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

Nomination Form
Anadromous Waters Catalog

Region: Southwest

USGS Quad(s): Chignik B-2

Anadromous Waters Catalog Number of Waterway: 271-10-10180

Name of Waterway: Packers Creek

USGS Name X Local Name

Addition X Deletion Correction Backup Information

For Office Use

Nomination #: 130062

Revision Year: 2014

Revision to: Atlas ____ Catalog ____ Both X

Revision Code: D-2

Fisheries Scientist		10/29/13 Date
Habitat Operations Manager		10/29/13 Date
AWC Project Biologist		5/16/13 Date
Cartographer		111213 Date

OBSERVATION INFORMATION

Species	Date(s) Observed	Spawning	Rearing	Present	Anadromous
Remove	271-10-10180		Fresh AWC		

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: Packers Creek is inappropriately cataloged as an anadromous fish stream under AS 16.05.871. The original nomination form filled out in February of 1983 notes that there were no personal observations of any kind and the designation was based on information from residents on migration of Pink Salmon and Dolly Varden and USFW field studies. However a recent letter from USFW says that they have no information on Packers Creek. Locals report that in some years, 2-3 pink salmon are present in the stream's lower reach, and they believe they are likely strays from nearby streams including the Chignik River and other Chignik Lagoon inlet waters. Per ADF&G's salmon escapement database, there is no record of any salmon escapement in Packers Creek going back at least 15 years. The only recent survey is a 2012 count of 0-fish escapement count by ADF&G's Division of Commercial Fisheries (Todd Anderson, pers. com., August 2012.) Please also see the appended five files that support the delisting of Packers Creek.

Name of Observer (please print): Charles McCallum

Signature: Charles F McCallum

Date: March 18, 2013

Agency: Chignik Regional Aquaculture Association

Address: 601 N. Bragaw St. Anchorage Ak 99508

ALASKA DEPT. OF FISH & GAME
MAR 18 2013

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: _____ Revision

02/08

Johnson, J D (DFG)

From: Dunker, Bradley E (DFG)
Sent: Tuesday, October 15, 2013 10:30 AM
To: Johnson, J D (DFG)
Cc: Daigneault, Michael J (DFG); Coleman, Jesse M (DFG)
Subject: RE: Packers Creek AWC

I should clarify, we didn't observe any salmon. We did trap Dolly Varden above the upper limits of anadromy.

Thx!

Brad Dunker
Habitat Biologist
Alaska Department of Fish & Game
333 Raspberry Road
Anchorage, AK 99518
Ph: 907.267.2541
Email: Bradley.dunker@alaska.gov

From: Dunker, Bradley E (DFG)
Sent: Tuesday, October 15, 2013 10:27 AM
To: Johnson, J D (DFG)
Cc: Daigneault, Michael J (DFG); Coleman, Jesse M (DFG)
Subject: Packers Creek AWC

Hi J,
Just returned from Packers Creek in Chignik Lagoon. Per our discussion, we took a look to see if there were any body parts in the stream that would indicate the presence of pink salmon. The habitat in Packers Creek is excellent habitat for spawning pink salmon with the exception of a short section of the stream near the bridge. We did not observe any fish, carcasses, or body parts during our site visit.

Please let me know if you have any questions.

Thx!

Brad Dunker
Habitat Biologist
Alaska Department of Fish & Game
333 Raspberry Road
Anchorage, AK 99518
Ph: 907.267.2541
Email: Bradley.dunker@alaska.gov

Johnson, J D (DFG)

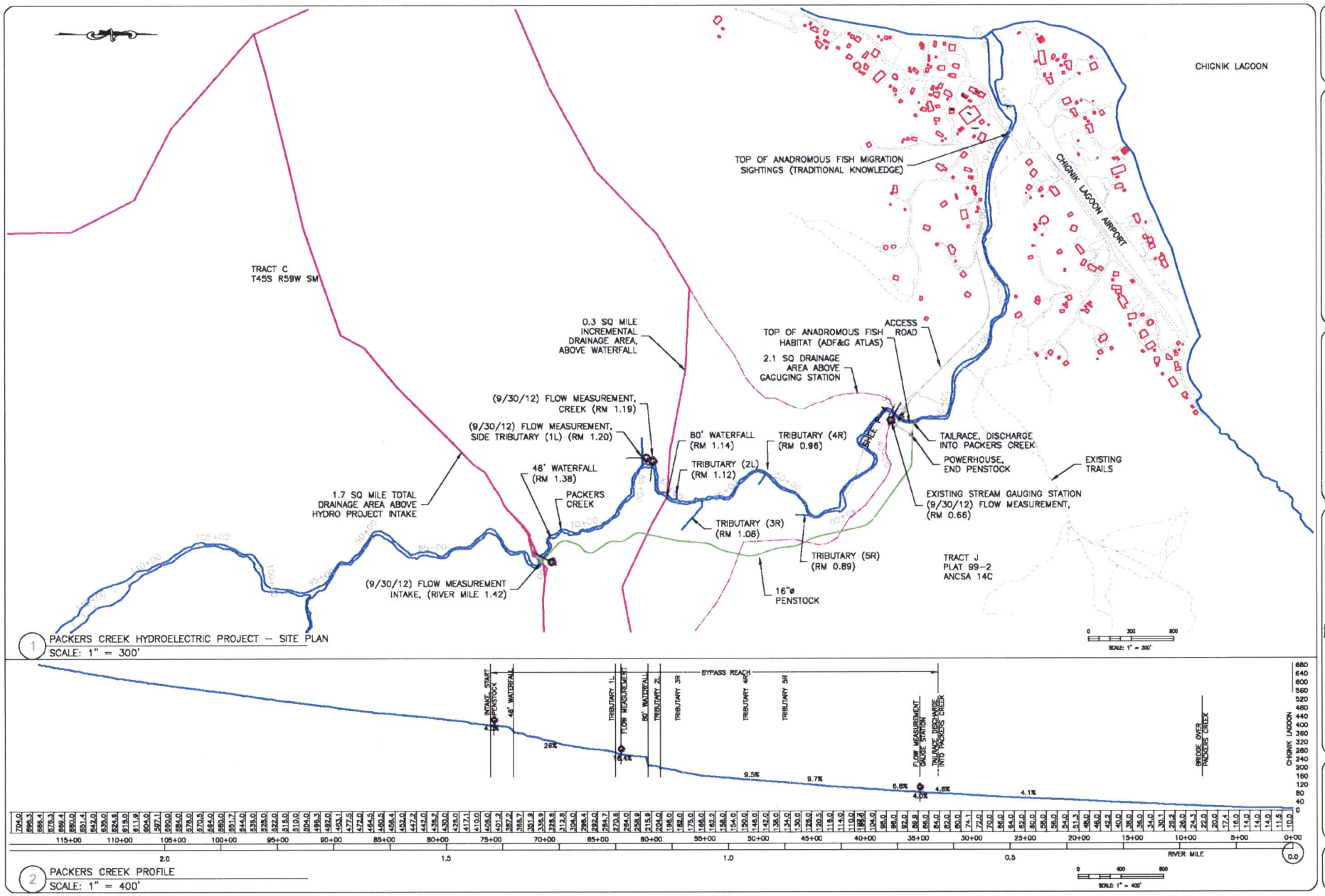
From: Anderson, Todd J (DFG)
Sent: Thursday, October 03, 2013 2:31 PM
To: Johnson, J D (DFG)
Subject: Packers Creek Delisting

Jay,

As we discussed over the phone I have no objection to the delisting of Packer's Creek (271-10-10180) from the *Catalog of Waters Important for Spawning, Rearing, and Migration of Anadromous Fishes.* I can find no evidence in the Region IV aerial stream survey database noting any salmon present in Packer's Creek. I conducted an aerial survey in August of 2012 but did not observe and salmon in the stream or off the mouth of the stream. Occasional pink salmon are likely present in the lower stretches of the river, as have been observed by residents, but I do not believe the system is important for pink salmon spawning. Local residents have reported and surveys conducted by Chignik Regional Aquaculture Association have observed that a small number of Dolly Varden are present in the system although the level of anadromy that these fish express is unknown. Personal communication from graduate students conducting stream surveys indicates that nearly every system in the Chignik River watershed has Dolly Varden present. From the available evidence I do not believe that Packer's Creek is an important spawning and rearing habitat for anadromous Dolly Varden when considering the ubiquitous presence of Dolly Varden in all waters of the Chignik River watershed. If you would like any clarification or anything further please feel free to contact me.

