State of Alaska
Department of Fish and Game
Division of Sport Fish

Nomination Form
Anadromous Waters Catalog

5

Region: Southcentral

USGS Quad(s): Tyonek A-5

Anadromous Waters Catalog Number of Waterway: 247-10-10200

Name of Waterway: Nikolai Creek ☐ USGS Name ☑ Local Name

☐ Addition ☐ Deletion ☐ Correction ☑ Backup Information

For Office Use

Nomination # 120351

Revision Year: 2013

Revision to: Atlas ____ Catalog ____ Both ____

Revision Code: F-1

	Date
Fisheries Scientist	
Habitat Operations Manager	
AWC Project Biologist	10/3/12
Cartographer	

OBSERVATION INFORMATION

Species	Date(s) Observed	Spawning	Rearing	Present	Anadromous
Pink Salmon (2)	8/23/2012			X	☑
					☐
					☐
					☐
					☐

IMPORTANT: Provide all supporting documentation that this water body is important for the spawning, rearing or migration of anadromous fish, including: number of fish and life stages observed; sampling methods, sampling duration and area sampled; copies of field notes; etc. Attach a copy of a map showing location of mouth and observed upper extent of each species, as well as other information such as: specific stream reaches observed as spawning or rearing habitat; locations, types, and heights of any barriers; etc.

Comments:

I observed adult pink salmon from the bridge during FRPA road condition survey (Figure 1). See August 20-23, 2012 Trip Report.

Name of Observer (please print): Will Frost, Habitat Biologist

Signature: _____ Date: 8/28/2012

Agency: ADF&G, Division of Habitat

Address: 333 Raspberry Road

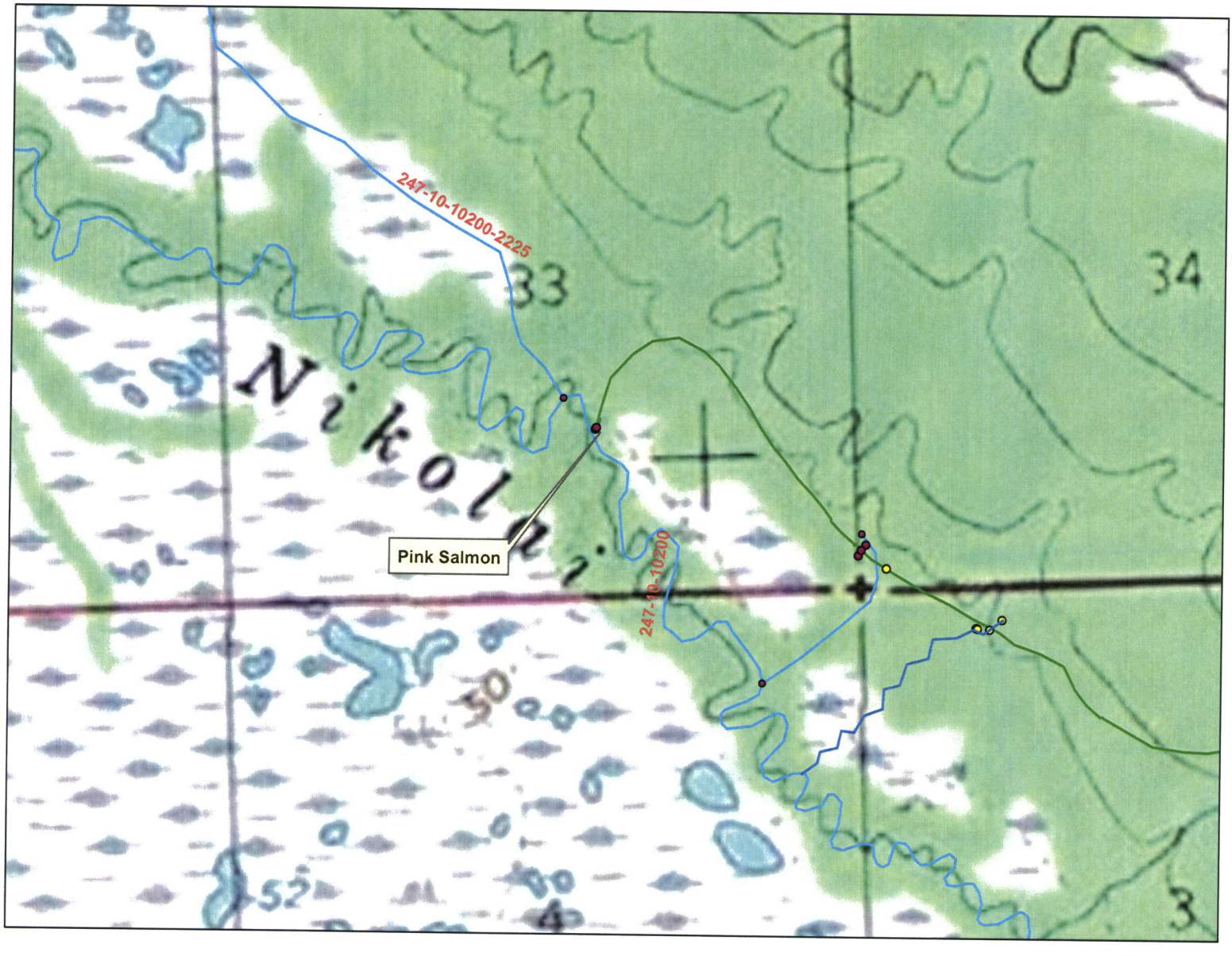
Anchorage, AK 99518

This certifies that in my best professional judgment and belief the above information is evidence that this waterbody should be included in or deleted from the Anadromous Waters Catalog.

