



# Meeting Minutes

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Golden, CO 80401

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**Prepared for:** City of Federal Heights, City of Thornton, and UDFCD

**Project Title:** Niver Creek MDP and FHAD

**Purpose of Meeting:** Baseline Hydrology Parameters

**Date:** November 10, 2014

**Meeting Location:** UDFCD

**Time:** 1:00 pm

**Agenda Prepared by:** Jennifer Winters, Brown and Caldwell

**Attendees:** Anna Sparks, Adams County  
Tim Williams, Federal Heights  
Jim Kaiser, Thornton  
Terri Fead, UDFCD

Shea Thomas, UDFCD  
Beth Baumgartner, Brown and Caldwell  
Danny Elsner, Brown and Caldwell  
Alan Pagan, UDFCD

## Meeting Minutes

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### 1. Niver Watershed

- a. CUHP shape factor 4:1. If a basin doesn't meet shape criteria, it can be check by looking at cfs/acre of similar basins (imperviousness).
- b. Current project/study at Kalcevic Gulch basin. Shea to provide BC with shape files for basin boundary.
- c. Be sure to justify differences between BC basin boundary and Kiowa basin boundary in Base-line Hydrology Report.

### 2. Subcatchment Questions

- a. Statistics – Stakeholders to give feedback if there are any concerns.
- b. Adams Co.
  - i. LN1 – Self discharging
    1. Keep LN1 in basin delineation.
    2. Add basin, described as LN 4.5 in meeting, at 78<sup>th</sup> & York; can be removed later on if decided that it doesn't flow into Niver Creek Basin. Also, the area is to be revitalized, which would cause a change in land use and storm sewer infrastructure. Future land use appear to appropriate.
  - ii. LN2–RR Tracks
    1. In this area, do not worry about UDFCD basin lines since the basin delineation is usually off due to 10' contour delineation. Thornton isn't sure if their basin delineation is up to date either.

2. Appears there may be drainage beneath railroad tracks. This basin may need to be split. Anna Sparks to look into more information/visit site. Jim Kaiser to send BC railroad grading plans.
- iii. LN5–irrigation canal
  1. Discussed and ok as is.
- iv. LN15–floodplain path vs. proposed path with improvements
  1. Low point on Washington Street. Thornton isn't aware of flooding issues in this area.
  2. BC should use the low point as the existing flow path. Add proposed path in alternative analysis.
- c. Federal Heights
  - i. TM 18–Remove from watershed
    1. Project at Federal and 92<sup>nd</sup> may bring flows back into basin. Tim Williams to check on flows at this intersection. If no flows here, the basin can be removed.
- d. Thornton
  - i. LN9–discharge from pond is assumed to go to Niver
    1. Low flows from school detention discharge onto cross-pans. The school may be removed from basin.
    2. 88<sup>th</sup> Ave & Washington may flow away from Niver (Hoffman Drainage). Jim Kaiser to check on storm sewer at this corner.
  - ii. LN14
    1. See comments above on LN15.
  - iii. LN17-- large amount of area draining to major streets with no storm sewer
    1. Thornton isn't aware of flooding issues in this area. Drainage west of I-25 (LN16, LN17 & LN18) drain north towards design point/Trib L. The 84<sup>th</sup> Ave interchange drains to the east.
    2. Jim Kaiser to clarify drainage with storm sewer maps on 84<sup>th</sup> & I-25.
  - iv. UN2, UN 3 and UN 4- cross pipes – unsure of routing
    1. Not sure if all drains south. Jim Kaiser to clarify drainage in this area.
  - v. UN10–Canal
    1. ½ of old Crook Lake, outfall drains south, leave as is on current delineation.
  - vi. UN27 and area to the east– storm sewer capacity/flow out of basin
    1. Thornton is aware of complaints in this area during heavy storms due to 100<sup>th</sup> Ave being very flat.
    2. Subdivision next to basin UN27 has issues with sheet flow and crown overtopping. BC should add a basin to the east of UN27 and remove later if necessary.
3. Impervious Percentages
  - a. Future Land Uses
    - i. Future = Existing
  - b. Questions/Assumptions
    - i. Adams Co.