Todd

Todd Anderson
Chignik Area Salmon Management Biologist
P.O. Box 40
Chignik Lake, AK 99548
(907) 845-2243
Chignik Management Area Website



1 PACKERS CREEK HYDROELECTRIC PROJECT – SITE PLAN
SCALE: 1" = 300'

2 PACKERS CREEK PROFILE
SCALE: 1" = 400'

polarconsult alaska, inc.
JEREMY STEVENS • ENVIRONMENTAL SCIENTIST • ENGINEERING MANAGER
1500 WEST 33RD AVE, SUITE 310 PHONE (907) 258-2420
ANCHORAGE, ALASKA 99503 FAX (907) 258-2419

NO. DATE REVISIONS

Drawing: PACKERS CREEK PLAN & PROFILE

Project: PACKERS CREEK HYDROELECTRIC PROJECT
CHIGNIK LAGOON POWER UTILITY
Chignik Lagoon, AK

DATE: 10/3/12
DESIGNED: MDD
DRAWN: MDD
CHECKED:
SCALE: AsNoted
FILE: PackersCrkHydro

Sheet
Creek
OF

State of Alaska
Department of Fish and Game
Public Review Nomination for Waters
Important to Anadromous Species

83-308

☒ Addition ☐ Deletion

Name of Waterbody (if known): Packer Creek

Location:

Anadromous Waters Catalog Volume and Number

USGS 1:63,360 Quadrangle Chignik B-2

or 1:250,000 (if 1:63,360 not available)

Species	Date(s) Observed	Stage(s) (Spawning, Rearing, Migration)
Pink		migration
Dolly Varden		Migration

Comments: Please provide any clarifying information in addition to identification on Anadromous Waters Catalog Public Review Maps.

Not personally observed. Info from residents of Chignik & USFWS field studies

Name of Observer (please print) Philip J Brna

Date: 2/10/83 Signature: Philip J. BRNA

Address: ADF&G

ACE 7739184

Figure 4. The document establishing Packers Creek as a stream *important* for anadromous fish by ADF&G.

CRAA Technical Report No. 12-04

Packers Creek Fisheries Survey- Fall 2012, Chignik Lagoon, Alaska

by

Bruce M Barrett

October 2012

Chignik Regional Aquaculture Association
2731 Meridian Street #B
Bellingham, WA 98225
360-647-2401

INTRODUCTION

Packers Creek is a relatively small stream entering the south side of Chignik Lagoon at the village of Chignik Lagoon. The creek has a history as a commercial and domestic water source. In the early 1900's,aside from providing water for fish processing, Alaska Packers Association generated electricity from the stream using a Pelton wheel. In the 1980's, the lower stream reach was diverted and extensively channelized particularly in the lower ¼ mile upstream of the lagoon following a major flood. The stream's intertidal, below the village bridge, has been used as a gravel source primarily for airfield construction and maintenance.

Packers Creek is being considered as a potential hydroelectric energy source by the Chignik Lagoon Village Tribal Council. Polarconsult Alaska, Inc. is responsible for the design drawings and permit applications for the project.. The preliminary proposal calls for diverting 8.5 cfs of water from Packers Creek at RM 1.4 and returning the diverted flow to RM 0.6 (Figure 1).

The need for an alternative energy source for Chignik Lagoon Village is evident with # 2 heating fuel selling at $5.47/gallon and electricity currently costing 83 cents/kwh for the village school (Michelle Anderson, pers.com., Oct. 2012).

Lower Packers Creek is a listed anadromous fish stream per ADF&G's *Catalog of Waters Important for Spawning, Rearing, and Migration of Anadromous Fishes (2012)*. Under the listing, the stream is said to be important for pink salmon (*Oncorhynchus gorbuscha*) and Dolly Varden (*Salvelinus malma*) migration. Many would hold that that the stream is misclassified. Locals report that in some years, 2-3 pink salmon are present in the stream's lower reach, and they believe they are likely strays from nearby streams including the Chignik River and other Chignik Lagoon inlet waters. Per ADF&G's salmon escapement database, there is no record of any salmon escapement in Packers Creek going back at least 15 years. The only recent survey is a 2012 count of 0-fish escapement count by ADF&G's Division of Commercial Fisheries (Todd Anderson, pers. com., August 2012).

Packers Creek is known to support resident (non-anadromous) Dolly Varden that are relatively small in size, averaging about 4-5 inches in fork length (FL) based on minnow trapping and rod-reel sampling conducted in late June (Barrett 2012).

ADF&G Habitat Division has requested that additional fisheries information be provided beyond that offered in the Chignik Regional Aquaculture Association (CRAA) study conducted in late June 2012 (Michael Daigneault letter to Lamar Cotten, 9/7/12). The document herein is intended to fulfill their request by presenting the results of fish-sampling investigations conducted September 29 through October 1, 2012.

OBJECTIVES

The objectives of the fall 2012 Packers Creek study were:

1. Determine whether fish are present in Packers Creek from RM 1.0 (above the area sampled in June 2012) to the proposed hydro-intake (RM 1.4) and beyond.
2. Determine average fish size by species in the sampled reach.
3. Determine whether there is evidence of a 2012 pink salmon escapement into Packers Creek.

METHODS

Standard minnow traps were deployed at multiple locations in Packers Creek with two sited upstream of the proposed hydro-intake and five in the proposed diversion reach above the area sampled in June 2012 (Figure 1). An eighth trap was sited at the gage station (RM 0.7) located near the proposed powerhouse. This last trap (#8) was fished in a known location for DV to validate whether the bait and traps used were an effective sampling means for ascertaining fish presence at the time of the survey.

Each trap was fished for nearly 24-h and baited with about 25 g of salmon roe wrapped in cheesecloth. The selected trap sites were all low velocity areas, typically in pools and behind boulders along the stream bank. Each trap was weighted with 2-3 medium sized cobbles and secured by a line attached to substrate. All locations were identified by GPS. The sampling was conducted under an ADF&G issued collection permit (SF2012-227).

Fish captured were confirmed by species in accordance with Pacific Fisheries of Canada (Hart 1973). All fish caught were measured for FL (tip of snout to fork-of tail, mm).

Aside from minnow trapping in the upper stream reach, a salmon escapement survey was conducted from the gaging station (RM 0.7) downstream to the stream mouth (RM 0.0) at Chignik Lagoon on foot. Because the survey was conducted after the expected time of pink salmon spawning, considerable focus was given to locating carcasses and parts thereof including gill plates, jaw bones, vertebrate and skins. Aside from surveying the main stem, overflow and secondary channels were included in the investigation along with islands and exposed bars. A redd (spawning nest) count was made at the same time.

RESULTS

Anadromous Fish

The salmon escapement count of Packers Creek downstream of RM 0.7 produced a 0-count of live fish and a 0-count on carcasses and parts thereof. A redd count conducted at the same time produced a 0-count too. Visibility conditions were excellent throughout the stream at the time of surveying.

No juvenile salmon were captured in any of the eight minnow traps fished (Tables 1-2).

Resident Fish

A total of eight DV were captured in 170 h of minnow trapping Packers Creek (Tables 1-2). Trap #8 at the gage site (RM 0.7) produced 75% (6-fish) of the catch, while trap # 7 at RM 1.0 provided the remaining 25% or 2-fish (Figures 3-4). No fish were captured in the six traps sited above RM 1.1.

Average FL length of the eight DV captured in the traps was 104 mm (4.1inches, Table 3). The lengths ranged from 79 to 160 mm (2.9 – 6.3 inches).

During the salmon escapement survey on September 29, 2012, a few DV were observed amounting to 3-4 fish in a single pool at approximately RM 0.3. The largest was estimated to be 6-7 inches (FL) long, while the others were about 3-4 inches in FL length.

Other

Water temperature in Packers Creek was 37.5 F, while air was 41F at 1523 hrs at RM 0.7 on 9/29/12.

