State of Alaska
Department of Fish and Game
Habitat and Restoration Division

Nomination for Waters Important to Anadromous Fish

Region SOUTHCENTRAL ▼ USGS Quad SUSITNA D7, D8

Anadromous Water Catalog Number of Waterway

Name of Waterway ☐ USGS Name ☐ Local Name

☑ Addition ☐ Deletion ☐ Correction ☐ Backup Information

For Office Use		
Nomination # 01-575		4/4/00
Revision Year: 2002	Regional Supervisor	Date
Revision to: Atlas ____ Catalog ____ Both X	AWC Project Biologist	3/22/00 Date
Revision Code: D-1, E-9, B-6 B-5	Drafted	Logged F.I. Date 5/8/00

OBSERVATION INFORMATION

Species	Date(s) Observed	Spawning	Rearing	Present	Anadromous
					☐
					☐
					☐
					☐
					☐

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: MORE CHANGES PER ATTACHED REPORT & MAPS.

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STATE OF ALASKA
DEPARTMENT OF FISH AND GAME

Signature: Ed Weiss

Date: 2/25/99

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 Catalog of Waters Important for Spawning, Rearing or Migration of Anadromous Fishes per AS 16.05.870.

Signature of Area Biologist: _____

Revision 3/97

RESURRECTION CREEK FISHERIES

AND HABITAT ENHANCEMENT EVALUATION

FY 90 COMPLETION REPORT

Mark Wenger - Fisheries Biologist
Spencer Waitmann - Fisheries Technician
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Chugach National Forest

Seward Ranger District

Ed

Info on Resurrection Ck
and Palmer Creek FYI

Stewart

INTRODUCTION

In spring 1990 the Chugach National Forest - Seward Ranger District Fisheries Staff initiated a comprehensive study to evaluate the existing fisheries resources of Resurrection Creek and identify potential fisheries habitat enhancement opportunities. Proposed enhancement efforts will be targeted towards improving coho and chinook salmon rearing habitat through reclaimation of past and future placer mining operations. A cooperative agreement reached in May 1990 with Al Johnson of Hope Mining Co., identified five dormant settling ponds on the west bank of the Hope Mining Claim for evaluation as potential coho salmon juvenile rearing ponds. Other fisheries habitat enhancement opportunities available are to reclaim a ~1,500' mine excavated side channel into a spawning channel with connecting rearing ponds, and construction of instream structures using mine tailing boulders. In addition, the SRD is continuing to evaluate the feasiblity of providing fish passage above a barrier on Palmer Creek. A 1988 habitat survey on upper Palmer Creek identified 17.5 acres of of potential spawning and rearing habitat above the barrier. The overall objective of the proposed enhancement program is to increase adult salmon returns and sportfishing opportunities in Resurrection Creek in an attempt to disperse angling effort from southern Kenai Peninsula streams.

1990 PROJECT OBJECTIVES

1) Evaluate distribution of coho and chinook salmon frye relative to channel type and habitat variables.

2) Evaluate sites for placement of an incline plane trap(s) to monitor smolt outmigrations in 1991.

3) Evaluate existing instream habitat and identify potential fish rearing and spawning habitat enhancement opportunities.

4) Develop partnerships with mining operators on Resurrection Creek to incorporate fisheries habitat enhancement into reclaimation plans.

5) Evaluate feasibility of developing a sport fishery in the Resurrection Creek drainage.

6) Continue to evaluate the feasibility to provide fish passage on Palmer Creek to access the upper drainage to coho and chinook salmon spawning.

Resurrection Creek is a non-glacial watershed on the northern Kenai Peninsula with a total of 127 miles of mainstem and tributaries which originate from mountain snowmelt or groundwater sources. Lower Resurrection Creek flows through the community of Hope and terminates into Cook Inlet's Turnagain Arm (Figure 1). The town of Hope is located 87 highway miles from Anchorage at the west end of the Hope Highway (~18 miles from the Seward Highway - Hope Highway Y). Its relatively close proximity to Anchorage and the majority of the Kenai Peninusula's summer tourist traffic prompted the Seward Ranger District to evaluate fisheries habitat enhancement opportunities, and development of a sportfishery on Resurrection Creek.

The community of Hope and the Resurrection Creek valley have a long history of placer mining dating back to 1888. The gold rush on the Kenai Peninsula preceded the famous 1898 Klondike Gold Rush when hundreds of prospectors descended upon the Sunrise and Hope area in 1895-96 to stake claims on the Sixmile and Resurrection Creek drainages (Barry 1976). Extensive hydraulic and hand placer mining began in 1895 and continued intermittently into the 1950's. Mechanized operations replaced hydraulic mining in the 1960's. Total estimated placer gold production from the Resurrection Creek drainage since 1895 is 30,000 - 40,000 oz., the majority being mined in the lower 6 miles of Resurrection Creek, and lower Palmer Creek. Approximately 2,000 - 3,000 oz have been produced since 1980 (U.S. Bureau of Mines 1984). Hope Mining Company is presently the only commercial mining claim operator on Resurrection Creek. In addition to commercial operations, recreational miners operate from May 15 - July 15 in a 1/2 mile reach between the Resurrection Pass Trailhead and the Pay Streak Claim.

Over the years mining practices have extensively modified much of lower Resurrection Creek's natural habitat. Habitat degradation has occured from: 1) diverting the stream channel; 2) removal of large boulders from the active channel; 3) channelization; 4) removal of riparian vegetation; and 5) construction of settling ponds in riparian areas. In most cases, reclaimation by mining operations has been insuffient to restore stream and riparian habitat to a suitable condition. Modifications of instream and riparian habitat, along with inadequate reclaimation are believed to be major factors limiting production of salmon in Resurrection Creek.

