

## COMMENT REVIEW MEETING MINUTES

**DATE/TIME:** JANUARY 14, 2019 @ 1:00 P.M.

**LOCATION:** UDFCD OFFICE

**PROJECT:** CHERRY CREEK TRIBUTARIES MDP & FHAD

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### ATTENDEES:

Shea Thomas - UDFCD

Dana Morris – UDFCD

Stacey Thompson – SEMSWA

Cathleen Valencia – Arapahoe County

Roger Harvey – Arapahoe County

Jonathan Villines – City of Aurora

Allie Beikmann – Dewberry | J3

Ken Cecil – Dewberry | J3

Danny Elsner – Dewberry | J3

### PURPOSE

1. Review select comments and present comment response action plan.
  - a. Reference on screen document for discussion.
2. Discuss next steps.

### DISCUSSION ITEMS

1. Personnel Updates
  - a. Kurt Bauer will be the new UDFCD project manager (PM) on this project and will be joining UDFCD in approximately one month.
  - b. Jon Villines will be leaving the City of Aurora and joining UDFCD. Replacement for Jon is TBD. Jon also noted that he sent comments early that morning following return to work. Dewberry | J3 reviewed them and sent response back to Jon and Shea (UDFCD) on 1/18/2019.
  - c. Dana Morris (UDFCD) will be conducting the FHAD review.

### 2. Project Title Name

- a. Current title needs clarification “Cherry Creek Tributaries Upstream of Cherry Creek Reservoir MDP”. UDFCD indicated the title needs to start with the main tributary name “Cherry Creek”.
- b. Proposed best option is “Cherry Creek Minor Tributaries in Arapahoe County MDP”. UDFCD will review and get back with us.

### 3. Tributary Names

- a. UDFCD indicated that unique names are important and ideally have reference to local landmarks, such as streets.
- b. North Unnamed Tributary (NU)
  - i. Suggested Lake View Tributary and attendees accepted.
  - ii. 2019-1-15 Update: Lakeview is already taken in Thornton. Dewberry | J3 proposed Little Raven Creek instead.
- c. Tributary to Cottonwood Creek (TC)
  - i. Suggested Suhaka Tributary due to proximity to the model airfield. Suhaka is named after an avid radio-controlled airplane flyer who built and flew his own planes out of the field at Cherry Creek State Park, also named after him.
  - ii. SEMSWA verified this name was acceptable on 1/18/2019. Suhaka is currently the last name of a member on the Centennial City Council.
- d. Valley Club Acres:
  - i. Agree to use Valley Club Acres (VCA) instead of Valley Club (VC) throughout.
- e. North Arapahoe and Parker, South Arapahoe and Parker:
  - i. Agreed to remove “and Parker” and modify to North Arapahoe Tributary and South Arapahoe Tributary (NA, SA).
- f. South Unnamed Tributary (SU):
  - i. Suggested Kragland Tributary or Dransfeldt Tributary due to historical significance.
  - ii. Roger indicated he would discuss with Karen at 17-Mile Farm House to find a good, historically significant name.

4. Clarified role of Arapahoe County in this project and agreed they are a stakeholder and SEMSWA is the sponsor that operates on their behalf. Wording will be clarified in the text and Arapahoe County logos will still be reflected in documents.
5. Dewberry | J3 asked if watershed numbers could be found online and what significance they have. UDFCD indicated they are part of a filing system that is generally not used anymore. Future MDP documents don't need to include it.
6. Main Tributary Comments
  - a. TC: Exhibit makes it appear tributary outfalls to Cottonwood Creek prior to crossing Peoria. Please clarify.
    - i. Outfall is downstream of Peoria. Dewberry | J3 will add a street name to clarify.
  - b. J: Let's discuss your travel path for subcatchment J2, since the shape factor is a bit excessive.
    - i. Attendees agreed to the approach of modifying the shape of the basin by removing the narrow "tail" downstream to get a better shape factor in CUHP.
  - c. NAP1: Can we discuss the catchment delineation in this area? It seems odd that NAP1 would really narrow down this much without adjacent area contributing.
    - i. NAP1 (NA1) will be cut off at Parker Rd. and the area downstream of Parker Rd. will be removed from hydrology. Upstream will be routed through piping infrastructure simulated in the model.
  - d. NAP3: Should this be the downstream limit for NAP3? Arapahoe Rd would then be incorporated into NAP2.
    - i. The current configuration is acceptable since this area doesn't go to the pond.
7. DFA Catchments
  - a. Attendees agreed to remove all DFAs with the exception of C-DFA2 which will be modeled up to Parker Rd and renamed to Tagawa Tributary. The other DFA areas do not have definitive outfall points along the tributaries and large portions are already in the floodplain.
8. Ponds
  - a. RB1-4
    - i. Confirmed that SEMSWA owns and maintains this pond.