DISCUSSION

Anadromous Fish

Because the September 29, 2012 escapement survey was conducted well after the time when adult pink salmon would expectedly be spawning, the absence of any live fish was not unanticipated. However, some carcasses should have been present in side cannels, on the stream banks, and/or lodged against willow and alder limbs and debris. The absence of salmon carcasses in any form (e.g. skins, gill plates, jaw bones, vertebrae) aligns well with *local knowledge* that Packers Creek is unlikely an *important* anadromous fish stream.

Since Coho (*O. kisutch*) and Chinook (*O. tshawytscha*) salmon fry are known to rear in Chignik Lagoon produced from parent spawning in the Chignik River drainage and because both species are known on occasion to rear in streams other than where adult spawning occurs (Groot and Margolis 1991), Packers Creek could be a secondary rearing area. However based on June and fall 2012 trapping efforts, Packers Creek does not provide rearing habitat for either species.

As for ADF&G's classification of Packers Creek being *important* for anadromous fish, the enabling document (Figure 4) is sorely short of credible foundation. No dates are given nor a single reference document cited or any suggestion that pink salmon spawn in the stream only that the species uses the stream for "migration." Further, the individual who compiled and signed the enabling certificate did not have a fisheries degree or standing as an employed fisheries biologist. Lastly, the inclusion of DV in the listing is most erroneous. DV have multiple life-strategies, and those in Packers Creek have not been documented to be any more than resident fish. In accordance with the preceding information, an immediate auditing of the Packers Creek listing by ADF&G is justified and requested.

Resident Fish

The upper reach of Packers Creek above RM 1.1 is devoid of fish use based on minnow trap catch results (Table 2) and owing to the two migration impediments identified in Figures 5- 6.

DV occurring in Packers Creek downstream of RM 1.1 are limited in abundance and size (Barrett 2012, Table 3) and per local knowledge, Packers Creek's DV serve no subsistence or sport fishing purpose.

Evidence indicates that Packers Creek's DV population is entirely non-anadromous based on the CRAA late June and fall 2012 survey work.

LITERATURE CITED

Alaska Department of Fish and Game. 2008, updated 2012. Catalog of waters important for spawning, rearing, and migration of anadromous fishes. ADF&G, Sport Fish Div., Juneau, AK.

Barrett, B.M. 2102. Packers Creek Fisheries Survey - June 2012, Chignik Lagoon, Alaska. CRAA tech. report No.12-01, Bellingham, WA.

Groot, C. and Margolis L. 1991. Pacific salmon life histories. UBC Press, Vancouver, BC.

Hart, J.L. 1973. Pacific fishes of Canada. Bull. 180; Fish. Res. Bd. Canada.

Table 1. Summary of minnow trap catches in total number of fish, and average hourly catch by location, date, and species, Packers Creek, Chignik Lagoon, AK.

Trap #	Location	Dates Fished	Total Hours	Total Catch		Avg. Hourly Catch
				DOLLY VARDEN	other	Dolly Varden
1	N 56.17.962 W158.31.395	Sept. 30 - Oct. 1, 2012	22.1	0	0	0.0
2	N 56.17.979 W158.31.364	Sept. 30 - Oct. 1, 2012	22.1	0	0	0.0
3	N 56.18.017 W158.31.328	Sept. 30 - Oct. 1, 2012	21.8	0	0	0.0
4	N 56.18.126 W158.31.468	Sept. 30 - Oct. 1, 2012	20.9	0	0	0.0
5	N 56.18.134 W158.31.516	Sept. 30 - Oct. 1, 2012	20.7	0	0	0.0
6	N 56.18.149 W158.31.526	Sept. 30 - Oct. 1, 2012	20.8	0	0	0.0
7	N 56.18.162 W158.31.458	Sept. 30 - Oct. 1, 2012	20.8	2	0	2.3
8	N 56.18.162 W158.31.458	Sept. 30 - Oct. 1, 2012	20.8	6	0	6.9

Table 2. Fish catch numbers by species with a standard minnow trap by location in Packers Creek, Chignik Lagoon, AK, September 30 - October 1, 2012.

TRAP #	LOCATION	DATE	TIME	CATCH		Notes
				DOLLY VARDEN	other	
1	N 56.17.962 W158.31.395	9/30/2012	1225 hrs.			Elv. 448 Above Intake site Alder cover: 30%
		10/1/2012	1032 hrs.	0	0	Cobble predominate Left bank set Trap depth: 15"
2	N 56.17.979 W158.31.364	9/30/2012	1240 hrs.			Elv. 438 Above Intake site Left bank set
		10/1/2012	1043 hrs.	0	0	Trap depth: 20" Cobble 90%, gravel 10% Set in pool w/slight eddy Alder cover: 15%
3	N 56.18.017 W158.31.328	9/30/2012	1308 hrs.			Elv. 420 approx. 50 ft. below intake Cobble 80%, gravel 20%
		10/1/2012	1058 hrs.	0	0	Trap depth: 25" Alder cover: 40% site: approx. 100yd above approx. 50 ft waterfall Rt. bank set
4	N 56.18.126 W158.31.468	9/30/2012	1444 hrs.			Elv. 306 below series of plunge pools trap depth 28 "
		10/1/2012	1135 hrs.	0	0	head of pool on left side Left bank set Sandy gravel bottom Alder cover; 20%

Table 2. Page 2 of 2.

TRAP #	LOCATION	DATE	TIME	CATCH		Notes
				DOLLY VARDEN	other	
5	N 56.18.134 W158.31.516	9/30/2012	1506 hrs.			Elv. 296 30 ft. upstream of "L1" trib. 4-5 ft immediate vertical drop below trap site Alder cover 30%
		10/1/2012	1149 hrs.	0	0	Cobble 90+% Set against rock wall; rt. bank
6	N 56.18.149 W158.31.526	9/30/2012	1526 hrs.			Elv. 280 100 ft. below "L1" trib. trap depth: 18" Rt. bank set in tail of plunge pool
		10/1/2012	1153 hrs.	0	0	Cobble: 80%, gravel 20% Alder cover 5% site: approx. 150 yds above 60+ ft. waterfall
7	N 56.18.162 W158.31.458	9/30/2012	1605 hrs.			Elv. 218 Alder cover 30% Boulder/cobble /gravel in order of freq.
		10/1/2012	1252 hrs.	2	0	Site roughly 1/8 mi. below 50+ft. waterfall mid channel set
8	N 56.18.162 W158.31.458	9/30/2012	1628 hrs.			Elv. 106 Gage site; left bank set Trap depth: 18" Set behind rock outcropping
		10/1/2012	1317 hrs.	6	0	adjacent gage data recorder 1- DV (5-6" FL) obser. at trap site 40% alder cover

Table 3. Sampled fork lengths (mm) of Dolly Varden by minnow trap, in Packers Creek, Chignik Lagoon, October 1, 2012.

Specimen #	Packer Creek Trap Locations	
	Trap # 7	Trap # 8
1	81	112
2	97	74
3		147
4		160
5		79
6		84
	Total all: n= 8	
	mean: 104	(4.1 inches)
	median: 90	(3.6 inches)