Signature of Area Biologist: _____ Date: _____

Name of Area Biologist (please print):

Revision 05/08


247-10-10200-2225
33
34
Nikolai
Pink Salmon
247-10-10200
50
52
4
3

MEMORANDUM

State of Alaska

Department of Fish and Game
Division of Habitat

TO: Michael Daigneault
Central Region
Regional Supervisor

DATE: September 19, 2012

PHONE NO: 267-2813

FROM: Will Frost WF
Habitat Biologist

SUBJECT: August 2012 Tyonek Trip Report

On August 20 to August 24, 2012, I joined Joel Nudelman and John Winters, Division of Forestry (DOF), and Jeannette Alas and Gillian O'Doherty, Alaska Department of Fish and Game (ADF&G) to conduct a joint ADF&G and DOF Forest Resources and Practices Act road condition survey on roads owned by the State of Alaska (SOA), Mental Health Trust (MHT), Tyonek Native Ass. (TYO), and Kenai Peninsula Borough (KPB). Mr. Nudelman, Ms. Alas and I arrived in Tyonek at 9:00 a.m. The weather conditions were cloudy and rain becoming clear and warm. Mr. Winters arrived on August 21 and Ms. O'Doherty arrived on August 22.

The DOF scored the condition of the roads and culverts on a scale of one to four. One was the lowest rating. I used an electrofisher or baited minnow trap to sample for fish presence near culverts. Each culvert was measured and given a score if fish were captured or observed.

On the afternoon of August 20, Mr. Nudelman, Ms. Alas and I drove from the Beluga Camp to Road TYO-0017. A bridge is located over the Chuitna River (Stream No. 247-20-10010). We inspected a steel bridge supported by old drill casings and sheet pile (Figure 1). An overflow culvert about 8-feet in diameter has been recently installed adjacent to the bridge. I had no site specific concerns with the bridge or culvert.

We drove to Road TYO-0015. We set two baited minnow traps in a pond above the road. The pond flows through ADF&G Culvert TYCS1-TY012 into Indian Creek (Stream No. 247-20-10020 (Figure 2)). The traps soaked about three hours. The traps captured stickleback. No other fish were observed. The culvert has structural damage under the road and the diameter is too small to pass fish. The culvert will need to be replaced with a culvert designed for fish passage.

We drove to Road TYO-00013. The road crosses Tyonek Creek (Stream No. 247-20-10040). Tyonek Creek flows through ADF&G Culvert TYCS1-TY014 (Figure 3). The steel culvert invert has folded back into the culvert inlet and is preventing fish passage (Figure 4). The culvert will need the damaged steel removed to restore fish passage.

We drove to Road TYO-0006. The road crosses Tyonek Creek. Tyonek Creek flows through ADF&G Culvert TYCS1-TY016 (Figure 5). The twin culverts may be a barrier to fish passage. The ADF&G recommends the culverts are removed and a bridge installed.

We drove to Road TYO-0016. We located a 36-inch diameter culvert. The culvert has not been surveyed prior to our site visit. An unnamed stream flows through the culvert. I used an electrofisher to sample the stream for fish presence. I sampled about 100 linear feet of the stream below the culvert. I captured Dolly Varden.

On the morning of August 21, Mr. Nudelman, Mr. Winters, Ms. Alas, and I drove to Road SOA1061. The road crosses an unnamed tributary (Stream No. 247-20-10050-2025) of Old Tyonek Creek. The unnamed tributary flows through ADF&G Culvert TYCS1-TY028 (Figure 6). I observed juvenile coho salmon about 200 feet above the culvert inlet in pool habitat. The water clarity was excellent. The juvenile coho salmon will be nominated for addition to the Anadromous Waters Catalog. The culvert may be a barrier to fish passage. The ADF&G recommends the culvert is removed and a bridge is installed.

We drove to Road KPB-0003. The road crosses an unnamed stream that flows into the specified reach of Stream No. 247-20-10050-2031. The unnamed stream flows through ADF&G Culvert TYCS1-TY017. The culvert inlet was blocked by a small beaver dam. The blockage was removed by hand. I sampled about 200 feet of the stream below the culvert. I captured juvenile coho salmon and juvenile rainbow trout (Figure 7). We set two baited minnow traps in a pond above the culvert. The traps soaked about one hour. We captured one stickleback and one rainbow trout. The juvenile coho salmon will be nominated for addition to the Anadromous Waters Catalog. The culvert may be a barrier to fish passage. The ADF&G recommends the culvert is removed and replaced with a culvert designed for fish passage.

