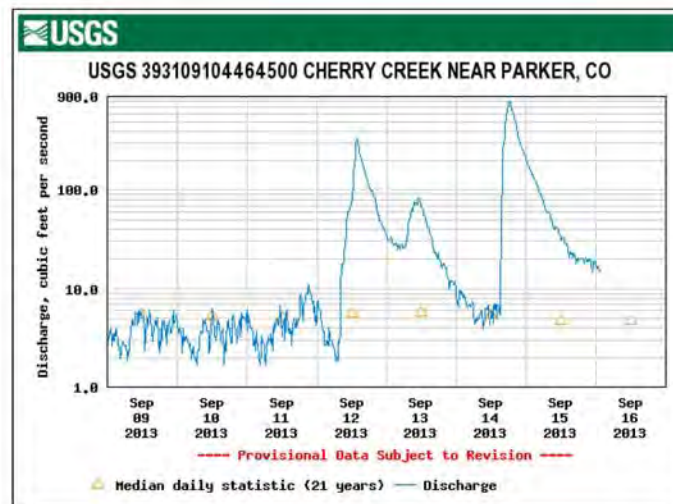
After storm event assessment at Inverness Golf Course Pond



Localized flooding caused pond overtopping and increased head pressure at the outlet structure, triggering the storm sewer pipe to fail completely and drain the pond. SEMSWA Maintenance crews TV'd the Corrugated Metal Pipe (CMP) to confirm pipe asset status.

Voids around the pipe scheduled to be filled by SEMSWA in September. Pipe lining project to follow shortly after.

Inverness Golf Course Pond @ Inverness drive East



Cherry Creek hydrograph illustrating peak flows from
September storm events @ the Main Street gage