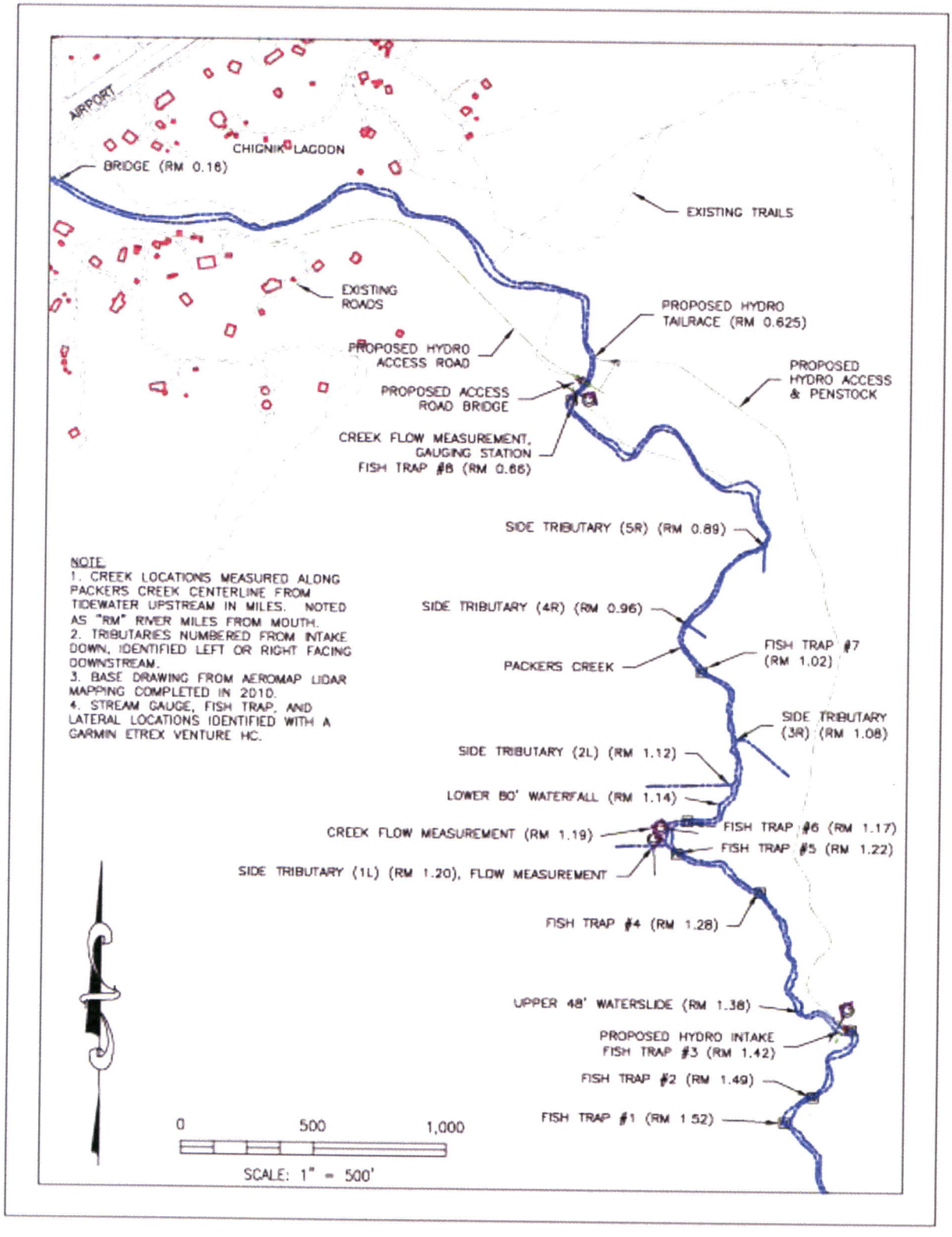


Figure 1. Map of Packers Creek with minnow trap locations, the hydroelectric project reach, and major fish migration barriers defined (map courtesy of Polarconsult Alaska, Inc).

Figure 2. One of two Dolly Varden from Trap #7 catch, Packers Creek, 10/1/12.

Figure 3. Dolly Varden minnow trap catch from Trap #8 at RM 0.7, Packers Creek, 10/1/12.

Figure 5. View looking down from the top of the 48ft. waterslide on the east side bank of Packers Creek at RM 1.4, 9/30/2012.

Figure 6. View of 80 ft. waterfall at RM 1.1 of Packers Creek, 9/30/12.

Gmail by Google

Charles McCallum< chuckmccallum@gmail.com>

Re: Packer Creek Fisheries Info Request

Bruce Barrett< alaskabiol@yahoo.com> Tue, Jan 29, 2013 at 7:18 PM
Reply-To: Bruce Barrett <alaskabiol@yahoo.com>
To: "Brna, Phil" <phil_brna@fws.gov>
Cc: Ron Britton <ron_britton@fws.gov>, Lori Verbrugge <lori_verbrugge@fws.gov>, Doug McBride <doug_mcbride@fws.gov>

Good evening Phil,
It is good to hear from you and much appreciate the briefing—it has been many years.
Here is some background information on Packers Creek and the assistance needed from USFWS:
Packers Creek enters Chignik Lagoon at the Village of Chignik Lagoon and is not in Anchorage Bay. The stream was used in the early 1900's for hydro-power and as a water source by Alaska Packers, one of the early fish processors operating in the Chignik area. Before Alaska Packers built a plant immediately adjacent to the stream, it likely supported a small pink salmon run. Currently there is no evidence that the creek harbors anything more than Dolly Varden and in some years, a handful of pinks at best. From a fisheries perspective, the stream's optimum habitat was channelized and rip-rapped extensively in the late 70's, 80's and early 90's for village and airport protection. The results of May/June 2012 interviews of local residents suggest that pink salmon are not frequently nor annually observed in the stream and then typically no more than one to three fish. Given what we known on genetics and pink salmon life history, it is probable that the few fish seen represent strays from neighboring streams.
CRAA conducted a fish survey of Packers Creek in June and again in October 2012, and the ADF&G area management biologist surveyed the stream in the fall too. No evidence of any salmon was found and that includes carcasses, skins, jaws and vertebra. Extensive minnow trapping exclusively identified resident Dolly Varden.
The 1980's document initiating the AS 16.05.871 Packers Creek classification speaks only to pink salmon migration and Dolly Varden (DV). Since Packers Creek has no sloughs or tributaries other than a few small highly cascading laterals, it would appear that pink salmon migration as the extent of salmon use would be inappropriate toward classifying it as "important for anadromous fish".
Additionally, there is no evidence based on extensive minnow trapping that the stream offers any anadromous DV habitat. Certainly anadromous DV are present in the Chignik drainage, however Packers Creek is only occupied by DV up to about 6.25 inches (FL), and it was found that the "larger" DV sampled (in the 5.5-6.3 inch range) were all sexually mature. Further, based on local interviews (May/June 2012), the stream has no history of sport or subsistence fishery use other than in the pre-60 years when local children occasionally fished it for "minnows."
Phil, the document that you signed in the 1980's appears to be absent of any verifiable data source. At this time, we need USFWS to identify whether there is USFWS data that addresses the presence or absence of salmon use for Packers Creek. Certainly there is nothing wrong w/admitting that no data exists w/o going into a dissertation or speculation on what may have occurred sampling wise in the Chignik area by the ACOE and others. The issue is whether USFWS has any data period. Please provide a letter from yourself or someone else w/i USFWS that says that the agency has or does not have something, and if there is any documentation of specific fish use, identify such.
Many thanks for your help, bruce
From: "Brna, Phil" <phil_brna@fws.gov>
To: alaskabiol@yahoo.com
Cc: Ron Britton <ron_britton@fws.gov>; Lori Verbrugge <lori_verbrugge@fws.gov>; Doug McBride <doug_mcbride@fws.gov>
Sent: Tuesday, January 29, 2013 2:51 PM

Bruce Barrett< alaskabiol@yahoo.com> Wed, Jan 30, 2013 at 11:47 AM
Reply-To: Bruce Barrett <alaskabiol@yahoo.com>
To: "Brna, Phil" <phil_brna@fws.gov>, Doug McBride <doug_mcbride@fws.gov>
Cc: Ron Britton <ron_britton@fws.gov>, Lori Verbrugge <lori_verbrugge@fws.gov>, Chuck McCallum <chuckmccallum@gmail.com>

Doug and Phil, would one of you kindly give us the courtesy of a letter to the finding. Thanks, bruce

From: "Brna, Phil" <phil_brna@fws.gov>
To: Bruce Barrett <alaskabiol@yahoo.com>
Cc: Ron Britton<ron_britton@fws.gov>; Lori Verbrugge <lori_verbrugge@fws.gov>; Doug McBride <doug_mcbride@fws.gov>
Sent: Wednesday, January 30, 2013 10:36 AM
Subject: Re: Packer Creek Fisheries Info Request

Bruce, the USFWS has no data on Packers Creek. You should check with ADF&G to see about removing it from the anadromous fish catalog. Phil

Phil Brna
Fish and Wildlife Biologist
U.S. Fish and Wildlife Service, Anchorage Field Office
605 W. 4th Ave. Room G-61
Anchorage, AK 99501
907-271-2440
phil_brna@fws.gov

Gmail by Google

Charles McCallum< chuckmccallum@gmail.com>

Re: What did the survey indicate?