We drove to Road MHT-1009. We located a 48-inch diameter culvert in an unnamed stream that flows into Congahbuna Lake. The lake flows into Stream No. 247-20-10050-2025. The culvert had not been surveyed prior to our site visit. I sampled about 500 feet of the stream below the culvert. I captured 20 rainbow trout. I sampled about 100 feet above the culvert. I captured 10 rainbow trout. The culvert may be a partial barrier to fish passage. The ADF&G recommends the culvert is removed and replaced with a culvert designed for fish passage.

We drove an additional one mile on the same road. We located a 36-inch diameter culvert in an unnamed stream that flows into Stream No. 247-20-10050-2025. The culvert had not been surveyed prior to our site visit. I sampled about 50 feet above the culvert. I captured 5 juvenile coho salmon. The culvert may be a partial barrier to fish passage. The ADF&G recommends the culvert is removed and replaced with a culvert designed for fish passage. The juvenile coho salmon and new stream reach will be nominated for addition to the Anadromous Waters Catalog.

On the morning of August 22, Mr. Nudelman, Ms. O'Doherty, and I drove to Road TYO-0009. Mr. Winters and Ms. Alas drove to additional roads to conduct a similar survey. We located a 16-inch diameter steel drill casing used as a culvert. The road crosses an unnamed stream that flows through ADF&G Culvert TYCS1-TY009. I sampled about 100 feet below the culvert. I

captured 2 juvenile Dolly Varden. The culvert is a barrier to fish passage. The ADF&G recommends the culvert is removed and replaced with a culvert designed for fish passage.

We drove to Road TYO-0011. The road crosses Tyonek Creek which flows through twin ADF&G Culverts TYCS1-TY008 (Figure 8). I observed 5 juvenile coho salmon about 500 feet below the culvert outlet in pool habitat. The juvenile coho salmon will be nominated for addition to the Anadromous Waters Catalog. The culverts may not be a barrier to fish passage.

We drove to Road MHT-1002. The road is closed and alder has grown in covering the road. We walked about 1,500 feet to Old Tyonek Creek. A 7-foot high beaver dam is in the location of an old stream crossing (Figure 9). No culvert was located. I observed about 50 juvenile coho salmon in the beaver pond. The juvenile coho salmon will be nominated for addition to the Anadromous Waters Catalog.

We drove to Road SOA-1054. The road crosses Stedatna Creek (Stream No. 247-10-10200-2215) which flows through ADF&G Culvert TYCS1-TY024. I did not sample Stedatna Creek. The culvert is a barrier to fish passage. The ADF&G recommends the culvert is removed and replaced with a culvert or bridge designed for fish passage.

We drove an additional 1.2 miles on Road SOA-1054. We located an unnamed stream that flows through ADF&G Culvert TYCS1-TY023. The stream flows into Nikolai Creek (Stream No. 247-10-10200). I sampled about 100 feet below the culvert. I captured 2 juvenile coho salmon. The culvert is a barrier to fish passage. The ADF&G recommends the culvert is removed and replaced with a bridge designed for fish passage. The juvenile coho salmon will be nominated for addition to the Anadromous Waters Catalog.

We drove an additional 1 mile on Road SOA-1054. We located an unnamed stream that flows through ADF&G Culvert TYCS1-TY022. The stream flows into Nikolai Creek. I sampled about 100 feet below the culvert. I captured 20 juvenile coho salmon and 5 Dolly Varden. The culvert is a barrier to fish passage. The ADF&G recommends the culvert is removed and a bridge installed and designed for fish passage. The juvenile coho salmon and stream reach will be nominated for addition to the Anadromous Waters Catalog.

We drove an additional 0.1 mile on Road SOA-1054. We located an unnamed stream that flows into Nikolai Creek. The stream flows through a 36-inch diameter culvert. The culvert has not been surveyed prior to our site visit. I observed 10 Dolly Varden above the culvert inlet. The culvert is a barrier to fish passage. The ADF&G recommends the culvert is removed and replaced with a culvert designed for fish passage.

On the morning of August 22, Mr. Winters and Ms. Alas drove to MHT-1002. The road was closed and covered with thick alder growth. We crossed Old Tyonek Creek at the beaver dam and also could not locate a culvert. We hiked in an additional 0.75 miles to MHT-1005. Another beaver dam and an unnamed stream were located about 0.25 miles from MHT-1005. No fish were observed and no culvert was located.

We then drove to TYO019. A culvert on an unnamed stream was located after about one mile. One minnow trap was set about 100 feet upstream of the culvert and another about 100 feet downstream of the culvert. The traps soaked for about two hours and one stickleback was captured at the outlet.

We drove about another mile, and on TYO021 we located an unnamed stream with a culvert which had not been surveyed prior to our visit. Two minnow traps were set, one about 100 feet upstream of and another about 100 feet downstream of the culvert. The traps were set and soaked overnight.

On the morning of August 23, we returned to Road SOA-1054. We located Stream No. 247-10-10200-2221. The stream flows through ADF&G Culvert TYCS1-TY021. I sampled about 100 feet below the culvert and 400 feet above the culvert. I captured 10 juvenile coho salmon above the culvert. The culvert may be a partial barrier to fish passage. The ADF&G recommends the culvert is removed and replaced with a culvert designed for fish passage. The juvenile coho salmon will be nominated for addition to the Anadromous Waters Catalog.

