

## II. OVERVIEW OF SELECTED PLAN

Andrew Earles provided an overview of the Selected Plan. The Selected Plan (UDFCD letter outlining the Selected Plan is posted on the project website) generally follows the Recommended Plan from the Alternatives Analysis Report. Notable differences include the following:

- Existing conditions hydrology from the 1989 OSP will be used for existing hydrology values in the Preliminary Design Report. WWE performed modeling to define 2005 hydrology based on current watershed development conditions; however, UDFCD opted to keep the 1989 existing hydrology as the existing (or baseline) condition so that “existing” hydrology is not a “moving target.” Municipalities have used hydrology from the 1989 OSP as a basis for regulating development over the past 15+ years, so changing the baseline “existing” or “undeveloped” condition does not serve the long term goals of stormwater management.
- For Preble Creek, the Selected Plan calls for four ponds between S.H. 7 and Interstate 25. The Preliminary Design Report will include preliminary sizing for these facilities.
- For Shay Ditch, the proposed regional facility in the Recommended Plan has already been designed. The Recommended Plan called for Alternative 4b (full spectrum detention). Since the facility has already been designed as a conventional facility (water quality capture volume plus detention storage), the Selected Plan will follow Alternative 3b (conventional regional detention).

## III. QUESTIONS/COMMENTS FROM SPONSORS ON SELECTED PLAN

Comments included the following:

- Gene Potter, P.E. indicated that the City of Thornton would like the Preliminary Design for Sack Creek and South Sack Creek to reflect planning and design efforts that are currently underway. Property owners in these tributary watersheds have hired Matrix Design Group to assist with development of designs for conveyances and other facilities. Gene would like the Preliminary Design Report to be consistent with these emerging plans.
  - Ben Urbonas expressed concerns with the timing of these revisions to the master planning project. He is very concerned about having this project drag out with changes taking place continuously after project sponsors agreed on the “Selected Plan”.
  - Jay Peters of Matrix expressed intent to be consistent with the master plan hydrology and modeling approach and to work closely with Ben and WWE to insure the District’s policies and this master planning project’s goals are met.
  - WWE has provided a CD of the Alternatives Evaluation Report with models to Matrix. If the schedules for Matrix’s design work on Sack Creek and South Sack

**To:** Big Dry Creek Northern Tributaries Outfall Systems Plan Update Project Sponsors and Stakeholders  
**Via email**

**From:** Wright Water Engineers, Inc.  
T. Andrew Earles, Ph.D., P.E., D.WRE and Derek Rapp

**Date:** August 21, 2006

**Re:** Meeting Minutes for August 15, 2006 Kickoff Meeting for the Final Phase (Preliminary Design) of the Big Dry Creek N. Tribs OSP Project, City of Thornton, 10:30 a.m. to 12:30 p.m.

**NOTE: Next progress meeting will take place  
Tuesday, October 17, 1:30 to 3:30 p.m.,  
Thornton Infrastructure Maintenance Services Bldg, 12450 Washington St**

The Preliminary Design Kickoff Meeting for the Big Dry Creek Northern Tributaries Outfall Systems Plan (OSP) Update was held on August 15, 2006 at the City of Thornton Offices on Washington Street from 10:30 a.m. to 12:30 p.m. Representatives of all municipal Project Sponsors (Thornton, Broomfield, Westminster and Adams County) were present, and Ben Urbonas and Ken MacKenzie of the Denver Urban Drainage and Flood Control District (UDFCD) and Andrew Earles and Derek Rapp of Wright Water Engineers, Inc. (WWE) led the meeting. These meeting minutes follow the agenda that was provided at the beginning of the meeting.