1. Adams County land use values are superseded if another municipality provides land use values. Use other municipalities' information before Adams County, i.e. Northglenn and Westminster.
  2. Industrial:
    - a. Old developments are industrial heavy and new developments are industrial light. If there are any industrial sites, use industrial heavy.
  3. Low Intensity Mixed Use:
    - a. Neighborhood business/commercial - 85% per UDFCD Criteria
  4. Residential: Assumed one story, 2000 sq ft, 0.2 acre lots.
  - ii. Federal Heights
    1. Currently Vacant/Agriculture
      - a. Vacant lots will most likely become commercial business, 95%
    2. Mixed Use Res = Neighborhood areas
    3. Single Family Res
      - a. BC should use 2,000 sf house, split level, 0.2 acre lots.
    4. Industrial: Light
    5. Federal Heights wants manufactured housing community's % impervious to match that of Thornton. BC to adjust land use values so they match.
    6. Mobile Home Residential should equal Mobile Park Residential.
  - iii. Thornton
    1. Residential Low = Assumed manufactured housing community; small section of 2 story , 2500 sq ft, 0.1 acre lots
    2. Residential Medium = Assumed 50% one story, 2000 sq ft, 0.2 acre lots and 50% split level, 2500 sq ft, 0.2 acre lots.
      - a. BC to check both Residential Low and Medium.
  - iv. Other Municipalities
  - v. Shea wants BC to do a sample calculation of manufactured homes % impervious by using rooftop, driveway, patios, etc. to verify % impervious values
  - vi. Shea to send other municipalities the % impervious values to get input.
4. Formalized Detention Areas
- a. 5 in previous MDP
    - i. Niver Dam (Thornton – just u/s I-25)
    - ii. Trib L Detention (Thornton – just u/s I-25)
    - iii. Unnamed Detention (Thornton – Lower Niver Creek just d/s of I-25)
      1. BC to check if used in Kiowa's baseline hydrology or future hydrology.
    - iv. Elm Court Detention (Federal Heights – Trib M @ Elm Court)
      1. Sediment removal, spillway repair project. Shea to look into project.
    - v. Zuni Street Detention (Federal Heights – Upper Niver Creek @ Zuni St.)
  - b. Others
    - i. Detention in basin UN2. Jim Kaiser to look into who owns detention area.
  - c. Use previous stage/storage relationship from Kiowa SWMM model for detention

- i. There needs to be supporting documentation for the detention pond rating curves used to reduce discharges in the hydrology for the FHAD. Rating curves used in the Kiowa SWMM model need to be verified based on design or as-built drawings, or as-built survey information and subsequent calculations.
5. Website
    - a. Stakeholder Logos
      - i. BC to send email with logos for approval from Thornton & Adams County.
    - b. Stakeholder Contacts
      - i. Stakeholders ok with contact information on website.
    - c. Next Steps: UDFCD approval and publish
  6. Next Steps
    - a. Hydrology:
      - i. Any follow up Action Items (Stakeholders)
      - ii. Finalize basins & imperviousness per comments (BC)
      - iii. Finish CUHP parameters (BC)
        1. Lengths, lengths to centroid, infiltration
      - iv. Run CUHP/PCSWMM (BC)
      - v. Write draft hydrology report (BC)
        1. Due to UDFCD on 12/12/2014
          - a. BC should turn in before Christmas. Will have comments in approximately 3 weeks (mid-January).
    - b. Website
      - i. Submit draft to UDFCD for review/approval
      - ii. Make live on web
    - c. Next meeting
      - i. Not necessary to meet before turning in baseline hydrology. BC can communicate questions regarding CUHP/SWMM directly with Shea.
  7. Action Items
    - a. All stakeholders to give feedback on statistics if there are any concerns
    - b. Shea Thomas
      - i. Provide BC with shape files of Kalcevic Gulch basin.
      - ii. Send other municipalities (Westminster and Northglenn) the % impervious values to get input.
      - iii. Look into sediment removal/spillway repair project at Elm Court Detention.
    - c. Anna Sparks
      - i. Railroads in basin LN2 - Look into more information/visit site to look for drainage.
    - d. Jim Kaiser
      - i. Railroads in basin LN2 - Send BC railroad grading plans.

- ii. 88<sup>th</sup> Ave & Washington may flow away from Niver (Hoffman Drainage). Check on storm sewer at this corner.
  - iii. Clarify drainage with storm sewer maps on 84<sup>th</sup> & I-25
  - iv. UN2, UN 3 and UN 4- cross pipes – unsure of routing. Not sure if all drains south. Clarify drainage in this area.
  - v. Detention in basin UN2. Look into who owns detention area.
- e. Tim Williams
- i. Project at Federal and 92<sup>nd</sup> may bring flows back into basin. Check on flows at this intersection. - DONE
- f. Brown and Caldwell
- i. Adjust land use values for manufactured housing communities in Thornton and Federal Heights so they match.
  - ii. Do a sample calculation of manufactured homes % impervious by using rooftop, driveway, patios, etc. to verify % impervious values
  - iii. Check % impervious for both Residential Low and Medium in Thornton.
  - iv. Check if unnamed detention (Thornton – Lower Niver Creek just d/s of I-25) was used in Kiowa’s baseline hydrology or future hydrology.
  - v. Send email with logos for approval from Thornton & Adams County. - DONE