

# Copper River EVOSTC Culvert Meeting Notes

## May 22, 2019

**Purpose of Meeting: H & H report review, hydrology review, and project timeline review.**

**Attended By:**

Tanya Bratsavsky, BCE	Steve McGroarty, ADOT & PF	
Egor Esipov, BCE		
George Uligan, BCE	Gillian O’Doherty, ADF&G	Erika Ammann, NOAA
	Megan Marie, ADF&G	
Keith & Shelly, Northern Geotechnical Engineering	Chantel Adelfio, CRWP	Bill Spencer, HDR
	Kristin Carpenter, CRWP	Kyle Walker, HDR
Jeff Stutzke, ADOT&PF	Kirsti Jurica, CRWP	Franklin Dekker, USFWS
John Bennet, ADOT&PF	Kate Morse, CRWP	Heather Hanson, USFWS

**“To-do list”:**

- ✓ **Distribute H&H report by June 4th**
- ✓ **DOT: Send Bill Spencer pictures and available information on “beaver friendly” culverts on the Alaska Highway**
- ✓ **CRWP: send out calendar reminders for 2019 monthly meetings**

**Culvert key:**

drainage	25-mile system	18-mile system	Elsner River	Sheridan River	Black Hole
CRWP ID	COP 43, 44, 45	COP 20, 22, 25	Cab 1 & 2	Sher 1 & 2, COP 1 & 9	COP 33
State ID	20100508, 20100510, 20101511	20100485, 20100488, 20100491	20101904*, 20101905	20101903, 20101902*, 20100467, 20100475	20100499

\*Removal only

**Discussion notes**

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**Geotech report:**

- Steve McGroarty from DOT questioned type F fill on figure 14. This figure shows the Type F fill is 12" above the bottom of the culvert. DOT requires type F 12" over the top of the culvert and surrounding the culvert.
  - Consensus: the Geotech report only shows the minimum requirements for the foundation strength. Designers will follow DOT requirements in the drawings and use Type F fill all around the culvert with a minimum depth of 12" over the top of the culvert. Type F gradation is shown in figure 15.

## Hydrology data:

- Franklin's summary:
  - Collected 6 discharge measurements at COP 43-45 since September 2018.
  - Gages placed at COP 42 and COP 44
  - Summary reports on the website show daily discharges, low flow, and peak flow estimates
    - Reminder that due to small number of discharge measurements peak flow estimates should be taken with a grain of salt
- Hydrology data input:
  - Luca (via Franklin): How does the removal of outliers effect the data? Did you take icing into account at gage sites?
    - Removing outliers: increases discharge for Q100 a little, but not by much.
    - Icing: Icing began in the second week of January and is noted in the summary. COP 44 had larger amounts of ice.
  - Bill: Did any events occur where sites were influenced by glacial flow?
    - No, we have not seen any yet. Higher flow events in October were likely precipitation related.

## H&H Design status:

- Bill's summary:
  - Will not include Saddlebag River in the regression flows.
  - New design for water surface elevation and low flow channels will maintain levels of ponds upstream.
  - Concern about the increase in elevation of road causing major flood events to run in ditches upstream and flow over the road on either side of the elevated section.
    - This was discussed further after the teleconference (see "After call notes").
  - Concern about the beaver problem. Proposed a pipe design where the culvert is in a backwater situation and running water is on the downstream side, so beavers clue in to the downstream side and do not block the culvert itself.
    - Jeff (DOT): has not dealt with this style culvert often, but there are some on the Alaska Highway. Jeff will look into those culverts and get back to Bill.
    - This was discussed further after the teleconference (see "After call notes").
- **Status:** Design is being reviewed by BCE and will have it to the group after review.

### **Proposed Project Timeline for COP 43-45:**

Goal: Invitation to bid by early January. Everything else is negotiable. We want to keep drafts due at least 3 weeks prior to meetings in order to allow time for people to review reports before meeting.

