Purpose: To improve the capacity of CD staff to implement better stream crossing projects at the county level.

Format: 2.5 days
- Day 1: 10:00am-5pm (focus on stream crossing basics)
- Day 2: 8am-5pm (focus on stream surveying and active Culvert install)
- Day 3: 8am-3pm (Grade control and instream structures, active Culvert install)
- Classroom and field
- Held in State College
- Limited to 20 attendees at a time
- Target Audience: CD staff responsible for field project part of DGLVR Program.

Day 1: 10:00am to 5:00 pm – Stream Crossing Basics
- 10am-noon: intro and class session
  - Schedule:
    - 15 min Welcome/Intro/overview/why (Creamer)
    - 10 min Survey Equipment 101. (Brown/Dreese)
    - 20 min Survey Basics. (Brown/Dreese)
    - 30 min Bank Full- Why (Chase, McAdams)
    - 30 min Long-Pro, Slope, Grade control Spacing-Why (Chase/McAdams)

- Lunch at Facility: 11:45 – 12:30

- 1-5:00pm: Field Trip and Active Site Visit
  - Schedule:
    - 30 min Travel to forest (Chase, Creamer, Dreese, Morrison)
    - 60 min Scare Pond Site/EnS on Site (Creamer, Chase, Brown)
    - 15 min Survey Basics Field (McAdams, Dreese, Chase, Brown)
    - 60 min BF/Long-Pro/Grade Control Spacing (McAdams, Dreese, Chase, Brown)
    - 45 min Scare Pond Site (Creamer, Chase, Thomas)
    - 30 min Return (Chase, Creamer, Dreese, Morrison)

Day 2: 8:00am to 5:00 pm – Stream Crossing Install
- 8-9:30am: Class
  - Schedule:
    - 30 min Initial site assessment, Opening size to BF comparison (Creamer, Challenger)
    - 60 min The Grant App, Structure Cost Basics, The contract, Pre Engineering (Creamer, Challenger)
    - 30 min The permit process for the Shavers Creek process.

- 9:30am – 11:45am
  - Schedule:
    - 30 min travel to site (Chase, Creamer, Dreese, Morrison)
- 45 min Scare Pond (Thomas, Creamer, Chase)
- 30 min Setting the New Structure elevation, Back-fill estimation (Chase, McAdams, Creamer)
- 45 min Lunch – Shaver’s Creek (Moir, ALP)

**12:45pm – 5:00pm**

- **Schedule:**
  - 45 min Finding/putting material in the pipe. (Creamer, McAdams, Thomas)
  - 45 min Fill and compaction around/over Culvert (Dreese, Creamer)
  - 45 min Washing Material in the Structure (Thomas, McAdams, Creamer)
  - 30 min Return to facility (Chase, Creamer, Dreese, Morrison)
  - 45 min Baffles, Structure info, Spans (Dreese, Creamer)
  - 45 min Using the Excel Long Pro Form (McAdams)

**Day 3: 8:00am to 2:00 pm – Grade Control and Instream Structures**

**8am – 9:30am**

- **Schedule:**
  - 90 min Grade Control Structures/Instream Habitat - How do they work, Why do we use them, Where do we use them (TU)

**9:30am – 12pm**

- **Schedule:**
  - 150 min Install/Tour of local grade control and instream structures? (TU)
  - Lunch @ Shaver Creek environmental center (Moir, ALP)

**1:00pm Active Culvert Install: 1.5 hour**

- **Schedule:**
  - 60 min Final culvert install visit – Scare Pond (Time Optional)
  - 30 min Return to Facility (Chase, Creamer, Dreese, Morrison)
  - 30 min Wrap up Creamer)