STATE OF ALASKA

DEPARTMENT OF FISH AND GAME

DIVISION OF HABITAT

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MEMORANDUM

TO: Jackie Timothy
Regional Supervisor

DATE: 09/09/09

FILE NO: FH09-I-0025 through FH09-I-0035

SUBJECT: Glacier Highway and Trailhead (Amalga to Eagle Beach) Site Visit

FROM: Sheila Cameron
Habitat Biologist

TELEPHONE NO: 465-4182

On Wednesday, September 2, 2009, I met with Glenn Johns (Johns' Engineering) and Rob Miller (Miller Construction) to look at each fish stream with culverts to be replaced as part of the Glacier Highway and Trailhead Department of Transportation and Public Facilities (DOT) project. There are 11 streams that have been identified, and permitted, as fish although not all are catalogued as anadromous. The permits were issued by the Division of Habitat (FH09-I-0025 through FH09-I-0035) on April 24, 2009 to DOT but no specifics for stream diversions were given at that time. The permit states:

> We require you to submit a construction plan to the Division of Habitat for approval prior to conducting any in-water work. The plan shall describe your site specific methods of replacing each culvert listed in Table 1, including sediment and turbidity control procedures, stream diversion and dewatering measures, and proposed construction timing.

We met at Amalga Harbor and drove out the road, stopping at each of the fish culverts to assess conditions and discuss methods necessary for fish preservation. Miller construction initially thought the culverts would not be replaced until spring 2010, but they now believe that they can have the job completed before winter. At this time of year, there is a greater concern for fish as adults are returning to spawn and eggs are in the gravels, in addition to rearing salmon's presence. **For all the permitted culvert replacements, fish fences need to be placed upstream and downstream and the area trapped overnight prior to dewatering to minimize the number of fish caught in the dewatered section. Any adult salmon or residual juveniles found will need to be moved upstream of the work area prior to dewatering.**

Pipes 115-121 (FH09-I-0025 through FH09-I-0029) have a significant amount of water in them, but no visible flow (Photo 1). Glenn proposes to dig a diversion ditch parallel to the stream and divert water into that ditch while the culvert is replaced, then divert the water back into the stream.

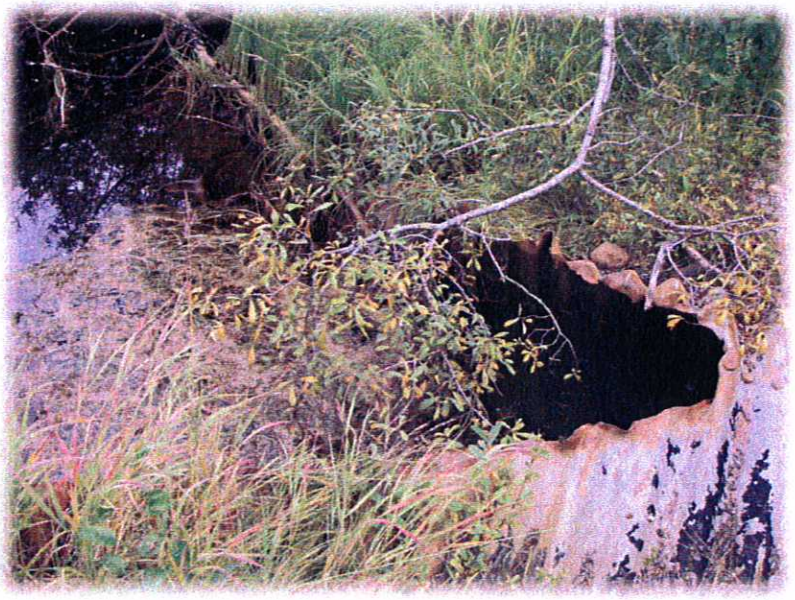

Photo 1: Upstream end of culvert 120

Pipes 135 and 136 (FH09-I-0030 and FH09-I-0031) have no visible water movement and Glenn proposes to dam the streams above the culverts and pump water around the work area as needed to dewater the area. These streams are catalogued for coho salmon spawning and rearing and Dolly Varden char rearing. There were no visible fish at either site, but it is quite possible that returning coho have not made it here yet. **These streams would benefit from being inspected within a week of the actual work to determine if anything further is needed to protect returning coho.**

Pipe 137a (FH09-I-0032) has no visible movement of water and no visible fish. They propose to dam the area and pump the water out. This stream is catalogued for coho salmon spawning and rearing and Dolly Varden char rearing. Although fish were not visible, it is quite possible that returning coho have not made it here yet. **This culvert would benefit from being inspected within a week of the actual work to determine if anything further is needed to protect returning coho.**

Pipe 137b (FH09-I-0033) is downstream of 137a on Tonsgard Road. This pipe is slightly perched on the outlet (photo 2) and spawned out chum salmon were visible both upstream and downstream of the culvert (photo 3). Glenn stated that a diversion ditch would be used for this culvert replacement. I recommend that as little of the streambed above and below the culvert be disturbed as possible due to the high probability of eggs in the gravel. **It would be ideal to wait until spring (after the fry are out of the gravels) for replacement of this culvert.**

Photo 2: Outlet of 137b

Photo 3: dead chum downstream of 137b

Pipe 145 (FH09-I-0034) is quite perched on the outlet (photo 4) and is a barrier to upstream migration of fish. There were adult chum (both alive and dead) in the large plunge pool while none were visible upstream of the culvert. The plans for this site include filling the plunge pool with scour materials. **While the culvert could be replaced in the fall if necessary, adding material to the plunge pool would kill all eggs in the gravels and should not be done until the fry outmigrate in the spring.**

Photo 4: Outlet of 145

Pipe 146 (FH09-I-0035) is perched with a smaller plunge pool than 145. This culvert does appear to be a blockage to fish. There were three adult chum salmon in the pool just below the culvert (photo 5). This stream is not catalogued as anadromous, so I will be submitting a nomination based on the presence of the chum salmon during our site visit. Miller will dam the stream and pump the water around the work site.

Photo 5: Chum salmon downstream of culvert 146

CC via email:

Al Ott, ADF&G Habitat, Fairbanks

Walt Loewen, DOT, Juneau

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Glenn Johns, Johns Engineering

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