



PROGRESS MEETING FOR UPPER GOLDSMITH GULCH WATERSHED OSP AND FHAD MEETING MINUTES

Date: August 17, 2004
Location: Greenwood Village Engineering, Conference Room
Distributions: None

Attendees:

Name	Organization	Email
Ben Urbonas	UDFCD	burbonas@udfcd.org
Steve Gardner	Arapahoe County	SGardner@co.arapahoe.co.us
Lanae Raymond	Arapahoe County	LRaymond@co.arapahoe.co.us
Tricia Solsrud	City of Greenwood Village	tsolsrud@greenwoodvillage.com
Karen Blilie	City of Greenwood Village	kblilie@greenwoodvillage.com
Rick Moser	Moser & Associates	moser@moser-eng.com
Rich Ommert	Moser & Associates	ommert@moser-eng.com
Teresa Patterson	Moser & Associates	patterson@moser-eng.com

I. Purpose

The purpose of this meeting was update the project sponsors on the hydrology results and present the approach to the alternatives phase of the project.

II. Website

A website for the progress of the study has been posted and a link to the site is available from the District's Project website at www.udfcd.org/projects.htm. The site will be updated regularly with meeting notices, meeting minutes, and information from the study as the alternatives and design are developed.

Suggested changes to the website include:

- Separating the Public Meeting Minutes from the Progress Meeting Minutes.
- Adding Arapahoe County and Greenwood Village to the contacts list.

Once the alternatives report is completed, the executive summary from the report will be posted on the site.

III. Hydrology

Differences in the detention and land-use characteristics between the 1989 study and Moser's hydrologic analysis were presented. Moser's analysis concluded that the available regional detention storage volume is approximately 20% less than that reported in the 1989 study and that the imperviousness is approximately double that which was used in the 1989 study. Peak flow at key locations was also presented.

A comparison of the effects of imperviousness and detention characteristics on the peak flow was presented with four different scenarios. In all cases the two different models (1989 study and Moser's) produced essentially the same results.

IV. Alternatives Screening

A. Flood Protection

Two general approaches were presented: 1) Channel and Culverts, and 2) Optimizing Detention along with Channel and Culverts. Four alternative approaches will be evaluated:

Alternative 1 – 10-Year Conveyance

Alternative 2 – 100-Year Conveyance

Alternative 3 – 10-Year Conveyance with Optimized Detention

Alternative 4 – 100-Year Conveyance with Optimized Detention

Ben would like Moser to evaluate modifying the existing upper regional detention basins to capture the volumes from smaller than 100-year storms and release them more slowly so as to delay the volume flow and allow lower catchments and detentions to drain somewhat before the upper peaks arrive. There may be a combination of such detention scenarios that would desynchronize the combination of peaks and lower the flows at Bellevue.

For the trail crossings, Moser will evaluate them for the required structure size for various return periods. Particular areas discussed were the horse stable area and Tommy Davis Park. Ben brought up the need to properly account these low-flow crossings in the floodplain definition and hydraulic analysis.

Moser will evaluate larger, privately-owned detention facilities in the alternatives evaluation as potential regional facilities.

The culvert crossing at Orchard Road at Tommy Davis Park needs to integrate a trail crossing within the culvert section.

B. Water Quality Protection

Water quality alternatives were discussed including:

- Entrances into Arapahoe Lake and dredging of the lake
- Existing Auto Dealership detention basins
- Retrofit outlet structures on existing detention at Silo Park and Orchard Hills Park
- Wetland low-flow channels

It was noted that water quality should be implemented prior to heavily-used public-use areas so that the standing water doesn't adversely affect the public.

C. Channel Stability and Aesthetics

Alternatives discussed included:

- Grade control structures upstream of Arapahoe Lake and downstream of Orchard Ave.
- Lining low-flow channel to prevent erosion downstream of Orchard.
- Different channel type through Tommy Davis Park. The concrete trickle channel through Tommy Davis Park fills with grass clippings. May want to

consider more native vegetation adjacent to the concrete channel through Tommy Davis Park.

- Modifying the riprap spillway in Orchard Hills Park to improve aesthetics.

Downstream of Silo Park – It was suggested that we may want to implement a meandering channel in the wide areas.

D. Identification of Problems

Known flooding problems included:

- Appletree Condominiums
- Silo Park Culvert (?)
- Downstream of Orchard Road along Goldsmith Gulch and the tributary (shallow, wide overbanks)
- Orchard Road overtopping at Tommy Davis
- Horse Stable Area
- Southwest Corner of Orchard and Yosemite

Known water quality problems included Arapahoe Lake.

V. Meetings

A. Public Meeting

- **Wednesday, August 25th, 7:00 PM held at Arapahoe County in the Arapahoe Room.**
- Sign-in sheet and comments form will be provided.
- A pre-presentation slide show of pictures from the area will be playing as people arrive.
- Ben will begin the introduction to the project and the purpose for the study, including introducing the project sponsors.
- Moser will then explain the project a little more and explain the identified problem areas.
- Break off into smaller groups, if attendance warrants.
- Have large maps of the area to use for identification.

B. Next Progress Meeting

- **Tuesday, September 14th, 8:00 AM held at the Greenwood Village, Conference Room #2.**
- Will discuss alternatives formulated and get feedback to prepare the draft alternatives report.