



# MEETING MINUTES

**DATE:** September 7, 2021

**TIME:** 2:00 p.m.

**LOCATION:** Microsoft Teams

**PROJECT:** Englewood MDP

**PURPOSE:** Baseline Hydrology Report Review (No. 2)

**ATTENDEES:**

Dewberry	Mile High Flood District	City of Englewood
Danny Elsner Haley Heinemann Katie Kerstiens	Jon Villines Charlie Pajares Jeff Battiste	Tim Hoos

**Discussion Items:**

- 1) Baseline Hydrology enhancements
  - a. Discussed recommended improvements to baseline hydrology. Improvements would include using the pluvial flood hazard assessment to inform the complicated overland flow paths and the level of connectivity detail in SWMM, use preliminary results to select more strategic design points and subbasins, and improve basin transfer estimation.
  - b. It's recommended that the baseline hydrology enhancements include an increase in resolution necessary to include Tier 2 recommendations in the Alternatives Analysis. As such, alternatives for Tier 2 lines would be considered by doing smaller-scale rational hydrology in the Alternatives Analysis phase. Based on pluvial results, some Tier 3 projects may also be identified for future study but no conceptual design in the MDP.
    - i. Tier 1 = MDP-level major trunk line
    - ii. Tier 2 = Secondary trunk lines, major laterals, upper-basin trunk lines (we are here)
    - iii. Tier 3 = Site-civil analysis (not included)
  - c. Dewberry conducted a comprehensive review of the City's GIS and as-built data available for existing storm sewer infrastructure. The recommendation was made to survey locations without reliable City data or unclear connectivity. The team agreed that a comprehensive and workable model of Englewood hydrology is the overall goal and that an important step will be to gather missing information.
    - i. Tim mentioned that in some cases manholes have been paved over, making it difficult to survey system connectivity in the past.

- ii. Englewood may have collected some additional storm sewer information since sharing their GIS database in 2020. Tim will review and share with Dewberry.
  - iii. Tim believes that there may have been some storm sewer survey collected for the Ulteig Acoma Street study. Tim will review and share with Dewberry.
  - iv. Tim will confirm what survey is planned or has been completed by HDR in the South Englewood basin and share with Dewberry.
  - v. Tim will see if the City has a copy of the “Storm Sewer Inventory Report. City of Englewood. Muller Engineering Company, Inc. March 1999.”
  - vi. Dewberry will update the recommended survey locations based on the additional survey data that Tim is able to provide.
  - vii. MHFD and Englewood will price out survey costs.
- 2) Earmarked comments on the draft Baseline Hydrology report were reviewed. Resolutions not listed below will be included in the comment response with the final Baseline Hydrology Report.
- a. Storm water inflow locations along the City Ditch will be added to the report, including the figure from the 2020 Hazen master plan. Opportunities to reduce storm water inflow volume or locations will be considered during the Alternatives phase.
  - b. Tim will look for documentation regarding whether the City has any responsibility for the railroad ditch between West Harvard Gulch and Evans Avenue west of the South Platte River. Routing of the Northwest Englewood and Evans Avenue basins will be confirmed based on the information received.
  - c. Big Dry Creek subbasin 30 sends overland flow north to the South Englewood basin, while storm sewer infrastructure is routed to Big Dry Creek to the south. Following the topography, the tributary area will be accounted for in the South Englewood hydrology and a note will be added to the report that this area should be considered in future Big Dry Creek studies as well. Deviations from other surrounding master plan delineations will be confirmed and annotated in the report.
  - d. The typical MHFD report template will not be as closely followed for this project and Dewberry is free to reference other recent studies as much as needed to provide a comprehensive account of the City’s major drainage. The group agreed that the typical interactive figures wont be needed.
  - e. During the Alternatives phase, Dewberry will review areas of existing inadvertent detention and explore opportunities to formalize into maintenance eligible

detention. Dewberry will also add the proposed improvements designed by Ulteig and HDR to the alternatives models to confirm their impact on the baseline hydrology.

- f. The formal environmental assessment will be deferred to the Alternatives phase of the project. In the meantime, Dewberry will review NWI data and include a figure of any existing wetlands.
- g. Dewberry will monitor the time step used for the SWMM model and update as necessary.

### 3) Next Steps

- a. Finalize baseline hydrology amendment
- b. Address comments and submit final Baseline Hydrology Report
- c. Submit final BLE Pluvial Flood Hazard Memorandum
- d. Share final report and memo with HDR

#### **Action Items:**

- Tim will share the available storm sewer inventory information listed under 1) c. above with Dewberry.
- Tim will look for documentation regarding whether the City has any responsibility for the railroad ditch between West Harvard Gulch and Evans Avenue.
- Dewberry will update the storm sewer survey exhibit with the inventory information shared by Tim.
- Dewberry will schedule a meeting with Brooke, Stacey and the project team for early October to discuss Englewood FHAD options.
- MHFD will review the proposed scope & fee for hydrology enhancements.