- a. June 4, 2019 - 15% Design – Draft H&H Report
  - i. 15% Review meeting June 25 at 1:30 pm –they can get the 15% design out to the group by June 4<sup>th</sup> after including comments from BCE
- b. September 3, 2019 – 65% Design – Final H&H Report, 65% Drawings, Specifications and Cost Estimate
  - i. 65% Review meeting September 24
- c. October 1, 2019 – 95% Design – Drawings, Specs and Cost Estimate
  - i. 95% Review meeting October 22
- d. October 25, 2019 – Permit applications submitted
- e. December 11, 2019 – 100% Design – Drawings, Specs and Cost Estimate
- f. January 8, 2020 – Invitation to Bid
- g. February 12, 2020 – Bids Due
- h. February 21, 2020 – Notice to Proceed

### **Monthly Meetings:**

- Will be scheduled for the 4<sup>th</sup> Tuesday of each month at 1:30 pm.
  - November and December meetings will be scheduled for the 3<sup>rd</sup> Tuesday to avoid holidays.
  - Meetings are not set in stone, we can alter meetings to fit schedules better for draft reviews.
  - CRWP will take notes and distribute after meetings.

### **Permits:**

- List of permits (list can be found on website in TaskList document). Permits will be completed by CRWP unless notes otherwise.
  - a. NEPA – completed by USFS and USFWS
  - b. Fish habitat permit (ADF&G)
  - c. Resource permit (ADF&G) – completed by contractor
  - d. US Army Corps of Engineers determination of Nationwide permit applicability
  - e. AK DOT/PF Special use Permit – completed by BCE during planning and CRWP during construction
  - f. Land owner use permit (DOT, Eyak Corporation, USFS)
  - g. Stormwater pollution prevent plan – completed by contractor
  - h. Temporary water use permit (DNR)

- POC for permit review before submitting:
  - Fish and Game permits: Megan Marie
  - DNR Water Use Permit: Heather Hansen
  - US Army Corps, nationwide permit: Heather and BCE
  - DOT Special use permit: Daniel Adamczak

**Next Steps:**

- Heather’s summary:
  - USFWS will be working on contracting design for the next projects (COP 20, 22, 25). The goal is to start field work this year.
  - Hydrology data collection will be ongoing for the next 1.5 years and will help to inform future designs.
- Kate Morse: FS will be completing work on Sheridan Road, and it could be possible to work with them do complete the removal and low water ford during the same time. Will check on timing for the FS project, believes it will be this summer.
  - Heather: Could be taken on by the FS, if they are willing to do the design. Otherwise, we should wait to move forward with our process, which will take longer than completion by this summer.

**After Call Notes:**

On the Call:

Tanya, Egor, and George (BCE)	Gillian, and Megan (ADF&G)	Bill (HDR)
Chantel (CRWP)	Heather (USFWS)	John (DOT)

Height of culvert and road elevation:

- Bill: flow goes through culvert with still 20% open space above high water line. Having culverts up high enough to have 100 year flow at 80% will cause a decent raise in elevation on this section of road. Is this something we want to continue forward with?
  - Heather: haven’t always kept the 80%, it is pretty conservative so we do not need to keep the structure at this size
    - Fish and Game agrees. Proposal of less rise sounds reasonable, and can decrease cost.
  - Decision: Go with culvert with less rise (still wide)
    - Road elevation will be around 2 ft vs 4ft
- Conversation about DOT’s plan to raise the entire elevation of the CRH. Is this something we should consider moving forward?
  - John (DOT): should not be concerned about this due to current state of funding

Beaver activity:

- Proposal: raise the bottom to backwater the structures and deal with the beaver problem.
  - Heather: Why do we need to raise the bottom? We should keep the bottom at the 1.5 measurement.
  - Bill: Still at 1.5 at low flow with an 8 ft culvert. If we embed a larger culvert further it could be more expensive in both supplies and construction.
    - Bill will play around with numbers and wait to hear from DOT about culverts on AK highway. As of right now he will move forward with drawings concentrating on stability.