- ii. Dewberry | J3 indicated that the stage-storage curve in the report needs updating to match the current curve used in the model.
  - b. NAP/Pond E (North Arapahoe Pond)
    - i. Confirmed that SEMSWA owns and maintains this pond.
    - ii. SEMSWA indicated that they want to clarify the Filings that are served by this pond. Documents from SEMSWA indicated it serves Filings 7, 8, and 9 for the Farm at Arapahoe County.
    - iii. Agreed to call the pond "North Arapahoe Pond" or NA pond for model inputs. However, a section will be included in the text noting that this is also referred to as Pond E by local agencies.
    - iv. Danny discussed how Dewberry | J3 developed the stage-storage-discharge curves and the discrepancies between as-built records and current LiDAR.
    - v. Attendees agreed that a survey would be beneficial and Shea estimated it would take a couple weeks to get this done.
  - c. SAP Pond
    - i. Confirmed this pond is not publicly owned and maintained, and not maintenance eligible.
  - d. NU Detention Pond
    - i. Dewberry | J3 indicated that this pond has a pseudo-outlet works at E Belleview Ave. that consists of two pipes, one five feet above the other.
    - ii. The parcel appears to be owned by the United States and is part of Cherry Creek State Park. It inadvertently provides detention and thus is not included in the model. It also doesn't appear to be maintained for detention.
    - iii. Ken noted that the downstream-most pipe in CC State Park appears to be very undersized for current flow conditions. This will be included in the report since it may be of interest for the Park.
    - iv. Shea noted that Rich Borchardt may be a good contact for future information re: the CC Basin Water Quality Authority model, as he will be working on the project.
  - e. TC Detention Pond
    - i. Agreed to refer to the identified pond as a "stock pond".

## 9. Imperviousness and Land Use

- a. J: SEMSWA had a comment regarding the Arapahoe County 2035 Transportation Plan for future widening of Parker Rd. from 4 to 6 lanes, and if any adjustments are necessary to the future conditions impervious values.
  - i. Dewberry | J3 indicated that Parker Rd. and the ROW was drawn in as a 100% impervious area and is thus a conservative land use, since typically land use areas include the adjoining streets. Attendees agreed to use the resulting comp %I for both existing and future conditions and no changes need to be reflected for future conditions.
- b. VC-DFA: SEMSWA had a comment regarding future residential development in part of Valley Club Acres Golf Course. Since this DFA subbasin is going to be removed, this issue no longer needs addressing.
- c. GR: SEMSWA indicated an area is identified as "Urban Center" on Centennial's 2040 Comprehensive Plan (Centennial NEXT).
  - i. Dewberry | J3 will determine the corresponding imperviousness value for Urban Center land use. The resulting comp %I will be used as the future conditions.
- d. C1: Much of this area is identified as "Regional Commercial" on the Arapahoe County 2018 Comprehensive Plan. It is currently built-out as residential.
  - i. Attendees agree this future zoning type appears odd given the built-out nature of the area. Cathleen indicated she will check with long-range planners at Arapahoe County to confirm the accuracy of this projected land use.
- e. SU1: Part of this area is identified as "Urban Center" on Centennial's 2040 Comprehensive Plan (Centennial NEXT).
  - i. Dewberry | J3 Will modify and the resulting comp %I will be used as the future conditions. There will be a separate existing conditions model for this subbasin since development is proposed in a large part of the tributary basin.
    1. Note: Dewberry | J3 found following this meeting that the Urban Center area extends to a small part of Subbasin 17A. The same method of existing vs. future for SU1 will be applied to 17A.
- f. 17A: SEMSWA comments that 17-Mile House Farm park has a master plan and %I values could be adjusted to account for future development.

