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

Nomination Form
Anadromous Waters Catalog

Region: South Central

USGS Quad(s): Tyonek A-4

Anadromous Waters Catalog Number of Waterway: 247-20-10010-2030-3018

Name of Waterway: "Middle Creek" ☐ USGS Name ☒ Local Name

☒ Addition ☐ Deletion ~~☒ Correction~~ ☐ Backup Information

Add Coho spawning

For Office Use

Nomination #	~~130031~~	mk CL	8/27/13
Revision Year:	2014	Fisheries Scientist	Date
Revision to: Atlas ____ Catalog ____ Both X		Habitat Operations Manager	8/27/13 Date
			1/31/13 Date
Revision Code:	B-2	AWC Project Biologist	9/10/13 Date
		Cartographer	Date

OBSERVATION INFORMATION

Species	Date(s) Observed	Spawning	Rearing	Present	Anadromous
Coho Salmon	9/28/12	X		X	☒
Coho Salmon	9/20/07	X		X	☒
					☐
Add coho salmon spawning to stream					☐
					☐

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: 3 adult coho salmon observed by J. Brekken, J. Alas, and R. Bates, ADF+G personnel, on 9/28/12. Salmon were in post-spawn condition and appeared to be holding in a specific area of the stream, but water clarity prevented us from seeing the bottom or any potential redds.
Adult coho salmon have been observed ~~here~~ spawning (actively digging redds) here previously in 2007 (OASIS, 2008) as reported in environmental baseline studies

Name of Observer (please print): Josh Brekken

Signature: Josh Brekken Date: 11/12/12

Agency: ADF+G

Address: 333 Raspberry Rd
Anchorage, AK 99518

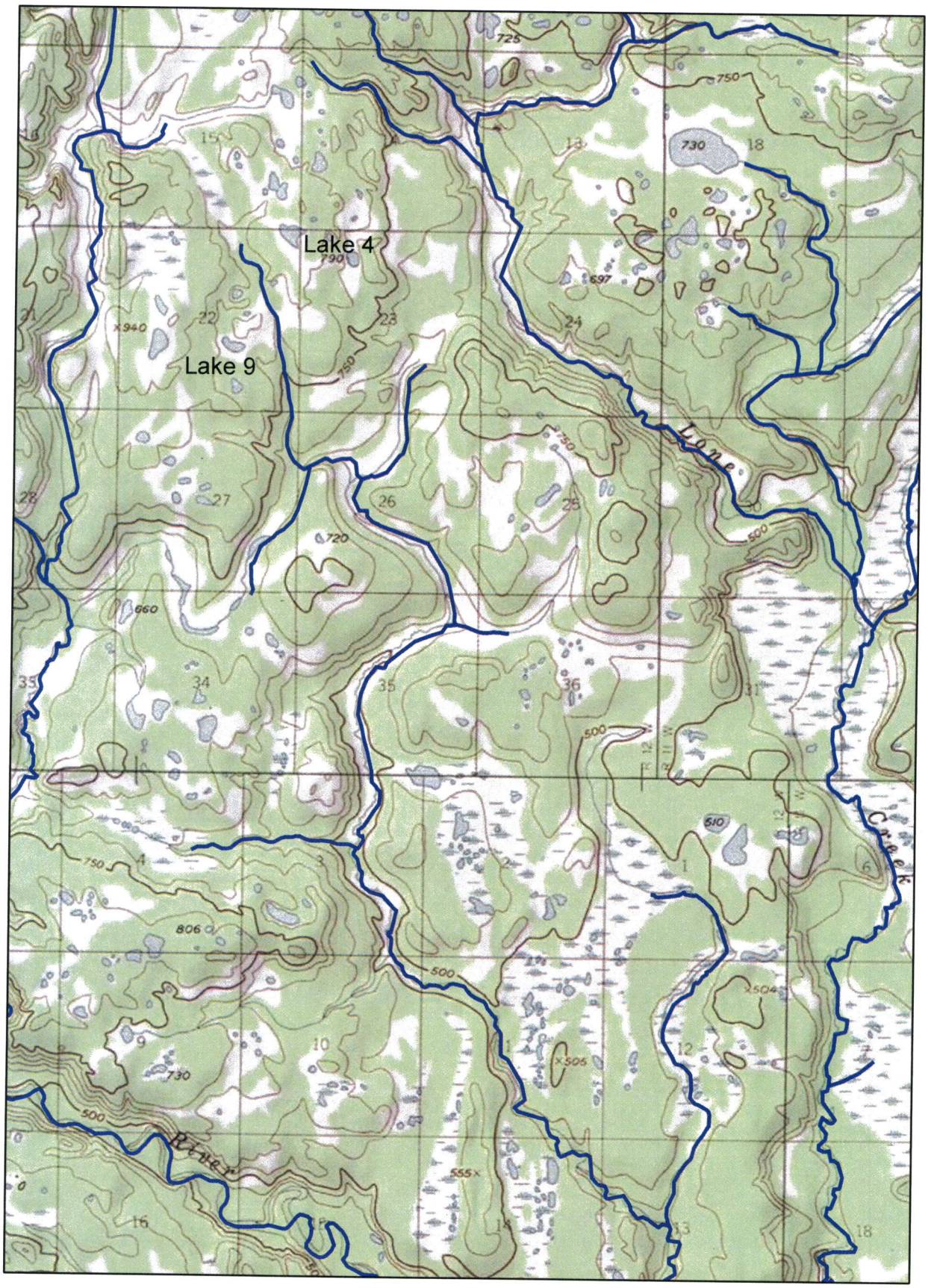
This certifies that in my best professional judgment and belief the above information is evidence that this waterbody should be included in or deleted from the Anadromous Waters Catalog.

