

HYDROLOGY MEETING MINUTES

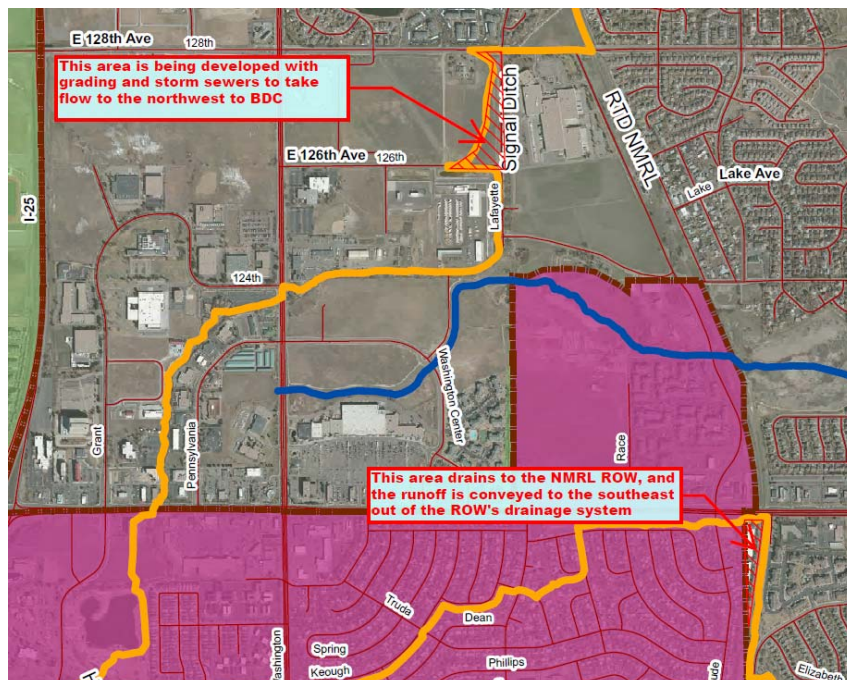
Brantner Gulch MDP and FHAD
Monday, May 13, 2019
10:00 am at Urban Drainage and Flood Control District

Attendees:

Name	Company	E-mail
Dave Skuodas	Urban Drainage and Flood Control District (UDFCD)	dskuodas@udfcd.org
Mark Schutte	UDFCD	mschutte@udfcd.org
Pam Acre	City of Northglenn (Northglenn)	pacre@northglenn.org
Russell T. Nelson	Adams County Parks and Open Space	RNelson@adco.gov
Jim Kaiser	City of Thornton (Thornton)	Jim.kaiser@cityofthornton.net
Matt Eberly	Thornton	Matt.eberly@cityofthornton.net
Rachelle Plas	Thornton	Rachelle.Plas@cityofthornton.net
Amy Gabor	Olsson	agabor@olsson.com
Hannah Pring	Olsson	hpring@olsson.com

The meeting was held to discuss review comments on the hydrology report and models. This summary is intended to reflect the key points raised, issues for further consideration, and action items resulting from the discussions.

- 1) Hydrology comments
 - a) Watershed boundary adjustments
 - i) Subbasin 57 will be cut off along Lafayette Street. See image below.
 - ii) Subbasin 50 will have triangular area added. See image below.



- b) Mann-Nyholt Lake
 - i) Flood attenuation in Mann-Nyholt Lake will not be accounted for in the baseline hydrology.
 - ii) Olsson will evaluate the existing connection between the lake and the South Platte River and will discuss with the project sponsors if flood attenuation should be accounted for in a future spillway design.
 - c) City of Thornton future land use percent imperviousness (max 80%)
 - i) Although the City of Thornton limits development to a maximum of 80%, the higher percent impervious values will continue to be used in the study to be more conservative. A clarification statement will be added to the report to state that although future impervious values are shown as 95% for master planning purposes, future development will be required to follow City of Thornton zoning requirements and associated percent imperviousness values.
 - d) Decrease in peak flows from old studies
 - i) Additional detention basins in this study as compared to past studies
 - ii) Lower rainfall in this study as compared to past studies
 - iii) Slightly lower overall percent imperviousness in this study as compared to past studies
 - iv) Olsson ran the future conditions model with the old point rainfall values, and removed the additional detention basins from the model for a more direct comparison of peak flows, as shown on Table 1. Olsson will incorporate these results into the report in a graphical representation. A separate report/graph will be completed for the 1983 FHAD and the 2010 MDP.
 - v) Graphical representation of comparison between the various studies will be simplified and incorporated into the report.
 - vi) Results of the difference in water volume will also be reported.
 - vii) Design Point 181 will be added to Table 7 within the report to compare the new model with the 1983 FHAD.
 - e) Flow profile views will be reversed to better follow direction of flow.
- 2) Schedule to follow agreement
 - a) Final hydrology due 3 weeks after receiving final comments
 - 3) Upcoming meetings
 - a) After existing hydraulics modeling and identification of problem areas
 - 4) Other

Table 1 - Comparison of Peak Flows

Reference Location	1983 FHAD	No Det, Old Rainfall	% Diff (No Det, Old Rainfall to 1983 FHAD Q100)	2010 MDP	Old Rainfall - 2010 Det	% Diff (Old Rainfall, 2010 Det to 2010 Update Q100)	% Diff unit discharge (cfs/ac)
Mann-Nyholt Lake	6069	8700	43%	3851	5653	47%	52%
Downstream of Fairgrounds Tributary Confluence/Riverdale Road	6790	9288	37%	6139	5963	-3%	-5%
Downstream of Plains Tributary Confluence/Quebec Street	5660	7056	25%	4571	4190	-8%	-9%
Downstream of Lakeview Tributary	5584	6388	14%	3818	3736	-2%	-8%
Holly Street	4220	5134	22%	3167	2942	-7%	-10%
Colorado Boulevard	1561	3618	132%	1829	1281	-30%	-30%
Fairgrounds Tributary	602	481	-20%	444	344	-23%	-24%
Horizons Tributary	1743	2199	26%	1595	1140	-29%	-27%
Quails Way Tributary	254	111	-56%	51	111	117%	-24%
Pheasants Run Tributary	606	423	-30%	522	423	-19%	-20%
Plains Tributary	452	495	9%	470	348	-26%	-16%
Lakeview Tributary	1407	1193	-15%	655	474	-28%	-28%
Fishing Is Fun Pond	2483	1344	-46%	---	1344	---	---
SPR Southern Tributary 006 at Yosemite Street	690	404	-41%	---	404	---	---

Actions Items

Project Sponsors:

- Submit comments on hydrology report/models

Please contact Olsson at 303-237-2072 with any changes or questions regarding 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 Pring

cc: Attendees