Bruce Barrett< alaskabiol@yahoo.com> Sat, Sep 8, 2012 at 4:47 PM
Reply-To: Bruce Barrett <alaskabiol@yahoo.com>
To: "Anderson, Todd J (DFG)" <todd.anderson2@alaska.gov>
Cc: Chuck McCallum <chuckmccallum@gmail.com>

Thanks Todd -- your survey is important. b

From: "Anderson, Todd J (DFG)" <todd.anderson2@alaska.gov>
To: Bruce Barrett <alaskabiol@yahoo.com>
Sent: Saturday, September 8, 2012 1:04 PM
Subject: RE: What did the survey indicate?

Relatively poor survey conditions but in just one pass I got a good views of several decent stretches of river before a set of small waterfalls. Water was still pretty low with no fish observed in stream or in the most likely locations I would expect fish off the mouth. Will track down any observations Pappas may have made when I am back in Kodiak.

From: Bruce Barrett [mailto:alaskabiol@yahoo.com]
Sent: Saturday, September 08, 2012 10:52 AM
To: Anderson, Todd J (DFG)
Subject: What did the survey indicate?

Good afternoon Todd,
What say you on the survey results? thanks, b

CRAA Technical Report No. 12-01

Packers Creek Fisheries Survey- June 2012, Chignik Lagoon, Alaska

by

Bruce M Barrett

July 2012

Chignik Regional Aquaculture Association
2731 Meridian Street #B
Bellingham, WA 98225
360-647-2401

INTRODUCTION

Packers Creek, on the south side of the Alaska Peninsula, flows into Chignik Lagoon and is a designated anadromous fish stream under the authority of AS 16.05.870 and reportedly utilized by pink salmon (*Oncorhynchus gorbuscha*) for spawning. Elders and other local residents of Chignik Lagoon Village do not consider Packers Creek a salmon stream because seldom are adult salmon visible in the stream and when present, are few, in the 2-3 fish range. Local knowledge is that the pink salmon are strays from nearby streams including the Chignik River and other Chignik Lagoon inlet waters and no natural production is occurring owing to the infrequency of pink salmon and the many village dogs and children plying the stream for various purposes not typically conducive to fish survival and reproduction.

Historically, Packers Creek has been a water and energy resource and problematic to the local community (Chignik Lagoon Village) due to severe flooding events. Beginning in the early 1900's and until about the mid 1930's, Alaska Packers Association operated a fish processing facility on land adjoining Packers Creek where it enters Chignik Lagoon. The company used the stream as a commercial freshwater source and for generating electricity with a Pelton wheel. Machinery remnants and at least two defunct pipelines exist today. In recent times, Packers Creek has served as a gravel source mainly in the intertidal. On behalf of flood control and an extension of the local airfield, the lower portion of the stream including its intertidal area has been extensively diverted, channelized, and rip-rapped, most of which occurred in the mid 1980's.

While village elders and other locals question the classification of Packers Creek as a salmon stream, common knowledge is that it supports "minnows," and up until about the late 1960's the "minnows" were commonly fished by the local children particularly in late spring and early summer. The "minnows" ((small Dolly Varden (*Salvelinus malma*)), as locally referred to, were typically in the 3-5 inch (8-13cm) length range and the largest known taken was about 8-10 inches (20-25cm). Reportedly, local residents (kids) no longer fish Packers Creek due to accessibility to more productive and species-diverse waters by motorized vehicles (e.g., boats/4-wheelers).

Chignik Lagoon Village has proposed construction of a small hydroelectric facility using Packers Creek flow. Their plan calls for diverting water from the stream's upper reach through a 0.8 mile long pipeline to a powerhouse sited about 0.6 miles above Chignik Lagoon. As part of a pre-permitting project requirement, the Alaska Department of Fish and Game has requested a baseline fisheries and habitat survey.

This report presents data collected in late June 2012 on fish presence, relative abundance, and size in Packers Creek with the focus mainly on the section where the proposed hydro-electric project would be if approved. Selected stream habitat data/observations are also presented.

OBJECTIVES

The objectives of the June 2012 Packers Creek study were:

1. Determine fish species presence and their approximate distribution in upper Packers Creek.
2. Determine average fish size by species in the study reach (hydro-project area).

3. Describe the general habitat characteristics of Packers Creek (surface velocity, channel morphology, depth, bed composition, and stream bank vegetation) within the study reach.
4. Collect flow data, measure cobble size, stream width and depth measurements at pre-designated Packers Creek locations.

METHODS

Standard minnow traps were deployed at multiple locations in Packers Creek with four in the lower stream below the proposed turbine site and seven above. The upper most site was at approximately 1.1 miles upstream of the lagoon while the lowest was about 300 yds. above the bridge crossing in the intertidal. Minimum fishing time per trap was 16-h and the maximum 49-h. Traps deployed at locations longer than 24-h were checked and re-baited at 24-h or less. Trap bait consisted of Borax treated sockeye salmon eggs from ocean-bright sockeye salmon (*O. nerka*) harvested in the Chignik Lagoon fishery. Each trap was baited with two sections of roe (18 g/each) wrapped individually in cheesecloth and also when they were re-baited. The selected trap sites were in all low velocity areas, typically in pools and behind boulders along the stream bank. Each trap was weighted with cobbles and secured by a line attached to substrate. Trap locations were identified by GPS.

Fish captured were identified by species in accordance with Pacific Fisheries of Canada (1973). All fish were measured (tip of snout to fork-of tail, mm). The largest Dolly Varden caught were necropsied for sexual maturity with the sample size limited to 10% of the total catch in accordance with the ADF&G collection permit (SF2012-227).

Hook and line sampling was conducted above and below the proposed turbine site where there is a current stream gage. About 3-h of fishing time was expended and limited by a shortage of suitable fishing areas. Two reaches were fished, between minnow trap sites 1-5 and 5-11 which are GPS identified. Small *Mepps* spinners were used (#1's and 2's) and also *Power* bait. The sampling was conducted under ADF&G, SF license 2200351.

Visual inspections were conducted for fish presence in five shallow slack-water areas and one secondary channel off the stream's mainstem where there was cover and the likelihood of young-of-year (YOY) and other small rearing fish. The locations examined were between traps sites #3 and #11 as identified by GPS. "Small" quantities of salmon eggs were used an attractant. The duration of the inspections were short at about 5-m for each slack water area and 15-m for the secondary flow channel.

The Rosgen Stream Classification System (1996/EPA 2008) was used a general guide in describing Packers Creek and specific habitat measurements were collected as defined in an ADF&G e-mail (Brad Dunker 6/5/12) subject to field equipment issues and practicality.

RESULTS

Fisheries

At Packers Creek fish were caught in all but one of the 11 sites sampled with minnow traps (Tables 1-2). Within the approximately 1.1 mile reach of stream starting from the intertidal zone, a total of 34 fish were

captured with 11 taken below the proposed powerhouse site and 23 at and above that location. Total fishing time for all 11 traps amounted to 396-h over a three day period (June 25-27).

The fish caught with minnow taps were all Dolly Varden and likely the resident variety given their "small" size and occurrence of a sexually mature male measuring 157mm (FL; Table 4; Figures 2-3). The average length of the Dolly Varden in the lower stream area was 100 mm and above, 108 mm (FL). While Dolly Varden exhibited a greater average length in the upper stream reach (powerhouse site & above) as compared to the upper reach, the 8mm the difference was not significant (90%/t-test).

Most of the Dolly Varden caught by minnow traps occurred in the first 24-h (Table 2). Overall, the trap catch numbers were relatively low. The highest was 8-fish taken in a 16hr trap-set at a site 300 yds. above the village bridge at intertidal. Trap cpue's (catch-per-unit-of-effort) averaged higher below the proposed powerhouse site than above at 3.4 fish/24-h compared to 2.3 fish/24-h. The difference should not be considered significant because of the sample sizes and the influence of a single trap which caught 8-fish (Trap # 1; Table1).

Hook and line gear was used for 2.9-h, and neither above nor below the proposed powerhouse site were any fish taken (Table 3). Further, there were no discernible strikes nor fish observed pursing the lures or bait used.

While using hook and line gear near trap site #2 below the proposed powerhouse site, an American dipper (*Cinclus mexicanus*) caught what appeared to be a larval fish in the 20-25mm range. Upon examination of submerged alder debris near the stream edge, a similar but slightly smaller size fish (20mm) swam away in a lurching or darting motion similar to that of a sculpin (*Cotus sp.*). Positive species identification was not made as the specimen avoided capture. No other fish were observed at the location.

