



## MEETING MINUTES Henderson Creek MDP and FHAD Progress Meeting #1

Date: January 21, 2020  
Location: MHFD  
Distributions: Agenda

### Attendees :

<u>NAME</u>	<u>ORGANIZATION</u>	<u>EMAIL</u>
Dave Skuodas	MHFD	<a href="mailto:dskuodas@udfcd.org">dskuodas@udfcd.org</a>
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Aaron Clutter	JR Engineering	<a href="mailto:aclutter@jrengineering.com">aclutter@jrengineering.com</a>

### 1) Introductions

The meeting was opened with introductions.

### 2) Background

Jen Winters (RESPEC) opened the meeting by orienting the group to the project area and providing an overview of previous studies for the Henderson Creek watershed before discussing the project scope.

### 3) Preliminary Ragweed Hydrology

Jen summarized the current status of RESPEC's hydrology study for Ragweed Drain. This study includes a baseline hydrology study and preliminary alternatives for Henderson Creek and Ragweed Drain. The baseline hydrology will consist of an existing conditions model and a future conditions model while the preliminary alternatives will incorporate proposed detention into the



future conditions model (i.e. Master Planned Hydrology). Dave Skuodas (MHFD) verified that nearby DFA 0053 is not included in the scope of the Henderson Creek MDP. In an effort to address the many development projects in design, Ragweed Drain is being studied in advance of Henderson Creek and was the primary subject of the meeting.

RESPEC has created subcatchments for Ragweed Drain that largely match those found in the 2004 OSP. Subcatchment boundaries were slightly revised based on latest LiDAR for the watershed. Additionally, as compared to the 2004 OSP two subcatchments were added to the watershed and one was removed (based on review of existing LiDAR and flow paths).. Existing percent impervious data was created using the latest National Land Cover Database (NLCD) data, with some adjustments to areas with new construction that has occurred after the date of the NLCD data. This data was used in the Colorado Urban Hydrograph Procedure (CUHP) and then routed using the EPA's Stormwater Management Model (SWMM) to provide a preliminary update to peak flows for major points in the drainageway. Jen highlighted changes at 112<sup>th</sup> Avenue, as well as upstream of I-76 and Highway 2. These major points each showed a preliminary increase in peak flows of about 25% from the 2004 MDP. RESPEC to review and narrow down the cause for the increase in peak flows between 2004 and 2020.

#### 4) Detention

##### Existing Detention:

The group discussed the existing Turnberry detention pond located along Ragweed Drain. The pond was modeled and found to not provide reduction in peak flows for the 100-year storm event. Brent Soderlin (Commerce City) confirmed that the Turnberry pond is not really a regional detention pond. Aaron Cutter (JR Engineering) said that they had investigated potential modifications to the outlet of the pond that could improve storage. JR will provide to RESPEC for review. The group all agreed that the existing pond east of Chambers along Ragweed Drain is not a regional pond and will not be included in the baseline hydrology.

##### Proposed Detention:

Two ponds from the 2004 OSP (333 and 346) were proposed for land owned by Commerce City. Pond 333, located directly upstream of I-76 and Pond 346, located upstream of Highway 85, may still be viable detention sites for this MDP. RESPEC to review ownership and volume to determine if the ponds are good options to include in the MDP alternatives.

Designs for the proposed Reunion 9 development are nearly complete and include several regional detention ponds which are designed to reduce peak flows to 50% of historic. Aaron Clutter (JR) will provide modeling files including CUHP, SWMM and the latest drainage report to RESPEC when complete. RESPEC to review the modeling for compliance with goals of the MDP. It was also noted that there are some apparent differences in drainage area between the JR Engineering and RESPEC subcatchment delineations. RESPEC to review and update subcatchment boundaries as needed.

Along Henderson Creek, there is a proposed regional pond at Highway 2 also associated with the Turnberry development.



**5) Additional Study Goals**

Additional MDP goals are to minimize flows at major downstream crossings. Critical crossings include the O'Brian canal and I-76 for both Ragweed Drain and Henderson Creek.

Also, Denver Water's Dunes reservoir is a high hazard dam, Brad Piede (Denver Water) explained that the current spillway routes through Henderson Creek and that there will be a by 2027 to provide a formalized pathway to the South Platte River and interest in the study's results.

**6) Next Steps and Schedule**

- RESPEC to finalize model and peak flow rates and provide to MHFD and Commerce City for review by February 7<sup>th</sup>, 2020 (assuming JR Engineering can provide Reunion 9 CUHP/SWMM by 1/28/2020; RESPEC submittal will be later if data is received after 1/28/2020).
- Henderson Creek baseline hydrology to be done +/- 6 weeks.
- Doodle Poll for follow up meeting forthcoming.

**7) Action Items**

- RESPEC to review and narrow down the cause for the increase in peak flows between 2004 and 2020 CUHP/SWMM.
- JR Engineering to provide Turnberry Pond outlet modification study/info to RESPEC for review.
- RESPEC to review ownership and volume of Ponds 333 and 346 as potential detention locations for the master planned hydrology.
- JR Engineering to provide final versions of CUHP, SWMM, drainage report and all other relevant backup information for Reunion 9 development when complete to RESPEC.
- Denver Water to share data related to Dunes Reservoir.
- RESPEC to provide draft CUHP and SWMM for Ragweed Drain to MHFD and Commerce City by February 7<sup>th</sup>, 2020 (assuming JR Engineering can provide Reunion 9 CUHP/SWMM by 1/28/2020; RESPEC submittal will be later if data is received after 1/28/2020).