## I. INTRODUCTION

Ben Urbonas started the meeting with an overview of the goals of Preliminary Design. Preliminary Design for this project involves developing plan and profile drawings of major drainage infrastructure including channels, right-of-way, ponds, culverts and ditch crossings for the Selected Plan. These drawings are conceptual in nature and for this project will rely on United States Geological Survey (USGS) topographic mapping. The purpose of the Preliminary Design Report is to provide municipalities with conceptual level infrastructure requirements and reasonable costs that will aid them in planning for implementation.

Following Ben’s overview, meeting attendees introduced themselves. A list of attendees is attached.

Creeks are compatible, Matrix can provide WWE with plans and profiles suitable for inclusion in the Preliminary Design Report for these tributaries (WWE will provide Matrix with our base mapping to facilitate this). WWE will work on other tributaries first to provide Matrix with time to develop plans for Sack Creek and Sack Creek South that are consistent with the Selected Plan; however, if the Matrix design is delayed, UDFCD will move ahead with the Preliminary Design Report based on the Selected Plan and direct WWE to complete the report.

- Gene Potter also discussed potential conflicts with ditch companies. Issues include not only the 2-year ditch crossing design criterion for major drainageways, but also the fact that utility crossings and roads are often involved, as well. Ben Urbonas noted that the 2-year crossing is a fairly common criterion for full separations (over or under) and that larger flows typically are allowed to flow over the ditch (already full with flood water) through a side-channel spillway and to continue flowing downstream. The potential for complications, increased costs, design challenges, etc., arising from implementation of ditch crossings will be acknowledged in the text of the Preliminary Design Report.
- Nancy Arthur indicated that in reality, three ponds will likely be constructed upstream of S.H. 7 on Preble Creek rather than the single regional facility shown in the Alternatives Evaluation Report. Meeting attendees reviewed notes from previous meetings where Broomfield had raised this issue in the past. At the time, Project Sponsors, WWE and UDFCD acknowledged this potential of more than one detention pond and agreed to model the ponds as a single facility since detailed locations of the three proposed ponds were still uncertain. The goal was to come up with a potential size for limiting flows at SH-7 to previously reported “existing” levels. Once the locations have been identified, the three ponds will need to be sized to meet the same hydrologic and hydraulic goals at SH-7 as was provided by the single pond used for planning purposes in the Alternatives report (i.e., they limit peak flow rates to master plan levels). Everyone at the meeting deemed this to be an acceptable approach.
- Ben Urbonas raised the issue of UDFCD maintenance eligibility. Ben indicated that UDFCD will now typically agree to assist with the maintenance of detention ponds shown in UDFCD accepted master plans. Therefore, it is best to show the three ponds along Preble Creek (versus the single pond in the Alternatives Evaluation Report) in the Conceptual Preliminary Design Report. To be maintenance assistance eligible, all facilities must be regional and owned by a government agency (fee simple or easement) and have adequate assurances for continued operation and maintenance. Nancy Arthur will work with the developers proposing these detention ponds (Anthem) to determine locations. WWE will then size the ponds and their outlets to meet the goal of limiting flows at SH-7 as required in the “Selected Plan.” Nancy will facilitate getting this information to WWE so that the three ponds can be shown in the Conceptual Preliminary Design Report. As with Sack Creek and Sack Creek South, this information must be provided in a timely manner so that it does not hold up completion of the master planning project.

#### IV. QUESTIONS/COMMENTS FROM OTHER STAKEHOLDERS

Representatives from the Regional Transportation District (RTD), the United States Army Corps of Engineers (USACE) and the Colorado Department of Transportation (CDOT) provided the following comments:

- RTD has plans for a rail extension following the alignment of the existing north-south rail line through the project area. The rail expansion will likely consist of two tracks and a regional transportation center (imperviousness has been accounted for in future conditions modeling). Culvert crossings of the railroad and embankment should account for the width of two tracks plus embankment side slopes. For the Selected Plan, peak flow attenuation effects of inadvertent storage upstream of railroad embankments are not considered, and downstream channels are designed for fully developed, undetained flows.
- USACE has not yet had an opportunity to review the Alternatives Evaluation Report or Selected Plan. WWE will send the USACE a CD of the Alternatives Evaluation Report. USACE provided some information on their recent policy regarding 404 permitting and floodplain development. This policy, under which USACE can deny 404 permits for activities that will reduce floodplain storage through the placement of fill, is aimed at preventing losses of floodplain storage associated with developments that place fill in the floodplain for the sake of increasing/maximizing developable land. Flood control projects proposed by municipalities and UDFCD are viewed in a different light by USACE (and generally do not decrease floodplain storage). The USACE relies on effective Federal Emergency Management Agency (FEMA) mapping for defining floodplains and the Flood Hazard Area Delineation (FHAD) mapping if FEMA maps are not available. UDFCD is holding a meeting with USACE and local municipalities at 9 a.m. on August 16, 2006 to discuss this policy. Ken MacKenzie invited meeting participants to attend if interested.
- CDOT continues to be interested in tributaries crossing Interstate 25 in the study area, especially Preble Creek. WWE and UDFCD have discussed the hydrology for this crossing with CDOT and Broomfield on several occasions over the past several months. CDOT Regions 4 and 6 have been involved in the OSP Update.

#### V. CONCEPTUAL PRELIMINARY DESIGN DRAWINGS—WADLEY SOUTH EXAMPLE

WWE provided Project Sponsors with rough, working drafts of Wadley South preliminary design drawings (plan view) for the purposes of discussing what features would be shown on drawings. Features that will be included on drawings include channel alignments, right-of-way, channel types, drop structures with typical spacing, culvert types and sizes, ditches and detention facilities. Major utilities, to be provided by Project Sponsors as soon as possible, will also be included. WWE will contact Xcel and Qwest for utility information on gas and electric lines and fiber optics. Each drawing sheet will include a sheet index map and match lines for adjacent sheets. Full size drawings will be at a scale of 1" = 200' as specified in the contract. Ben requested that drawings show basic

information (channel and culvert sizes and types, existing detention facilities, etc.) for existing major drainage infrastructure.

Gene Potter provided several comments on the alignment shown for Wadley South and asked if parcel boundaries would be shown on preliminary design drawings. Individual parcel lines will not be shown on preliminary design drawings; however, WWE will provide Project Sponsors with draft layouts for proposed channel alignments so that they can identify areas where channel alignments should be adjusted to avoid unacceptable encroachments onto nearby parcels. WWE should be able to provide Project Sponsors with currently proposed alignments in approximately two weeks, and we request that Project Sponsors mark up alignments with proposed revisions and return them to WWE within two weeks of receiving the draft alignments.

## **VI. SCHEDULE FOR COMPLETION**

WWE requested an extension of the 90-day project schedule specified in the letter from UDFCD outlining the Selected Plan. UDFCD and Project Sponsors agreed to an extended schedule with a Draft Conceptual Preliminary Design Report due the first week of December. Because the Draft Conceptual Preliminary Design Report will be provided to Project Sponsors only several weeks before the holidays, the typical 30-day period for review of the draft report also will be extended (by roughly two weeks).

## **VII. NEXT MEETING**

The next meeting, a mid-course check in to assure that preliminary design is on the right track, has been scheduled for Tuesday, October 17 from 1:30 to 3:30 p.m. at the City of Thornton offices. Please note that the time has changed from the 10:00 a.m. mentioned in the meeting.

Ben asked Project Sponsors to consider whether public notice (i.e., mailings to all potentially affected residents) should be provided for this planned meeting. This can be expensive but is an option for Project Sponsors to consider. Sponsors should contact Ben if they would like to pursue this option. Some residents of Wadley Farms North are interested in the Conceptual Preliminary Design. They have been included on the project email list in the past. Kelly Hardigan will provide WWE with contact information so that we can be sure the correct people are on the email list.

Attachment: List of Meeting Participants

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