Signature of Area Biologist: _____ Date: _____

ALASKA DEPT. OF FISH & GAME
JAN 18 2013
Revision

02/08

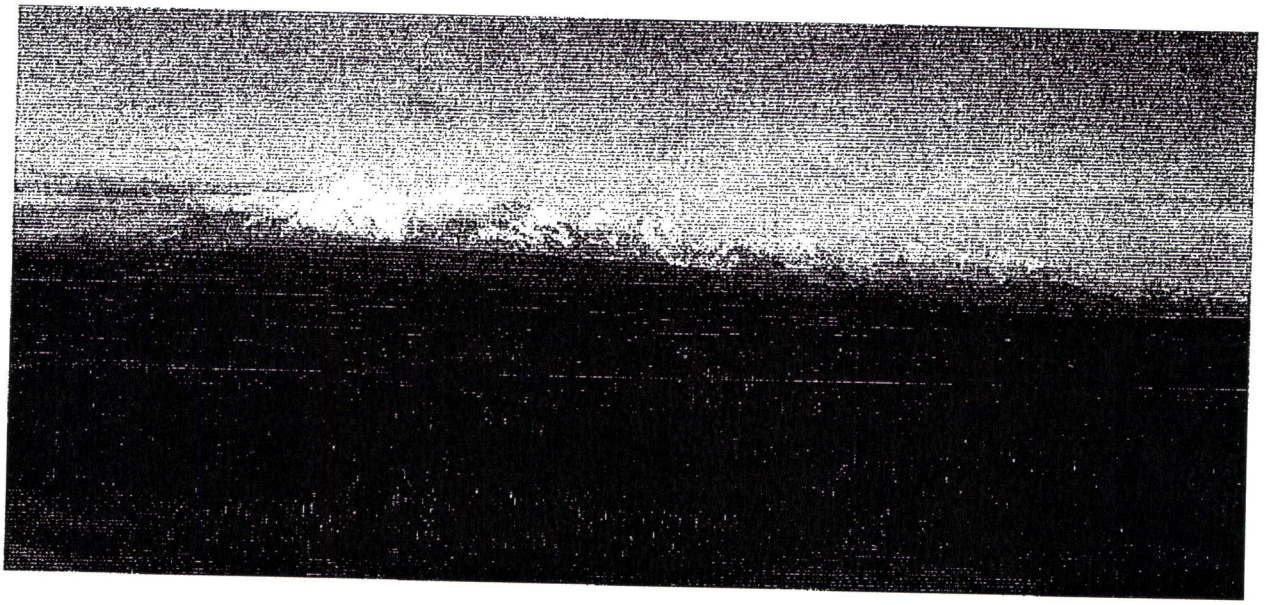
AWC Nominations (Changes) in Chuitna River Drainage for Spawning Coho Salmon