Visual observations and baiting of selected slack water areas above the powerhouse site and a shallow side channel below suggest an absence of fish use of these habitats at least during daylight hours. It was expected that a few (YOY) and other similarly small fish would have showed, but none were observed (Table 5).

Habitat Observations

General Information:

Packers Creek is well shaded by alder, providing up to a 50% canopy (Table 2). The stream banks and immediate uplands are heavily vegetated with alder constituting about 80% of the cover, followed by salmon berry bushes (15%), and grasses and ferns (5%). Most of the alder are 40+ years old based on ring counts (est. off trail cuttings). At and above the gaging station (site 5), minimal to no stream bank erosion and channel migration are evident based on bank-vegetation stability and the general absence of exposed bank soils and gravels/cobbles. The stream course between trap sites 1 and 11 were noticeably absent of any large woody debris due to stream slope and water velocity/flows.

The stream above the gage site (#5) appeared markedly less productive, relative to aquatic insect production or food for rearing fishes, than the lower reach of Packers Creek. At sites 5 and 11, algae growth was discernible only by feel, and macro-invertebrate density averaged about 1.5-animals/cobble. At site 2, terrestrial insect numbers were noticeably much greater than in the stream's upper reach by a

factor of roughly 10x and likely due to more off-channel standing water, less stream velocity, greater sunlight, and more algae growth. In the lower reach near trap site 2, algae growth was readily observable on most stream cobbles and on the backside of boulders. Macro-invertebrates per/cobble averaged about 4 animals at site 2, a level substantially greater than the 1.5 density estimated above the proposed powerhouse location.

Site Specific Observations

At Packers Creek the water temperature was 38F on June 27 (site # 11; 1210h) and June 28th (site # 5; 1107hrs). Air temperatures were 47F and 50F, respectively.

No silt deposits were noted at or between trap sites 2-11. None of the stream cobbles sampled (sites 4 &11) were embedded. Course sand was evident under most cobbles and in shoreline eddy areas including site 2 where a larval sculpin was observed among waterlogged alder debris.

At the gaging station (site 5) the cobble diameter averaged 4.3 inches (Table 6). Stream width was 18 ft. while the OHW (ordinary high water) channel width was 21.2 ft. The water elevation on June 28 was 7 inches less than the OHW elevation, and the average stream depth was 8.0 inches. The right stream-bank slope was estimated at 80% while the left-bank slope was about 35%. The respective bank heights were 5.5 ft and 2.0 ft. At the gage station site, the vertical drop between the riffle and the pool measured 18 inches (Figure 4). Upstream of the proposed powerhouse site, most pools and riffles were separated by similar waterfalls.

At the upper most trap site (#11), cobble diameter averaged 3.3 inches, and stream width measured 17 ft. The OHW width was 20.5 ft. and stream depth average 11.6 inches. On June 27th, the stream elevation was 5 inches less than the OHW elevation.

The further most location reached on foot by way of the stream channel is shown in Figure 5 and is about 1/3 mile downstream of the proposed pipeline intake. Accessibility beyond this point was restricted due to relatively high water and steep terrain. A series of several waterfalls were visible, the highest was estimated at 6 ft. (Figure 5). An overland attempt was made to reach the westside tributary (left side looking downstream) at its confluence with Packers Creek which is about 0.2 miles below the proposed pipeline intake. The attempt was foiled by slope and vegetation issues (Figure 6). From a distance, the tributary appeared to be contributing about 10% of the Packers Creek flow, conservatively.

Table 1. Total hours fished and catch in number of fish by species and average hourly catch and adjusted catch for 24-h period, Packers Creek, Chignik Lagoon, 2012.

TRAP #	LOCATION	Dates Fished	Total Hours	TOTAL CATCH DOLLY VARDEN	TOTAL CATCH other		Avg. Hourly Catch Dolly Varden	Adjusted Catch 24 Hours Dolly Varden
Trap catch data below the existing gaging station and the proposed hydro-project reach (trap #'s 1-4)								
1	N 56 18.532 W 158 32.086	6/25-26	16.0	8	0		0.50	12.00
2	N 56 18.550 W 158 31.852	6/25-27	39.6	1	0		0.03	0.61
3	N 56 18.501 W 158 31.669	6/25-27	40.6	1	0		0.02	0.59
4	N 56 18.446 W 158 31.619	6/25-27	41.3	1	0		0.02	0.58
TOTALS: Traps 1-4			137.5	11	0	AVG.	0.14	3.44
Trap catch data within the proposed proposed hydro-project reach (trap #'s 5-11)								
5	N 56 18.420 W 158 31.638	6/25-26	23.8	4	0		0.17	4.03
6	N 56 18.394 W 158 31.558	6/25-27	47.6	5	0		0.11	2.52
7	N 56 18.380 W 158 31.504	6/25-27	48.1	6	0		0.12	2.99
8	N 56 18.357 W 158 31.439	6/26-27	21.6	2	0		0.09	2.22
9	N 56 18.337 W 158 31.426	6/25-27	49.0	0	0		0.00	0.00
10	N 56 18.288 W 158 31.507	6/26-27	21.8	2	0		0.09	2.20
11	N 56 18.261 W 158 31.515	6/25-27	47.0	4	0		0.09	2.04
TOTALS: TRAPS 5-11			258.9	23	0	AVG.	0.10	2.29
GRAND TOTALS: 1-11			396.4	34.0	0	AVG.	0.11	2.71

1/ Trap #'s begin at the lower stream end and progress upstream; the gaging station is at the proposed the powerhouse (turbine) site .

Table 2. Number of fish caught by species using a standard minnow trap per location, Packers Creek, Chignik Lagoon, 2012.

TRAP #	LOCATION	DATE	TIME	CATCH		Notes
				DOLLY VARDEN	other	
1	N 56 18.532 W 158 32.086	6/25/2012	1818hrs			Trap set behind gabion on rt. side against bank Trap set at 29"depth 4th trap set below gaging station
		6/26/2012	1020hrs	8	0	40% alder cover; trap at top of pool & below 50yd riffle approx. 300 yds upstream of road bridge
2	N 56 18.550 W 158 31.852	6/25/2012	1755 hrs			Rt. bank set 3rd trap below gage station
		6/26/2012	1045hrs	0	0	site below "Augie's" bluff house trap at mid pool; behind boulder(8x5x5 ft); below Augie's house
		6/27/2012	0930hrs	1	0	15yd riffle above pool 40% alder cover; trap depth 24" pool depth max. 4' & length 25ft
3	N 56 18.501 W 158 31.669	6/25/2012	1730 hrs			2nd trap below gaging station Rt. bank set
		6/26/2012	1107 hrs	1	0	Trap at conf. w/south side 2ndary flow channel 40% alder cover
		6/27/2012	1008 hrs	0	0	18" trap depth Slack water at channel confluence 2ndary channel carrying 3-5% of stream flow
4	N 56 18.446 W 158 31.619	6/25/2012	1705 hrs			RT bank set; behind boulder & alder 18" trap depth Trap behind boulder next to dense salmon berry bush overhang
		6/26/2012	1119 hrs	0	0	Loc. off cut bank mid-way in 150yd riffle zone Site 75 yds below gauging station
		6/27/2012	1025 hrs	1	0	
5	N 56 18.420 W 158 31.638	6/25/2012	1140 hrs 1650 hrs	0	0	Location: at gaging station Trap depth 24.8" waterfall immediately upstream w/18" drop
		6/26/2012	1130 hrs	4	0	Left bank trap set in pool at gauge site 50% alder cover; pool length 20ft. max pool depth approx. 3 ft; trap in upper 1/2 of pool
6	N 56 18.394 W 158.31.558	6/25/2012	1110 hrs 1637 hrs	0	0	Left bank set behind old log crib 25% alder cover
		6/26/2012	1205 hrs	4	0	Site: w/i 30 ft. pool upstream riffle: 10% grade
		6/27/2012	1044 hrs	1	0	Trap depth: 32"
7	N 56 18.380 W 158 31.504	6/25/2012	1049 hrs 1628 hrs.	0	0	Left bank set in eddy Site: w/in 8ft. long pool
		6/26/2012	1222 hr	5	0	1 ft. drop into pool from riffle. Trap depth: 19"
		6/27/2012	1055 hrs	1	0	10 % alder cover

Table 2. Page 2 of 2.