We drove an additional 0.6 miles on Road SOA-1054. We located a 60.5 foot long bridge over Nikolai Creek. The steel bridge is supported by a wood bulkhead (Figure 10). The wood is rotting at ground level. The deck of the bridge has untreated wood beams covering half the bridge width (Figure 10). We did not attempt to cross the bridge with a vehicle. We observed two adult pink salmon below the bridge. The pink salmon will be nominated for addition to the Anadromous Waters Catalog.

We drove to the site of ADF&G Culvert TYCS1-TY011 located in Three Mile Creek. The 5-foot diameter culvert has failed and about 300 feet of the roadbed has washed into the creek (Figures 11 and 12). The failed roadbed is continuing to erode, discharging sediment into the creek. Three Mile Creek (Stream No. 247-20-10002) is a specified waterbody about 0.5 miles below the road. The ADF&G will require action to be taken to stabilize the roadbed. I sampled the stream about 100 feet above the road and 500 feet below the road. I captured sculpin and stickleback.

On the morning of August 23, Mr. Winters and Ms. Alas returned to the unnamed stream on TYO021 to retrieve the minnow traps, which had soaked for about 16 hours. Five Dolly Varden were captured in the downstream trap.

About one quarter of a mile further north on TYO021, another unnamed stream with a culvert was located. It had not been surveyed prior to our visit. Two minnow traps were set, one about 50 feet upstream and another about 50 feet downstream of the culvert. The traps soaked for about two hours, and no fish were captured.

A half mile further north on TYO021, a steel supported bridge was located on an unnamed stream (Stream No. 247-20-10002-2019) and we inspected it. An old culvert was laying on the streambank below the bridge, and likely had been replaced by the bridge. No concerns were indentified with the bridge.

We then drove on roads MHT1027 and MHT-1028. No culverts were located on MHT-1028. We drove MHT1027 until reaching Three Mile Creek where the old culvert (ADF&G TYCS1-TY011) had been washed out (see above).

We then drove on TYO022 and TYO023. Although some culverts on unnamed streams were located, none appeared to be fish-bearing and no traps were set.

We completed our day by surveying TYO1028, TYO014, and TYO1033. No culverts were located on any of the roads. We also located TYO1029 and determined that it was a closed road.

Figure 1. Steel bridge over Chuitna River.

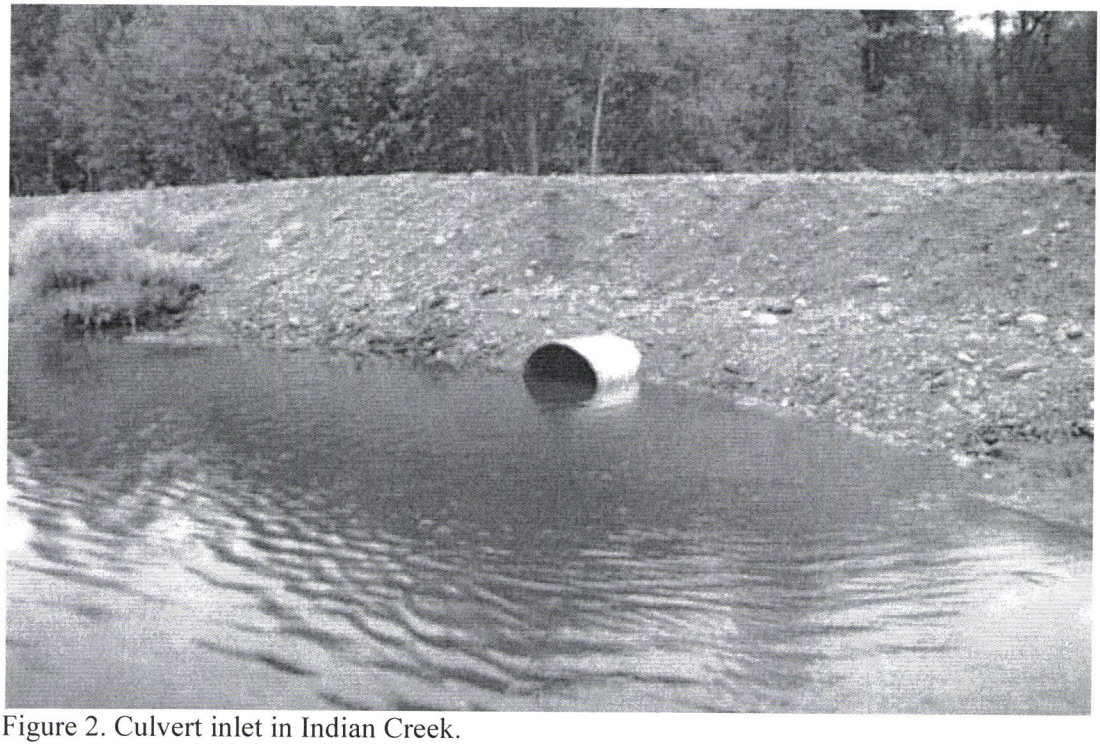


Figure 2. Culvert inlet in Indian Creek.