AWC Streams

Stream on 9/28/12 and observed coho salmon adult

Chuitna Coal Project – 2007 Freshwater Aquatic Biology Study Program



March 28, 2008

Prepared for:

PacRim Coal, LP

711 H St. Suite 350
Anchorage, Alaska 99501

Prepared by:

oasis ENVIRONMENTAL

825 W. 8th Ave.
Anchorage, AK 99501

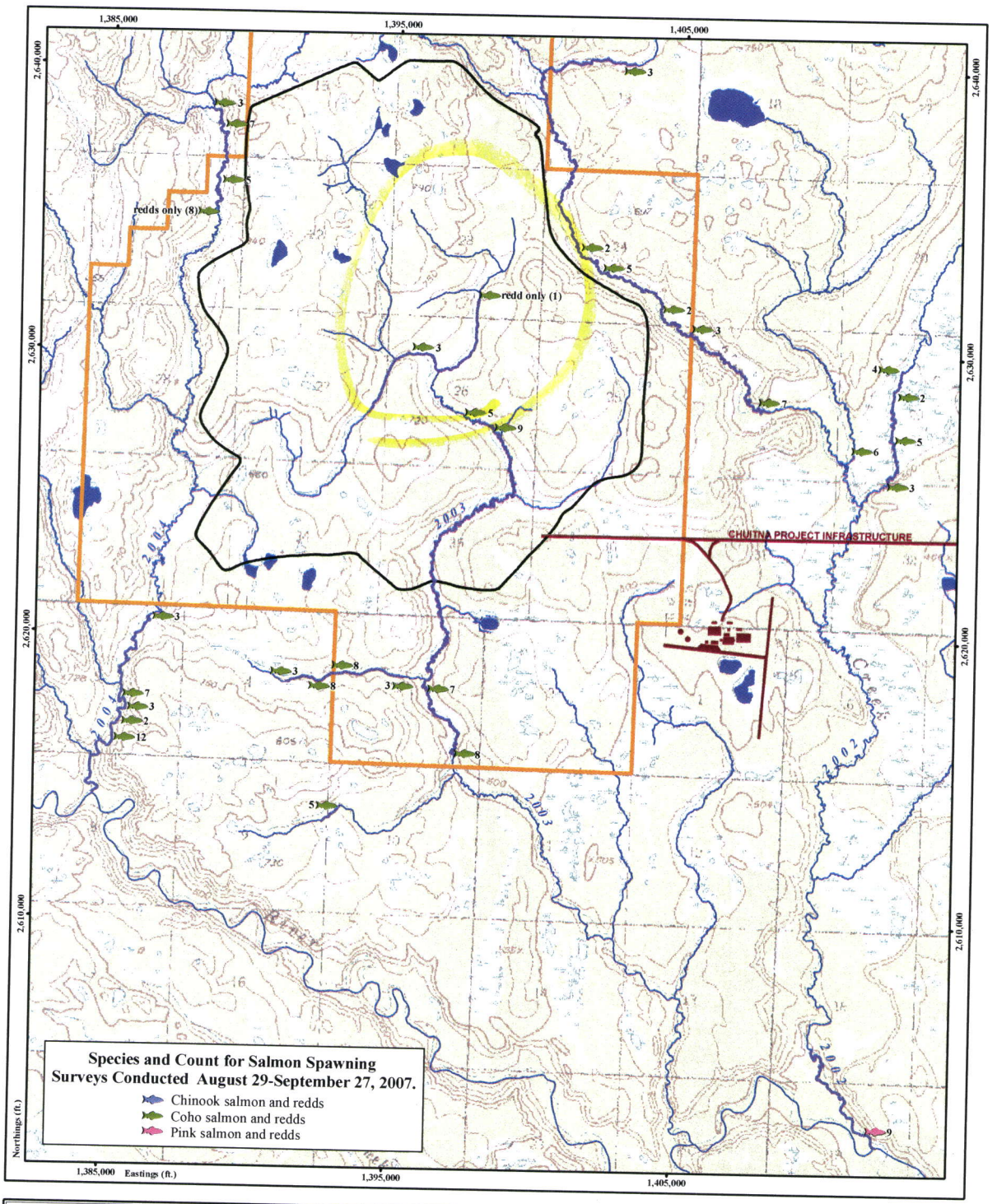


FIGURE 3.1-23
AUGUST 23 TO SEPTEMBER 27, 2007 SALMON SPAWNING SURVEY COVERAGE AND COUNT FOR STREAMS 2002, 2003, AND 2004.