TRAP #	LOCATION	DATE	TIME	CATCH DOLLY VARDEN	CATCH other	Notes
8	N 56 18.357 W 158 31.439	6/26/2012	1332 hrs			Left bank set in alder debris Trap depth: 16 "
		6/27/2012	1107 hrs	2	0	20% alder cover Site in 20ft long pool
9	N 56 18.337 W 158 31.426	6/25/2012	1025 hrs			Rt bank set
			1620 hrs	0	0	Trap w/i 20 ft. pool Max. pool depth: 4ft.
		6/26/2012	1258 hrs	0	0	40% alder cover
		6/27/2012	1118 hrs	0	0	
10	N 56 18.288 W 158 31.507	6/26/2012	1354 hrs			Lt. bank set in long run No pools insight
		6/27/2012	1145 hrs	2	0	40% alder cover Trap depth: 17" Trap behind 2 boulders 2ft off bank
11	N 56 18.261 W 158 31.515	6/25/2012	1255 hrs			Lt. bank set
			1610 hrs	0	0	Trap depth: 21.5"
		6/26/2012	1418 hrs	4	0	50% alder cover Stream width: 11.5ft.
		6/27/2012	1153 hrs	0	0	Trap in 14 ft pool, max. depth 3ft.

Table 3. Summary of hook and line sampling in a selected reaches of Packers Creek, Chignik Lagoon, 2012.

Date	Location Start	Location End	Gear Type Baited Lure	Gear Type Lure	Catch Dolly V.	Catch other	Notes
6/28/2012	N 56 18.261 W 158 31.515 (Between trap sites # 11 & 5)	N 56 18.420 W 158 31.638	Yes yes	yes yes	0 0	0 0	1115-1245hrs; pools & selected riffles fished; no strikes or follow-ups.
6/28/2012	N 56 18.420 W 158 31.638 (Between trap sites #'s 5 & 2)	N 56 18.550 W 158 31.852	Yes yes	yes yes	0 0	0 0	1310-1435hrs; pools & selected riffles fished; no strikes or follow-ups; at end loc. (below Augie's bluff house) 1-YOY sculpin? (20mm) in stream shallows.

Table 4. Length of Packers Creek Dolly Varden caught by trap location in late June 2012.

Traps below Powerhouse Site			Traps at and above Powerhouse Site			Notes
TRAP #	Location	Length (mm) (FL)	TRAP #	Location	Length (mm) (FL)	
1	N 56 18.532 W 158 32.086	133	5	N 56 18.420 W 158 31.638	121	
		89			91	
		76			81	
		121			114	
		86	6	N 56 18.394 W158 31.558	119	
		99			113	
		80			112	
		118			107	
2	N 56 18.550 W 158 31.852	97			114	
3	N 56 18.501 W 158 31.669	83	7	N 56 18.380 W 158 31.504	105	
4	N 56 18.446 W 158 31.619	119			119	
					112	
					76	
					86	
					108	
	n=11		8	N 56 18.357 W 158 31.439	99	
	average (mm)	100.1			120	Trap 8: 120mm immature
	median	97.0	10	N 56 18.288 W 158 31.507	157	Trap 10: 157mm mature male
					86	
			11	N 56 18.261 W 158 31.515	112	
					123	Trap 11: 123mm immature
					94	
					122	
n= 23; avg. (mm) 108.3; median 112.0						

Note: Only 3 fish were examined for sexual maturity per SF2012-227 permit restriction.

Table 5. Visual survey of selected shallow slack-water areas and a secondary flow channel for fish presence, Packers Creek, 2012.

Date	Location		Fish Presence		Species & No.		Notes
	Start	End	yes	No			
6/27-28/12	N 56 18.261 W 158 31.515 (Trap sites 11-5)	N 56 18.420 W 158 31.638		X	-	0	5 areas inspected 5-minutes/each.
6/27/12	N 56 18.501 W 158 31.669 General loc. trap site #3)	N 56 18.501 W 158 31.669		X	-	0	2ndary flow channel <5% of mainstem flo 15 minutes.

Table 6. Selected stream measurements at two locations, Packers Creek, 2012.

Trap Site #5 (Gage Station) July 28, 2012; 0937 hrs.			Trap Site #11 July 27, 2012; 1438 hrs.		
X -Section Distance (ft) from RT. Bank	Cobble Diam. (inches)	Water Depth (inches)	X -Section Distance (ft) from RT. Bank	Cobble Diam. (inches)	Water Depth (inches)
0		0.0	0		
		6.8			
1		8.5	1	4.3	8.5
		9.5			
2	3.2	8.5	2		9.5
		8.8		3.9	
3		6.5	3		12.5
	4.5	7.8			
4		10.0	4		13.5
		10.5		3.0	
5	5.3	11.7	5		14.5
		13.5			
6		12.0	6	2.5	15.0
	7.5	12.5			
7		9.3	7		16.5
		9.5			
8	3.3	11.5	8	2.5	15.0
		9.8			
9		9.5	9		15.0
	4.3	9.3			

Table 6. Page 2 of 2.

Trap Site #5 (Gage Station) July 28, 2012; 0937 hrs.		
X -Section Distance (ft) from RT. Bank	Cobble Diam. (inches)	Water Depth (inches)
10		9.0
		7.8
11	3.8	7.3
		8.0
12		11.8
		6.5
13	3.0	6.0
		5.3
14		8.3
		8.0
15	3.8	7.0
		7.5
16		6.8
	4.3	4.5
17		3.0
		2.9
18 (bank)		1.0
	Avg.= 4.3	Avg.= 8.0
OHW: 21.2 ft. ; flow width: 18ft.		
OHW: Elv. 7" above H2O level		

Trap Site #11 July 27, 2012; 1438 hrs.		
X -Section Distance (ft) from RT. Bank	Cobble Diam. (inches)	Water Depth (inches)
10	3.8	14.5
11		13.8
	3.8	
12		7.5
13	4.5	7.5
14		8.3
	5.0	
15		7.0
16		6.5
17 (bank)		
	Avg.= 3.3	Avg.= 11.6
OHW: 20.5 ft. ; flow width: 17 ft.		
OHW: Elv. 5" above H2O level		
X-section 6' upstream of 15" fall		

