



PINEY CREEK MAJOR DRAINAGEWAY PLAN

Progress Meeting Minutes

January 5, 2011

Attendees:

- Shea Thomas, UDFCD
- Rich Borchardt, UDFCD
- Monica Bortolini, SEMSWA
- Bill McCormick, City of Aurora
- Hoanh Tran, City of Aurora
- Vern Adam, City of Aurora Water Department
- Lori Tagawa, Aurora Parks, Recreation and Open Space Department, Aurora Water
- Brad Robenstein, Douglas County
- Stacey Thompson, Arapahoe County
- Lynn Cornell, Arapahoe Parks and Recreation District
- Doug Rockne, Arapahoe Parks and Recreation District
- Bill Ruzzo, Cherry Creek Basin Water Quality Authority
- Chuck Reid, Liverpool Metro District
- Alan Leak, WRC Engineering, Inc.
- Nate Torrey, WRC Engineering, Inc.
- Jessie Nolle, WRC Engineering, Inc.

A sign-in sheet and meeting agenda were distributed to attendees prior to the start of the meeting.

FHAD

The first draft of the FHAD was submitted to UDFCD for review and comments are anticipated to be completed soon. Once comments are received a draft FHAD Report will be submitted to all project sponsors for review.

Discussion of Problem Areas

Piney Creek has been divided into 13 study reaches, based on similar channel characteristics and problem areas. Problems in each reach were discussed.

Reach 1

Reach 1 has degraded in the upper part of the reach and has aggraded in the lower part of the reach. The floodplain is nearly encroaching on the Orchard Valley development on the north side of Reach 1.

Reach 2

The failed drop just downstream of Parker Road will be designated with a different symbol than the symbol used to identify functioning drops. Parker Road is causing 100-year backwater to flood Orchard Road. A new drop structure will be constructed to replace the failed one. The new drop structure may be constructed upstream of Parker instead of downstream of Parker to better convey flow through the bridge. Reach 2 exhibits sections of severe erosion. Bank stabilization may be required. Determine the CDOT

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status of the Parker Road bridge. The channel between the bridge piers may be widened and/or deepened and the side slopes excavated, but some kind of structural mitigation may be required due to the bridge piers relying on skin friction.

Reach 3

Reach 3 is generally stable due to drop structures being constructed. Flooding does occur over Orchard Road but this is due to backwater from Parker Road.

Reach 4

Reach 4 is stable but is currently flooding Orchard Road. Conveyance could be expanded through this reach.

Reach 5

Reach 5 both upstream and downstream of Tower Road has experienced a large amount of sediment deposition, burying two vertical drop structures. The sediment is coming from Piney Creek Ranches (Reach 6). There is also high groundwater in the area. A new trail under Tower Road has been constructed over the concrete trail due to sediment deposition covering the existing trail. Problems may be eliminated by addressing severe erosion in Piney Creek Ranches.

Reach 6

During construction of the Caley bridge in Reach 6, a single storm event, estimated to be less than the 2-year event, resulted in a hole 50 feet square by 5 feet deep being completely filled with sediment. This reach is very vulnerable to erosion and contributes a lot of sediment to the system.

Phasing is a very important component when dealing with sediment transport problems. A sediment pond downstream of Piney Creek Ranches would be a quick fix but would require extensive maintenance based on observations of the quantity of sediment being conveyed downstream from Piney Creek Ranches during even a small storm. A sediment basin is not considered a permanent solution to the problem. The need and long-term costs of the quick fix needs to be balanced with the higher initial capital costs of stopping the transport of sediment by fixing the channel through Piney Creek Ranches. It is estimated that the cost of a single check structure is equal to the cost of removing sediment from a sediment basin three times.

Alternatives should be considered at Caley to reduce the extents of the floodplain upstream of Caley (see Reach 7)

Reach 7

The possibility of detention will be considered at the downstream limit of Reach 7, just upstream of the Caley bridge. This detention would be used to reduce peak flows going under the newly constructed Caley bridge. It was suggested that the detention pond be created by converting the existing levee at the west edge of the Greenfield development to a detention pond embankment instead of a levee.

Reach 8

Aurora Water and UDFCD have dredged upstream of Liverpool to Gartrell, through the golf course in the past and would like to again to aid in conveyance and reduce floodplain extents. An individual 404 permit will likely be required due to the presence of wetlands. Alternatives are being considered. It is estimated that three to four feet of sediment has accumulated in the past three to four years.

Reach 9

There are areas of both erosion and deposition in Reach 9.

Reach 10

Reach 10 banks are possibly unstable.

Reaches 11-13

Channel appears to currently be stable in these reaches.

Discussion of Detention

Aurora is to confirm that the Rocking Horse Pond should be included in the base model (this has since been confirmed). A regional pond is planned just upstream of Jackson Gap as part of the Whispering Pines development. This pond should be considered in the alternatives.

Alternatives Description

With respect to the naming of various types of improvements, the difference between “floodplain preservation” and “limited structural” were discussed. “Limited structural” implies a reclamation component and restorative maintenance.

Public Meetings

Mailing lists for public meetings will be provided by Aurora, SEMSWA, and Douglas County. WRC will provide a boundary for the mailing lists. It was discussed to send mailings to every home within the basin boundary but this may not provide the best benefit for the cost that would be required. It was discussed to possibly send mailings only to homes closer to Piney Creek, to notify HOAs, and to post notice at parks.

Other

The Alternatives Report will be submitted prior to the next meeting.

A draft analysis of sediment transport for Cherry Creek is expected soon.

Meeting was adjourned at 11:30 A.M.

Minutes Developed By:


Nathan R. Torrey