

# MEMORANDUM

State of Alaska

Department of Fish and Game  
Division of Habitat

TO: Jackie Timothy  
Southeast Regional Supervisor

DATE: December 5, 2016

FILE NO: FH11-I-0123A  
FH14-I-0109

SUBJECT: 2016 Greens Creek Mine  
Site Visit Trip Report #2

FROM: Kate Kanouse   
Habitat Biologist

PHONE NO: (907) 465-4290

---

On November 18, 2016, I traveled to the Greens Creek Mine with USFS Geologist Richard Dudek for a general site visit and to observe the Greens Creek fish pass. Hecla Greens Creek Mining Company (Hecla) Environmental Engineer Mitch Brooks accompanied us.

## Greens Creek Fish Pass

The fish pass was functioning properly and we did not observe debris that could impede fish passage (Figure 1). We did not observe adult coho salmon transiting the fish pass, though it may have been too late in the spawning season. Greens Creek discharge was about 80 cfs at the time.<sup>a</sup>

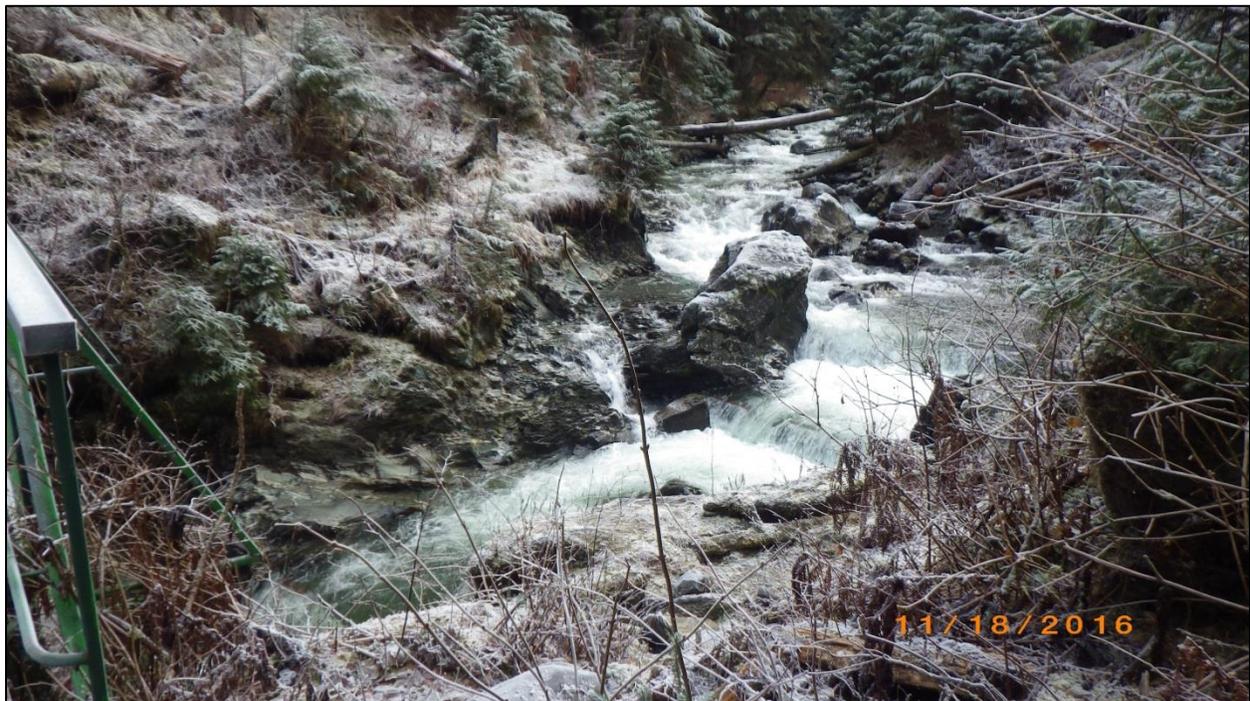


Figure 1.—Greens Creek fish pass.

---

<sup>a</sup> USGS gage 15101490, located 5 km upstream of the fish pass, measured 32 cfs during our site visit; the stream discharge estimation at the fish pass is based on a factor of 2.5.

### Tailings Disposal Facility Development

Hecla began disposing tailings in the new 18 acre TDF expansion area in early August 2016 (Figure 2), and Pond 10 construction was nearly complete.



Figure 2.—TDF expansion area and active tailings disposal, looking southeast.

### Falls Creek Bridge

The sediment catchment basins at the toe of the Falls Creek bridge abutments failed and washed downstream since my last visit on September 2, 2016 (Figures 3, 4). Hecla is developing a new plan to prevent fines from the road and bridge entering the creek, a tributary to Zinc Creek (Stream No. 112-65-10230). I surveyed the lower portion of Falls Creek on September 2, 2016 and nominated the water body for inclusion in the 2017 Anadromous Waters Catalog. I will complete the stream survey below the bridge<sup>b</sup> in spring 2017.



Figure 3.—Falls Creek bridge BMPs on 9/2/2016.



Figure 4.—Falls Creek bridge BMPs absent on 11/18/2016.

<sup>b</sup> Falls at the B Road bridge prevent upstream fish passage.

### Zinc Creek Bridge

We observed white material along the bottom of a 4 inch plastic pipe draining the Zinc Creek bridge south abutment (Figure 5). USFS staff first noticed the white material during an October 7, 2016 inspection. Hecla Environmental Manager Chris Wallace collected a sample of the white material that he will dry, weigh, and preserve in water for measuring total metals concentrations.



Figure 5.—Zinc Creek bridge abutment drain and white material.

### Stream No. 111-41-10190 Culvert

Hecla plans to replace the A Road culvert in Stream No. 111-41-10190<sup>c</sup> during 2017 (Figures 6, 7). The bottom is corroded and broken in several places, causing water to flow beneath the culvert. Habitat Division issued Hecla FH14-I-0109 for the structure, which was installed in the 1980s, and a permit amendment is required for its replacement.



Figure 6.—Stream No. 111-41-10190 culvert outlet, looking upstream.



Figure 7.—Stream No. 111-41-10190 culvert outlet, looking downstream.

### Recommendations

1. Revisit the fish pass in spring 2017, per the quarterly monitoring agreement.
2. Investigate fish use in Falls Creek below the B Road bridge in spring 2017.

#### Email cc:

Al Ott, ADF&G Habitat, Fairbanks  
ADF&G Habitat Staff, Juneau  
Dan Teske, ADF&G SF, Juneau  
Dave Harris, ADF&G CF, Juneau  
Steve Bethune, ADF&G WC, Sitka  
Will Collingwood, ADEC, Juneau

Kyle Moselle, ADNR, Juneau  
Matthew Reece, USFS, Juneau  
Linda Speerstra, USACE, Sitka  
Steve Brockmann, USFWS, Juneau  
Cindy Hartmann Moore, NMFS, Juneau  
Chris Wallace, Hecla, Juneau

<sup>c</sup> The unnamed stream supports coho and chum salmon, Dolly Varden char, and cutthroat trout.