

DETENTION POND SENSITIVITY MEETING MINUTES

Basin 4100 and DFA 0056 OSP
Wednesday, November 15, 2017
9:00 am at Urban Drainage and Flood Control District

Attendees:

Name	Company	E-mail
Brooke Seymour	Urban Drainage and Flood Control District (UDFCD)	bseymour@udfcd.org
Jim Kaiser	City of Thornton (Thornton)	Jim.Kaiser@cityofthornton.net
Matt Eberly	City of Thornton	Matt.Eberly@cityofthornton.net
Amy Gabor	Olsson Associates (Olsson)	agabor@olssonassociates.com
Hannah Heberd	Olsson Associates	hheberd@olssonassociates.com

Discussion Items:

The meeting was held to discuss the results of the detention pond sensitivity analysis, identify which ponds to be included in the model, and any other known areas of concern that should be considered moving forward. While this summary is not intended to represent a comprehensive account of the meeting, it is intended to reflect the key points raised and issues for further consideration and to identify the action items resulting from the discussions.

- a) Olsson completed a sensitivity analysis of the detention ponds from the 2002 OSP. Olsson modeled several scenarios: all the detention from the 2002 OSP, no detention at all, and several scenarios where select detention ponds with larger impacts were included. Main areas of concern and observed problems as they related to detention pond locations were discussed in detail. These minutes provide a summary of items discussed in the meeting.
 - i) Downstream of pond 316, Basin 4100 BFE's were mapped and based on Pond 316.
 - ii) Design Point 130 to 120T is a reach known for flooding. This stretch is downstream of Pond 331 and should be further evaluated.
 - iii) Olsson stated that the peak flows are generally lower than the old study. Jim noted that the development in some areas is older, so they may not be designed to old OSP study flows.
 - iv) Old MDP shows flows at Pond 307 going east, which is incorrect. The Olsson model shows both the pond outflow and overflow going south. Pond 307 does not have a large impact and will not be modeled.
- b) Conclusions from meeting
 - i) Olsson will move forward with modeling ponds 316, 331, 302, and 322.
 - ii) Ponds 326, 327, and 329 will need further analysis and one will most likely be included in the model.
 - iii) Pond 316 was included in a LOMR. Thornton will send the stage-storage-discharge information from the LOMR to be included in the model.
 - iv) The 2002 OSP information is adequate to use for ponds 322, 331, and for 326, 327, or 329, if they are modeled.

- v) The RTD project regraded the station so that the entire site outflows to School Tributary. Olsson does not need to include the RTD detention pond, but subbasin boundaries will need to be adjusted for Subbasins 1, 5, and 10.

2) Information Regarding Alternatives

- a) Design Point 154/153 goes to the lakes, but 151 keeps 5- to 10-year out of lakes (Tributary K). The lake is being regraded and the finger will be filled in around Design Point 154.
- b) Mining operations have changed the topography of the lakes since previous OSP.
- c) 2002 OSP had incorrect flows at School Tributary railroad crossing. Subbasins 2 and 3 travel independently to the railroad. The 2002 OSP had a total of approximately 400 cfs coming to the railroad, but only approximately 250 cfs crossing under the railroad. Merrick confirmed the discrepancy and completed new hydrology, which included inadvertent detention, or overbank storage, at the railroad.
- d) FasTracks replaced every crossing under the railroad. Thornton is interested in what amount of detention is needed downstream of School Tributary. Thornton will state where the detention pond should be placed for the conceptual design.
- e) Adams County is planning park improvements in Subbasin 37.
- f) Pond 304 should be further analyzed to see if the current outlet is adequately designed to handle all three flows coming into the pond. The berm between Pond 304 and the river is the old embankment of Riverdale Road. The existing outlet pipe, which is a large diameter CMP, is above a critical 30-inch treated water line. The old road embankment to the east also contains both the 30-inch treated water line and a 36-inch raw water supply line. Therefore, the capacity/stability of the outlet pipe and the overtopping of the berm should be analyzed. The Prior OSP had concepts for a spillway to the South Platte River which should be re-evaluated based upon current hydrology from this study, as well as existing topography, including the South Platte Regional Trail on the river side below the berm. The capacity of the Regional Trail bridge should also be verified against the outlet pipe's discharge.

Action Items:

- Thornton
 - Send LOMR information for updated information on pond 316
 - Send Olsson record drawings for FasTracks pipes
 - Send Olsson information for RTD pond to update subbasin boundaries
- Olsson
 - Evaluate need for Detention Ponds 326, 327, and/or 329

Please contact Olsson at 303-237-2072 if there are any changes or questions with these meeting minutes. These minutes will be considered final unless comments are received within seven days of distribution. Although comments will be incorporated, as appropriate, only major revisions will be redistributed.

Minutes prepared by: Hannah Heberd

cc: Attendees, Shea Thomas, Anna Sparks, Marc Pedrucci, File