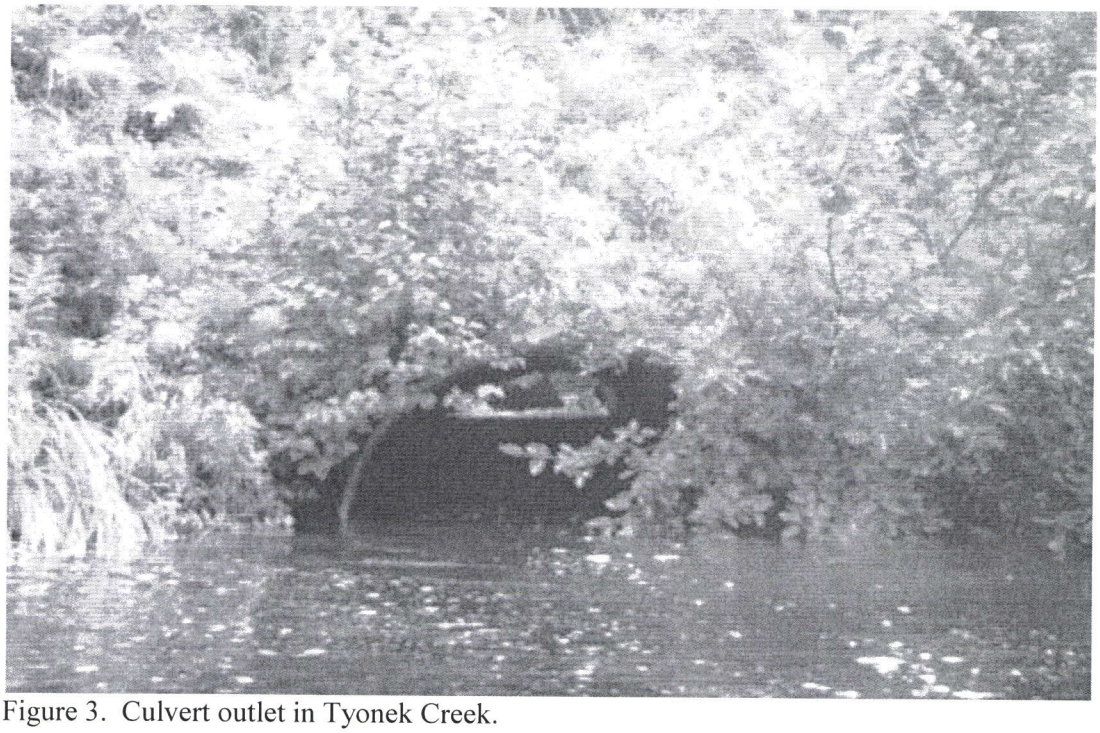


Figure 3. Culvert outlet in Tyonek Creek.

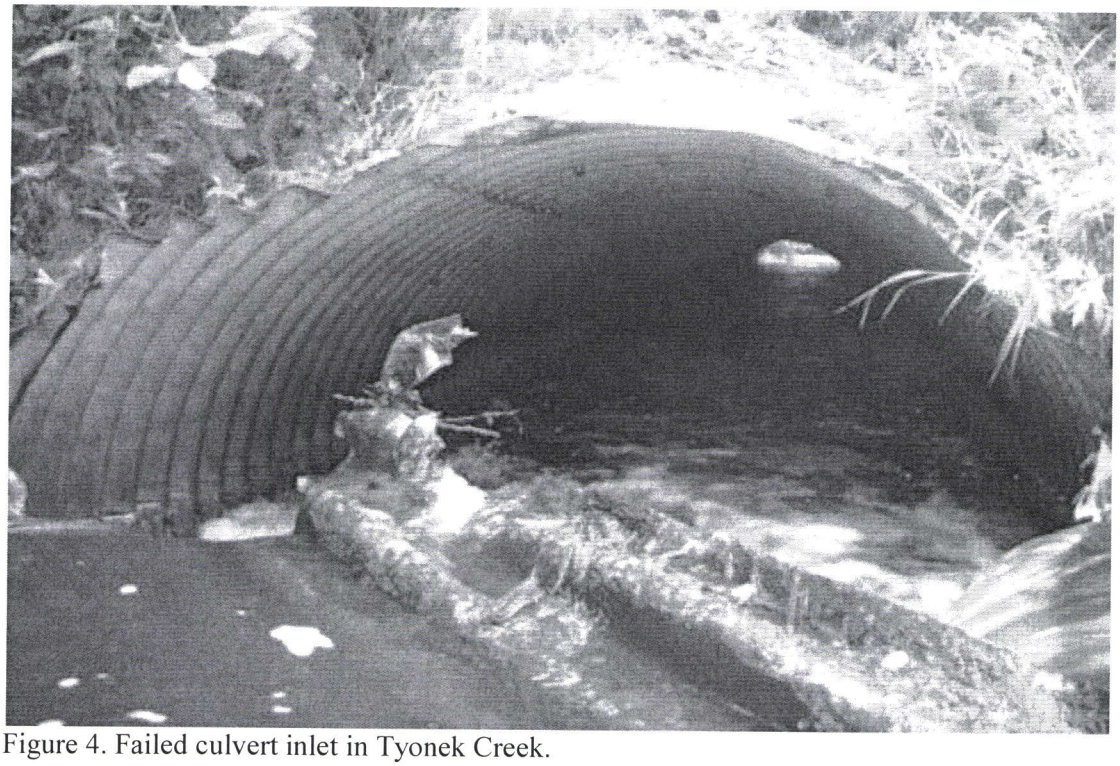


Figure 4. Failed culvert inlet in Tyonek Creek.

