

SUMMARY

PROJECT: Murphy Creek Master Drainageway Plan
MEETING DATE/TIME: March 3, 2022 9:00-10:00 am
LOCATION: Teleconference
PURPOSE: Project Kickoff

Name	Representing	Email
Morgan Lynch*	Mile High Flood District	mlynch@mhfd.org
Mark Schutte	Mile High Flood District	mschutte@mhfd.org
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Sue Liu	Arapahoe County	sliu@arapahoe.gov
Tiffany Clark*	Southeast Metro Stormwater Authority	tclark@semswa.org
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Jeanne Boyle	Merrick – Project Manager	jeanne.boyle@merrick.com
Clare Steninger	Merrick – Hydrology Lead	clare.steninger@merrick.com
Theresa Ring	Merrick – Hydraulics Lead	theresa.ring@merrick.com
Others Invited:		
Sam Miller*	City of Aurora	samiller@auroragov.org
Robert Victor	Arapahoe County	rvictor@arapahoe.gov

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The following is a summary of the interactions, comments, and future deliverables discussed. While this summary is not intended to represent a complete or comprehensive account of the meeting, it is intended to reflect the salient points raised or questions to be answered.

1. Introductions

- Introductions between the Merrick project team and the sponsors/stakeholders were made.

2. Project Scope & Project Goals

- Area of Interest: Murphy Creek and Tributaries
- The initial scope is to update the hydrology for the watershed.

- c. The scope for subsequent hydraulics, alternatives analysis, and conceptual design phases will be evaluated after reviewing the updated hydrology.
- d. A Fluvial Hazard Zone Delineation study is a separate special project being done by Olsson. This information will be provided to Merrick to include in other phases of this MDP.
- e. Overall goals for this MDP are:
 - i. To understand the hydrology for this rapidly developing area,
 - ii. To clarify existing routing patterns within the watershed and evaluate drainage concerns,
 - iii. To provide recommendations for improvements along Murphy Creek and tributaries including channel stabilization, culvert/crossing sizing, and regional detention sizing,
 - iv. To provide guidance to the project sponsors and stakeholders for future construction projects,
 - v. Potentially develop Flood Hazard Area Delineations (FHADs) for tributaries to Murphy Creek.

3. Available Data

- a. 2008 OSP & FHAD
 - i. Linework and Background Information
 - ii. CUHP/SWMM Model
- b. Topography – 2020 LiDAR Digital Terrain Model (DEM)
- c. GIS Data – NRCS soils, zoning, neighborhoods, subdivisions, Master Plan areas, City Limits, Right-of-Way limits, storm mains, culverts, detention/water quality, inlets, manholes, outfalls, channels, control structures, NFHL BFEs, NFHL cross sections, FHAD lines, Murphy Creek subbasins, Murphy Creek watershed, and others.
- d. Development Master Plans
 - i. Merrick will compile a list of received Master Drainage Reports to be verified by Aurora that we have the best information available.
- e. Land Use/Zoning
 - i. Arapahoe County and City of Aurora zoning shapefiles will be the basis for assigning imperviousness values
- f. Previous Master Plans
- g. Construction Plans
- h. Crossing Survey
- i. Transportation Master Plans
 - i. Quincy Avenue expansion between Gun Club Rd and Harvest Rd
 - ii. Aurora Northeast Area Transportation Study (NEATS) July 2007.

4. Project Discussion

- a. Design Points and Basin Delineations
 - i. Merrick is using the design points from the 2008 OSP with several additional points where it makes sense.
 - ii. Basin delineations will be based on these design points and the 2020 LiDAR. Adjustments to the basin divides will be informed by information from drainage reports as necessary.
 - iii. There appears to be conflicting information between the 2008 OSP and the Master Drainage Reports for subdivisions in this area. It was recommended to review routing in specific areas described below in more detail.
 - iv. For the hydrology phase, the same routing will be used for both existing and future land use/imperviousness analyses.
- b. Project Specifics (Known or Potential Problem Areas, Recent Construction or Approvals)
 - i. Harvest Gulch (4000 East)
 - 1. The approved Murphy Creek East development should be included as existing for hydrology. Routing of the tributary will be closer to Yale compared to the historic tributary alignment.
 - ii. Gun Club Creek (4000 West)
 - 1. The 2008 OSP has conflicting text/drawings for the recommended design versus the Master Drainage Reports for Murphy Creek, Aspen Business Park, Aspen Village, and other subdivisions in the area. There is confusion as to if Gun Club Creek is routed through the irrigation pond south of Jewell or if it bypasses the pond and continues north.
 - 2. There is a new development north of Jewell (Aspen Village) that does not appear to include a tributary for offsite runoff from the south. We should verify that Gun Club Creek is actually routed to Murphy Creek south of Jewell and is not intended to flow through Aspen Village.
 - 3. If clarification cannot be determined from the 2020 LiDAR, a site visit for this area should be considered to verify routing.
 - iii. Alexandra Gulch (tributary to Gun Club Creek)
 - 1. Aspen Business Park MDR was recently approved but there is confusion of where the tributary crosses Gun Club Road. Could be a split flow condition for minor/major storm events. There are 3 culverts crossing Gun Club Road that are not in the City's GIS storm pipe layer. Additional field survey may be needed for these culverts.
 - iv. There are potentially proposed improvements for Yale Ave. per the Murphy Creek subdivision plans and for Gun Club Road. If so, these plans need to be provided.

- c. Imperviousness
 - i. Planned Development
 - 1. Recently, developments have proposed higher densities than previously planned. This trend (multi-units on a single lot, etc.) is likely to continue so a higher percent imperviousness should be considered in this MDP (i.e., using 70% instead of 45% for planned development). Merrick will make recommendations for the percentage based on current trends.
 - 2. Aurora has a recently completed Unified Density Ordinance (UDO) that may direct the imperviousness values needed.
 - 3. Specific imperviousness for each neighborhood/development is not required.
 - ii. DADS – Merrick will look at the Senac Creek MDP for recent values used for this area.
 - iii. Merrick will create a table of land uses and corresponding imperviousness values for sponsor approval.

5. Schedule

- a. A general outline of the project progression was presented:
 - i. Progress Meeting – Review of initial hydrology results
 - ii. Draft Hydrology Report Submittal
 - iii. Sponsor Review Period – 2 to 3 weeks following submittal
 - iv. Review Meeting – Review of sponsor comments