- i. Dewberry | J3 indicated that the current %I value is conservative since a large area is considered single-family residential for the study even though it is a large open property. Since only 1.8 acres of the land is developable and the land use is conservative, attendees agreed to use the current comp %I of 13.7% but request language added to the text.
  - g. What 100-yr rainfall value was used in the previous study? How does the %I compare between that study and this one? (OSP Study).
    - i. Rainfall for the current MDP is lower than the 1999 OSP. Dewberry | J3 will show the difference for the 100-year rain event and compare to Table A-5 from the 1999 OSP at possible points of comparison.
  - h. Often it's better to compare unit runoff (cfs/ac) rather than just runoff. Would that be a valid comparison in this case? (pg. 3-5, UD)
    - i. New comparison table shown during the meeting will be added.
  - i. Arapahoe County indicated that existing and future flows from the MDP do not match the Kings Point drainage report.
    - i. Dewberry | J3 found that flows for subbasin 17B are close to the drainage report but much higher for the SU tributary because the MDP included a larger area and an overall higher comp %I. CUHP/SWMM models confirmed this, although there is still a difference of 120 cfs for the 100-yr.
    - ii. The MDP does not include the proposed ponds. Shea noted that she will talk to Morgan at UDFCD to see if developers will run their models without the ponds and verify similar flows (higher flows).
10. Jurisdictional questions, appendix comments and grammatical error comments were not discussed as answers and edits are readily known.
11. Additional storm events
- a. UDFCD requested modeling of two additional storm events: the 1-year and water quality (WQ) events. This would entail a short paragraph discussing the events and inclusion of a separate table in the Appendix.
12. Project Budgeting
- a. UDFCD requested that Dewberry | J3 send a comparison table of tributary length to estimate additional project cost.
  - b. UDFCD and SEMSWA to discuss funding.

### 13. FHAD

- a. The position on whether or not to conduct a FHAD for each tributary was discussed at the end of the meeting and the conclusions are below. SEMSWA noted that alternatives will be studied for tributaries even if a FHAD is not conducted for them. And UDFCD indicated that a FHAD is not required if overflow from storm infrastructure is contained in the street flow.
- b. North Unnamed Tributary – limits are from Belleview Avenue to NU3 basin.
- c. Tributary to Cottonwood – no FHAD.
- d. Joplin Tributary – limits are from Cherry Creek floodplain to at least J6 basin, may go farther along storm sewer if concentrated sheet flow puts properties into the floodplain.
- e. Grove Ranch Tributary – no FHAD.
- f. Valley Club Acres Tributary – no FHAD.
- g. North Arapahoe & Parker – limits could be along storm sewer if a floodplain is found in the overflow of the storm.
- h. South Arapahoe & Parker – limits could be along storm sewer in SAP1 basin, but will at least be from Parker to SAP4 basin.
- i. Chenango Tributary – limits are from Cherry Creek floodplain to C9 basin.
- j. South Unnamed Tributary – limits are from Cherry Creek floodplain to SU7 basin.
- k. 17 Mile – no FHAD.

### ACTION ITEMS

1. All stakeholders to confirm that “Little Raven Creek” is an acceptable name for North Unnamed Tributary.
2. Stacey (SEMSWA) to verify Suhaka is an acceptable name for Tributary to Cottonwood.
3. Roger (AC) to discuss name options for South Unnamed with Karen at 17-Mile Farm House.
4. Shea (UDFCD) to schedule a survey for North Arapahoe pond to develop accurate stage-storage-discharge curves.
5. Cathleen (AC) to check with long-range planners at Arapahoe County to confirm the accuracy of “Regional Commercial” for the area of subbasin C1 (Chenango) under future conditions.
6. Dewberry | J3 to pick up comments in final baseline hydrology report as discussed in the meeting and provided in comments by the stakeholders.
7. Dewberry | J3 to send tributary length comparison table to UDFCD for review.
8. Dewberry | J3 will review Jon Villines comments and follow-up as necessary for inclusion.

### PROJECT SCHEDULE

Kickoff Meeting	September 10, 2018
Progress Meeting (+5 Weeks)	October 23, 2018
Submit Draft Baseline Hydrology	December 14, 2018
Comment Review Meeting	January 14, 2019
Complete Corrections to Draft Baseline Hydrology	February 1, 2019
Baseline Hydrology Approved	February 4, 2019