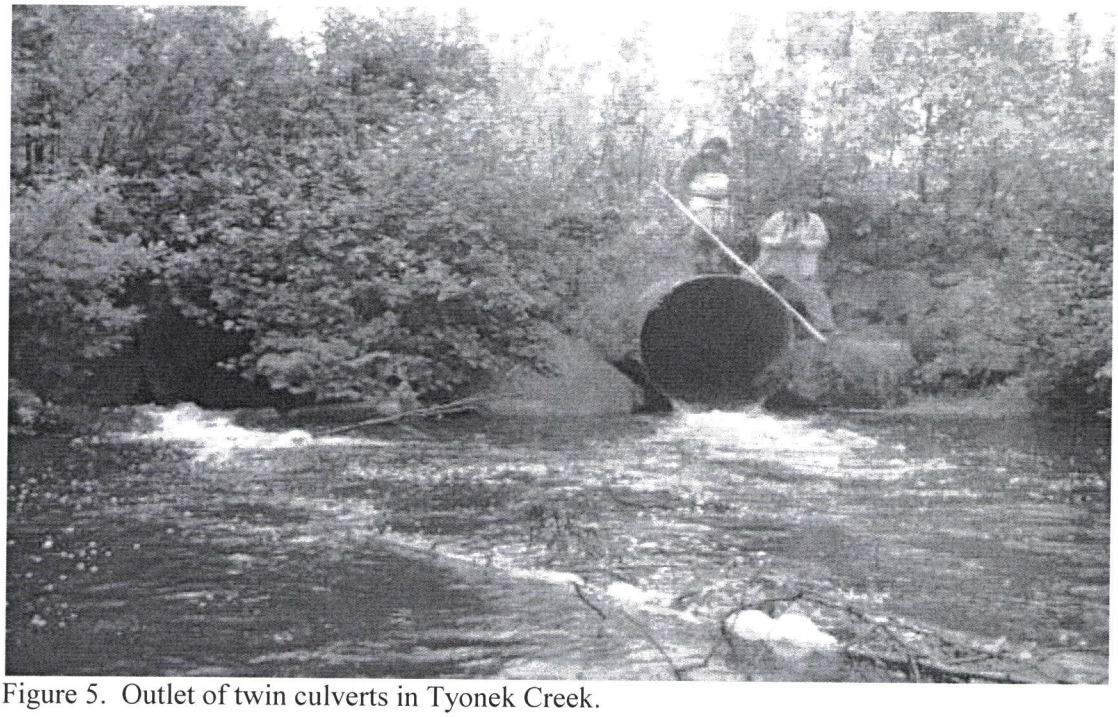


Figure 5. Outlet of twin culverts in Tyonek Creek.

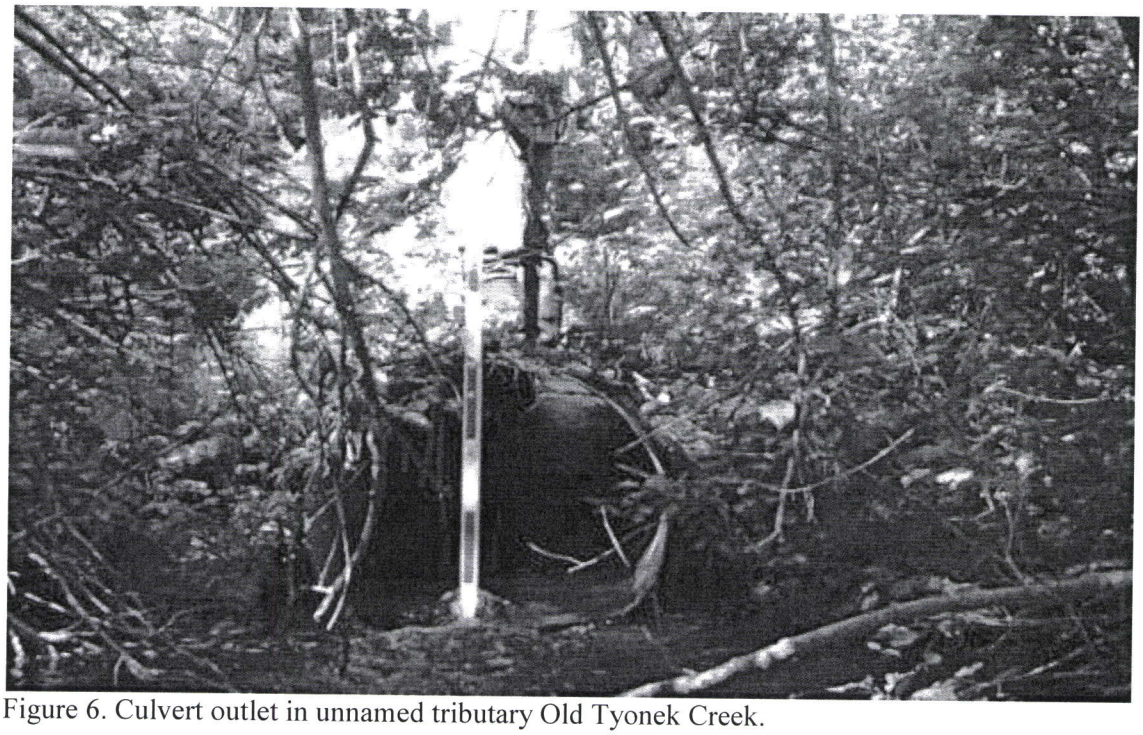


Figure 6. Culvert outlet in unnamed tributary Old Tyonek Creek.