N

0 0.25 0.5 1 Miles

0 0.5 1 1.5 Kilometers

1:42,000 1 inch equals 3,500 feet

Projection: NAD83 AK State Plane Zone 4 (feet)

CHUITNA COAL PROJECT

PacRim Coal, LP
711 H Street, Suite 350
Anchorage, AK 99501 USA
Phone: (907) 276-6868

Legend

- Surveyed Stream Reach
- Project Area Stream
- Project Area Lake
- Proposed Road & Conveyor
- Proposed Facilities
- Lease Mining Unit-1 Boundary
- Lease Boundary

Data Sources:
Salmon Spawning Survey Data, Oasis, 2007.
Mine Infrastructure, Mine Engineers, 2006.
Hydrology, Oasis, 2007.
USGS Topographic Quadrangle, 1:63360, Tyonek Sheets A2, A5, & A7, 1958.

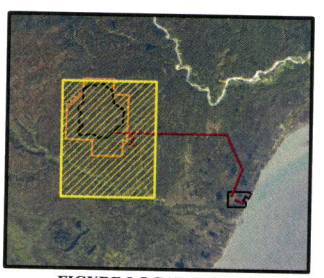


FIGURE LOCATION MAP

Physical Habitat

The majority (67%) of redd sites and areas where spawning behaviors were observed were associated with at least one cover type (undercut bank, overhanging vegetation, emergent vegetation, large woody debris, and deep pool). Of the spawning sites associated with cover, 70% were associated with more than one cover type. Actual distance from cover types to redd sites or observed spawning behavior ranged from 0 to 1.5 m with an average of 0.6 m distance. The most commonly utilized cover type was undercut bank followed by overhanging vegetation, large woody debris and emergent vegetation. No redd site or observed spawning behavior was associated with deep pools in stream 2002.