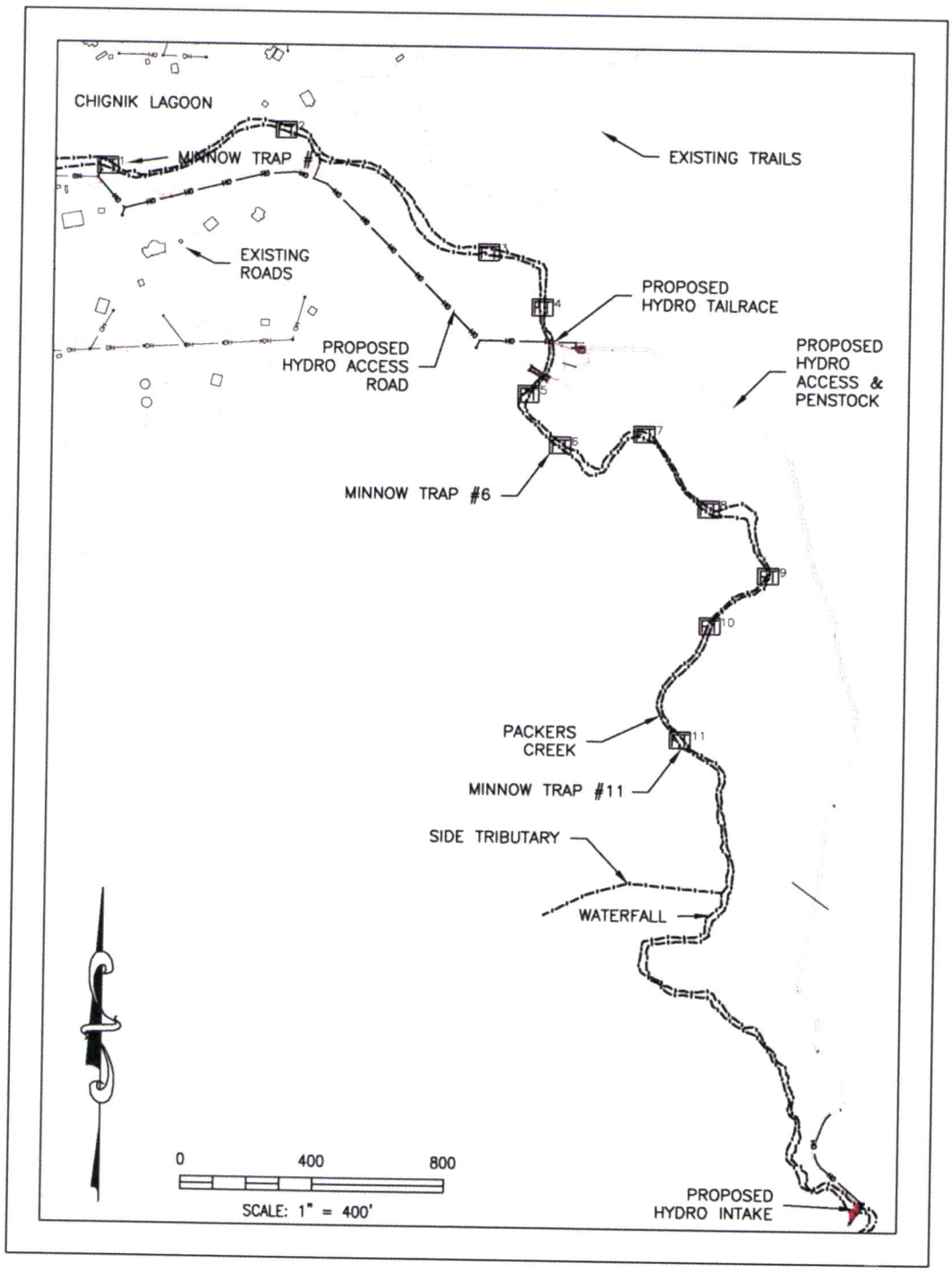


Figure 1. Map of Packers Creek with fish minnow traps sites identified, June 25-27, 2012.

Figure 2. Dolly Varden, Trap #7, above proposed powerhouse site, Packers Creek (6,26,12).

Figure 3. Dolly Varden male, mature, 157mm FL, Trap #11, Packers Creek, (6,26,12). Confirmed by Dr. Roger Saft, retired ADF&G fish pathologist, Anch., AK (7/5/12).

Figure 4. Upstream view of Packers Creek at gaging station site (trap 5 site), June 28, 2012.

Figure 5. Upper most point on Packers Creek accessible on foot via the stream channel; six falls visible -- - estimated at 6+ft, 3ft, 2.5ft, 2.5ft, 3.5ft, and in foreground 3ft.; N 56 18.234 / W 158 31.468; 1420hrs., June 28, 2012.

Figure 6. Photo looking out and down on left-hand side tributary entering Packers Creek below the proposed hydro intake. Photo taken from an 80 ft. ridge, approx.; N 56 18.163, W 158 31.515; elv. 362ft.; 1515 hrs., 6/25/2012. Tributary input estimated at 10% of mainstem flow, conservatively. Foot access restricted by slope and vegetation issues.

THE STATE of ALASKA
GOVERNOR SEAN PARNELL

Department of Fish and Game

DIVISION OF HABITAT
Central Region Office

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September 7, 2012

Lamar Cotten
Manager, Lake and Peninsula Borough
P.O. Box 495
King Salmon, AK 99613

Dear Mr. Cotten:

Thank you for your July 13, 2012, letter expressing the importance of hydroelectric power to the Village of Chignik Lagoon and providing us the report from the Chignik Regional Aquaculture Association (CRAA) on the presence of fish and the physical characteristics of Packers Creek. The Chignik Lagoon Power Utility is proposing a hydroelectric power generation facility on Packers Creek. The proposed project would divert up to 8.5 cfs from Packers Creek for power generation. The facility is proposed to run year around. The lower reaches of Packers Creek are listed as anadromous waters (AWC# 271-10-10180) pursuant to Alaska Statute (AS) 16.05.871 and Alaska Administrative Code 5 AAC 95.011. Water used for power generation will be returned to the creek near the upper limits of anadromy.

We have met with your representatives and shared many phone conversations prior to the June field investigation conducted by the CRAA. On February 28, 2012, representatives from the Alaska Department of Fish and Game (ADF&G), Division of Habitat (Habitat), the Alaska Department of Natural Resources, Division of Mining, Land, and Water (ADNR, DMLW), and the Alaska Energy Authority (AEA) met with you and Polarconsult to discuss a path forward. Habitat stated at that meeting that we were not looking for a detailed instream flow study, but a simple study that would determine basic fish presence or absence, channel morphology (cross sections), and flow data sufficient to determine flows that will remain in Packers Creek in the proposed bypass reach. The result of that meeting was to outline a field study that will provide the basic information needed to further review your proposed project and minimize cost of the field investigation by only having to conduct one site visit. The Lake and Peninsula Borough would hire a contractor or reply to ADF&G's offer to conduct the field investigation. On May 16, 2012, ADF&G met with Polarconsult and CRAA (contractor hired by Lake & Peninsula Borough) representatives to refine the study plan. The study plan was developed jointly with and agreed upon by ADF&G, Polarconsult, and the CRAA. The study plan was documented in an email from Brad Dunker on June 5, 2012, as referenced in the CRAA report.

In response to your request to Habitat Biologist Brad Dunker, we have summarized your comments into three general areas of concern and identified remaining data needs that will facilitate a decision on the Fish Habitat Permit. Specific items in your July 13, 2012 letter are

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Anchorage Fish and Wildlife Field Office
605 West 4th Avenue, Room G-61
Anchorage, Alaska 99501-2249

in reply refer to
AFWFO

February 12, 2013

Dear Mr. Barrett,

We are in receipt of your request for information regarding anadromous fish use of Packers Creek at Chignik Lagoon Village. This letter confirms that the Anchorage Fish and Wildlife Field Office has no data or information that is responsive to your request, other than the information contained in the email Phil Brna sent you on January 29, 2013.

Sincerely,

Lori Verbrugge, Ph.D.
Branch Chief, Conservation Planning Assistance/Environmental Contaminants

Subject: Packer Creek Fisheries Info Request

Bruce, your January 25, 2013 request for information on Packer Creek at Chignik Lagoon found it's way to me. I am still here, working for USFWS and I have some memory of the project. I went out to Chignik when I was working for ADF&G in 1983 with folks from USFWS and the Corps of Engineers who were working on a potential hydro project. Mary Lynn Nation was the lead biologist for USFWS and I think John Burns had the lead for the Corps. They were both out there and I think a few others as well, but I don't remember who. There were also people there at the time looking at a project at Perryville and maybe also Chignik Lagoon.

I do not specifically remember which stream was called Packers Creek. My memory is that we set traps and fyke nets in many of the local streams in Anchorage Bay and we found pink (or chum?) fry in most and a few coho in others. I specifically remember finding pink fry in the stream that flows into the south west corner of Anchorage Bay. That is the steam that has the existing small hydro project on it (called Indian Creek?). We also found fish in other streams but I don't remember which streams or what fish. We did not find fry at the Mud Bay stream but there were pieces of carcasses (dried jaw bones and skeletons in the bushes along the creek). We only went there once since USFWS had a raft which was falling apart and it was tough to get there. I know from my involvement with the Chignik hydro project, that fish returns to that little stream are highly variable and there are never lots of fish. There have been some recent surveys there and ADF&G has the information but it is also on the FERC website. I vaguely remember finding fish in the stream that goes by the cannery and also streams by the airstrip, but I can't be 100% certain.

The USFWS prepared a Fish and Wildlife Coordination Act Report for the Corps of Engineers which documented what was observed. USFWS no longer has those old files since they were all discarded. You might be able to get them from the Corps or maybe even ADF&G (if they still have the old waters files). I discarded all of my ADF&G field notes (I had about 100 of the big hard bound rite-in-the-rain books) when I retired in 2000.

I hope this helps.

Send me an email about what you have been up to. Doug McBride and Mike Thompson sometimes mention your name.

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