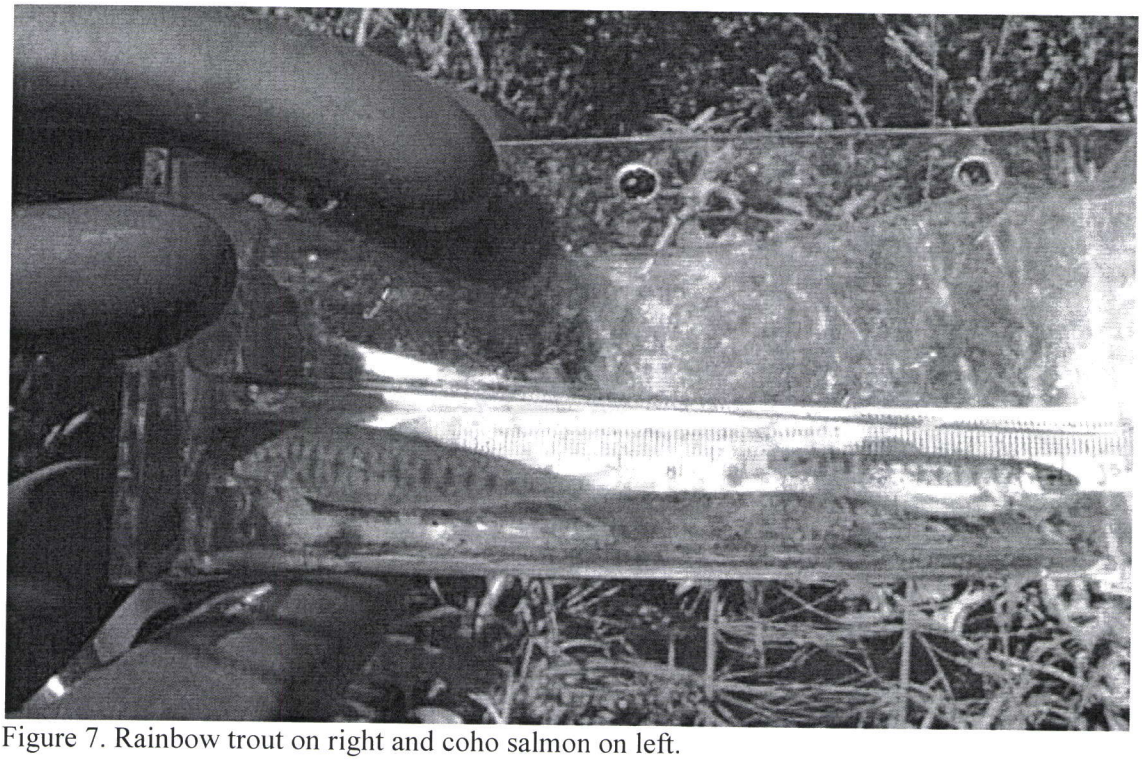


Figure 7. Rainbow trout on right and coho salmon on left.