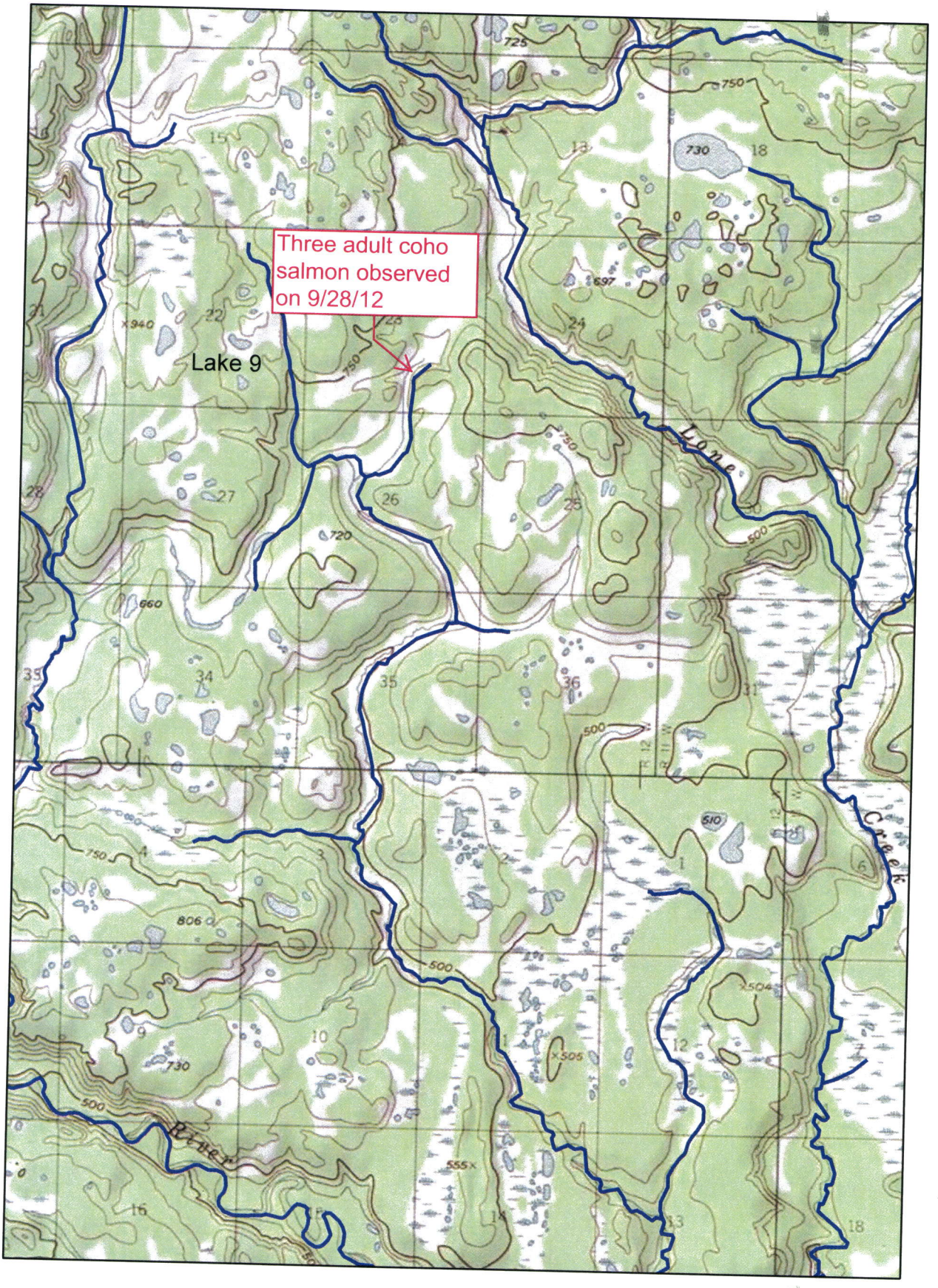
Medium-sized gravel substrate (8-30 mm intermediate axis width) was the dominant particle size at 41% of the sites where redds and spawning behaviors were observed in stream 2002. Coarse gravel substrate (30-60 mm intermediate axis width) was the next most frequently observed dominant particle size at 38% of the sites where redds and spawning behaviors were observed in stream 2002. Water depths at these sites ranged from 6 cm to 90 cm with an average of 31 cm. Water velocity at spawning areas and redd sites ranged from 0.03 meters per second (m/s) to 0.49 m/s with an average of 0.25 m/s. Redd sites were located in C channel types (88%) and E channel types (12%) (Rosgen 1996), and 80% in run habitat types.

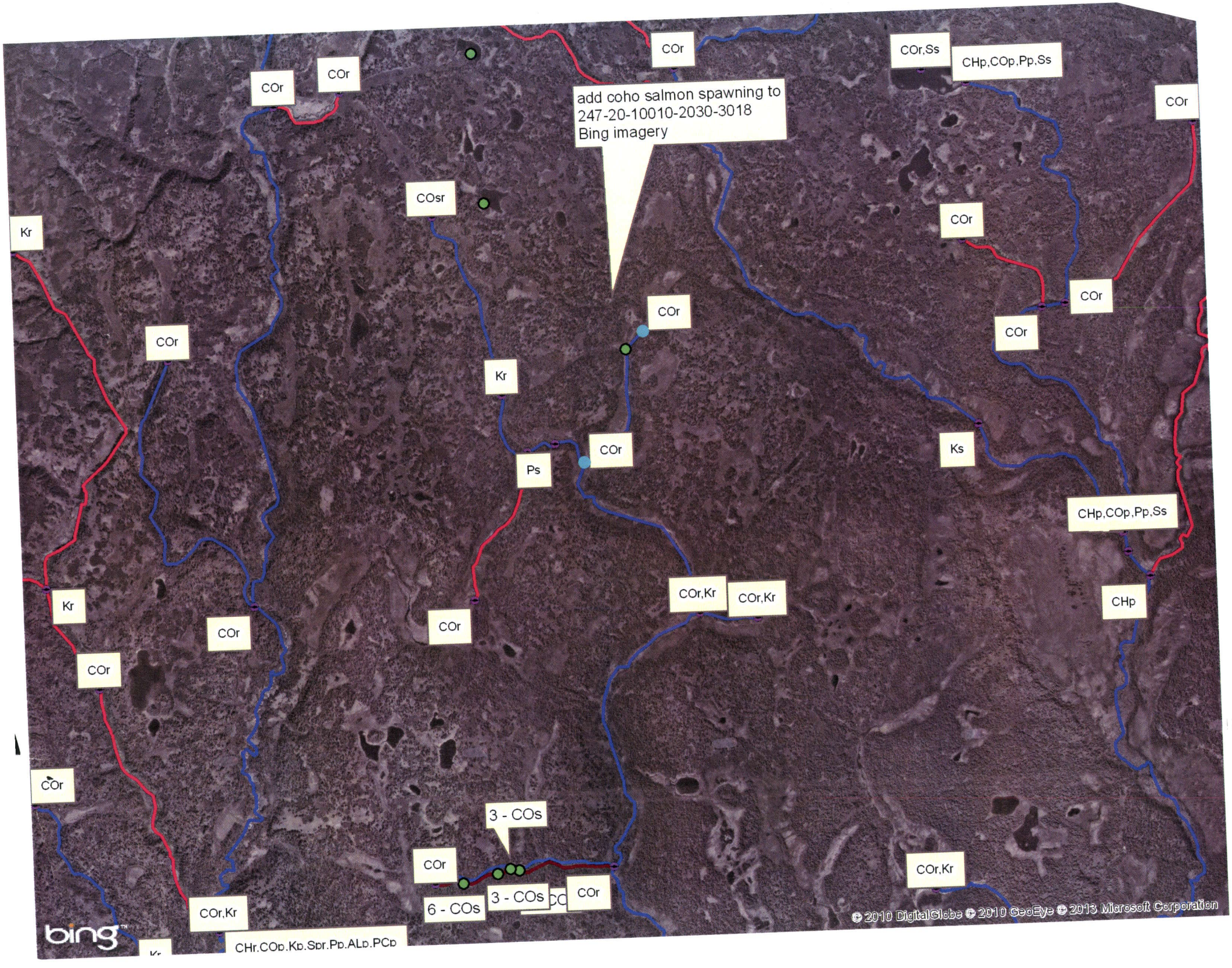
Riffle habitat types accounted for the next most frequently used spawning locations (13%). Habitat parameters were generally within the range of spawning habitat preferences reported in the scientific literature for Chinook, pink, and coho salmon (Bjornn and Reiser 1991).

3.1.4.3. Stream 2003 Summary

On the initial stream 2003 survey (July 27, 2007 and August 1, 2007) no salmon were observed in the stream however there were salmonids schooling at the 2003 confluence with the Chuitna in early August (Figure 3.1-25). Chinook and pink salmon were not observed to spawn extensively in stream 2003, during 2007, with the following exceptions: one adult pink salmon observed on August 9, 2007 in the vicinity of two pink salmon redds (0.1 rkm) and one Chinook salmon carcass was noted during the August 22 2007 survey near the confluence with the Chuitna. This was a change from 2006 when Chinook and pink salmon migrated upstream into 2003, 1.5 and 5.1 rkm respectively. Spawning surveys from the early 1980s document Chinook salmon upstream migration distances ranging from 5 rkm to 6.3 rkm and a pink salmon upstream migration distance of 1.5 rkm (no records exist for pink salmon migration distance in 1982 or 1983). Salmon were absent from stream 2003 during the August 16 and August 22 surveys. Following mid-September rains, coho salmon penetrated far into stream 2003 and on September 19 – 21, 2007, were observed spawning in several branches of upper stream 2003. By the final foot survey on September 26 the longitudinal extent of stream 2003 coho salmon migration reached into the headwaters and matched the distribution mapped in the 2006 surveys, (14.4 rkm upstream of the Chuitna confluence) which was similar to the 1983 and 1984 upstream spawning distribution (13.2 rkm and 13.4 rkm respectively; ERT 1985).

AWC Nominations (Changes) in Chuitna River Drainage for Spawning Coho Salmon




add coho salmon spawning to
247-20-10010-2030-3018
Bing imagery
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