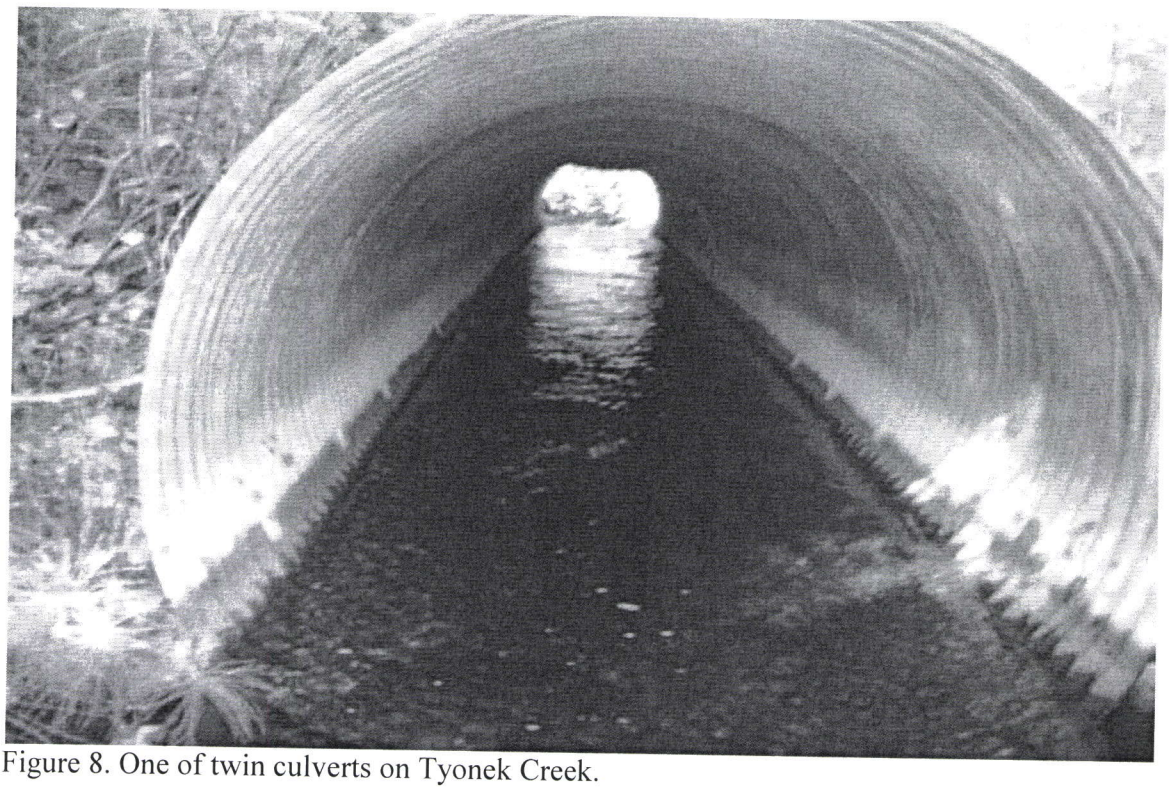


Figure 8. One of twin culverts on Tyonek Creek.

.

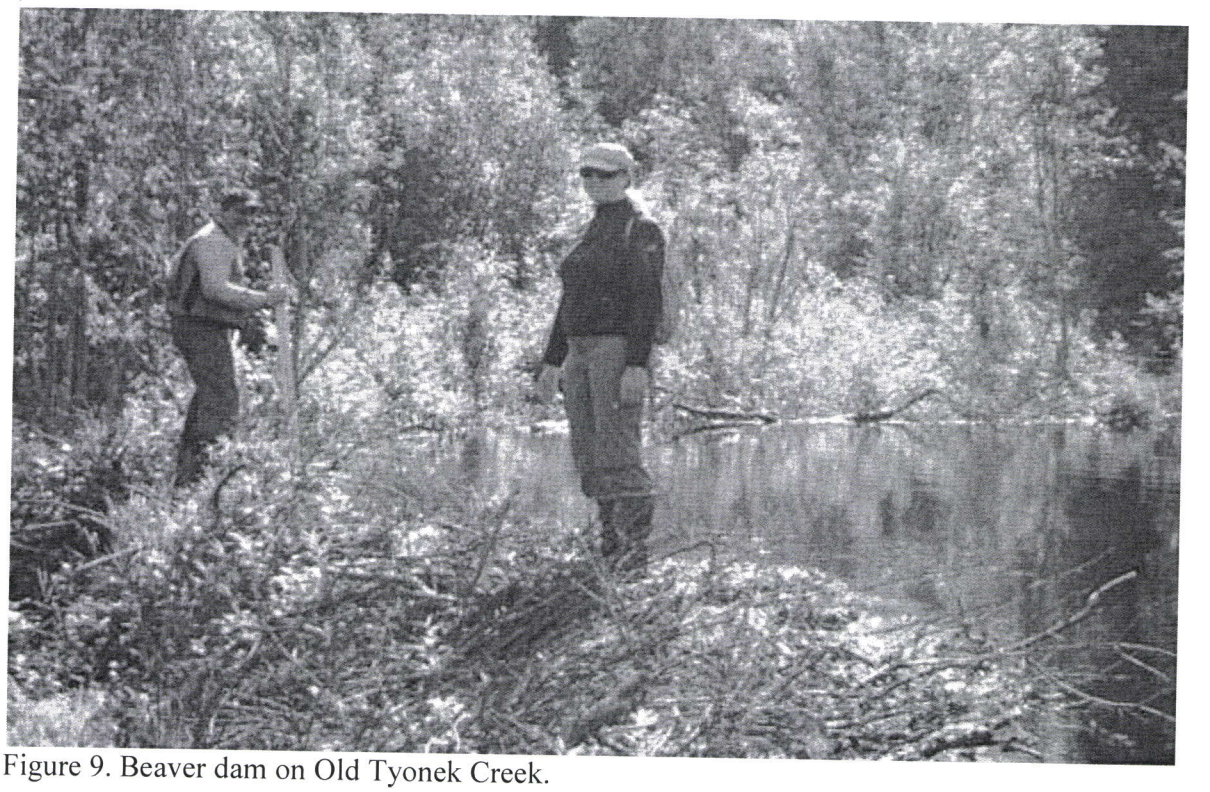


Figure 9. Beaver dam on Old Tyonek Creek.

Figure 10. Wood bridge supports and partial bridge deck in Nikolai Creek.

Figure 11. Washed out roadbed on Three Mile Creek.

Figure 12. Roadbed in Three Mile Creek.

cc: D. Bosch, ADF&G
J. Alas, ADF&G
G. O'Doherty, ADF&G
A. Ott, ADF&G
J. Nudelman, DOF
J. Winters, DOF
K. Hanley, DEC