Prior to the present study, fisheries information available on Resurrection Creek has been limited to periodic adult escapement counts, a baited trap survey on Palmer Creek in 1989, and the ADF&G Anadromous Fisheries Catalog. In addition, a channel type classification inventory was conducted throughout the drainage in 1988. The channel type system provides a means of classifying sections of stream based on gradient, width, substrate composition, surrounding landforms, and riparian habitat. The channel type inventory is described in greater detail in the Study Area section. The Resurrection Creek system has natural populations of chinook, chum, coho, and pink salmon, as well as a resident population of dolly varden. Pink salmon return primarily during even years with peak counts of 10,000-50,000 recorded during escapment surveys in the 1970's. Returns of chinook, chum and coho are considerably less, with peak counts ranging from less than 100 to 500. The verified upstream extent of migrations by chinook and coho is believed to be 12 miles upstream while pink and chums have only been verified to the confluence with Rimrock Creek, ~6 miles upstream (ADF&G 1986). Dolly varden are more widely distributed in the drainage.

Due to the limited fisheries resources of Resurrection Creek, sportfishing activity is minimal compared to southern Kenai Peninsula streams, with angler effort primarily targeted towards catching pink salmon near the mouth. Peak annual harvests in Resurrection Creek estimated by the Alaska Dept. of Fish and Game Sport Fish Survey Questionaire for 1985-1988 were: 1,728 pinks, 104 chinook jacks, 36 chum, 36 coho, and 109 dolly varden. The current sportfishing regulations for Resurrection Creek prohibit the retention of chinook salmon greater than 16 inches. Peak annual angler effort during this period was 3,402 angler days (Mills 1989).

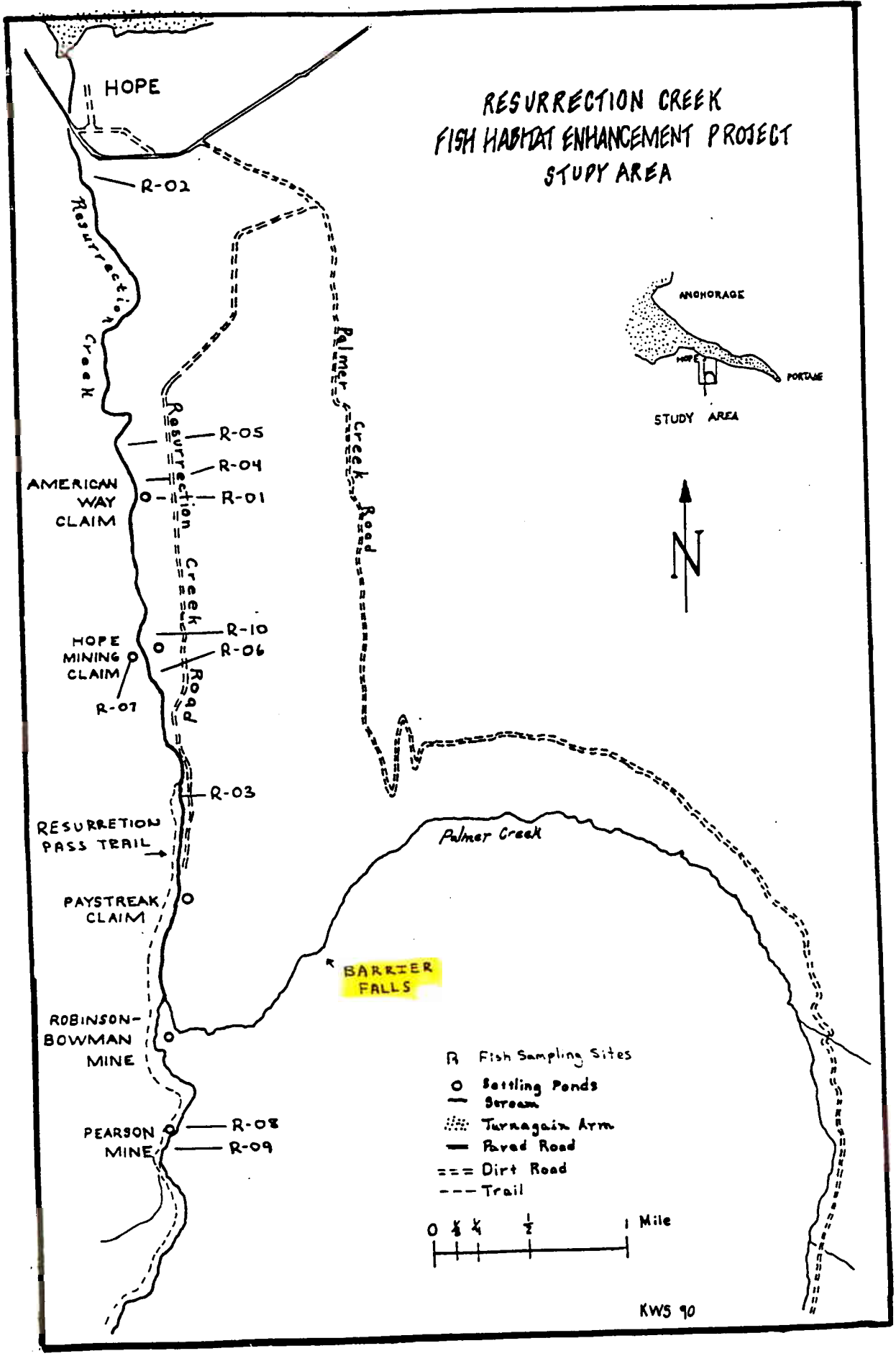
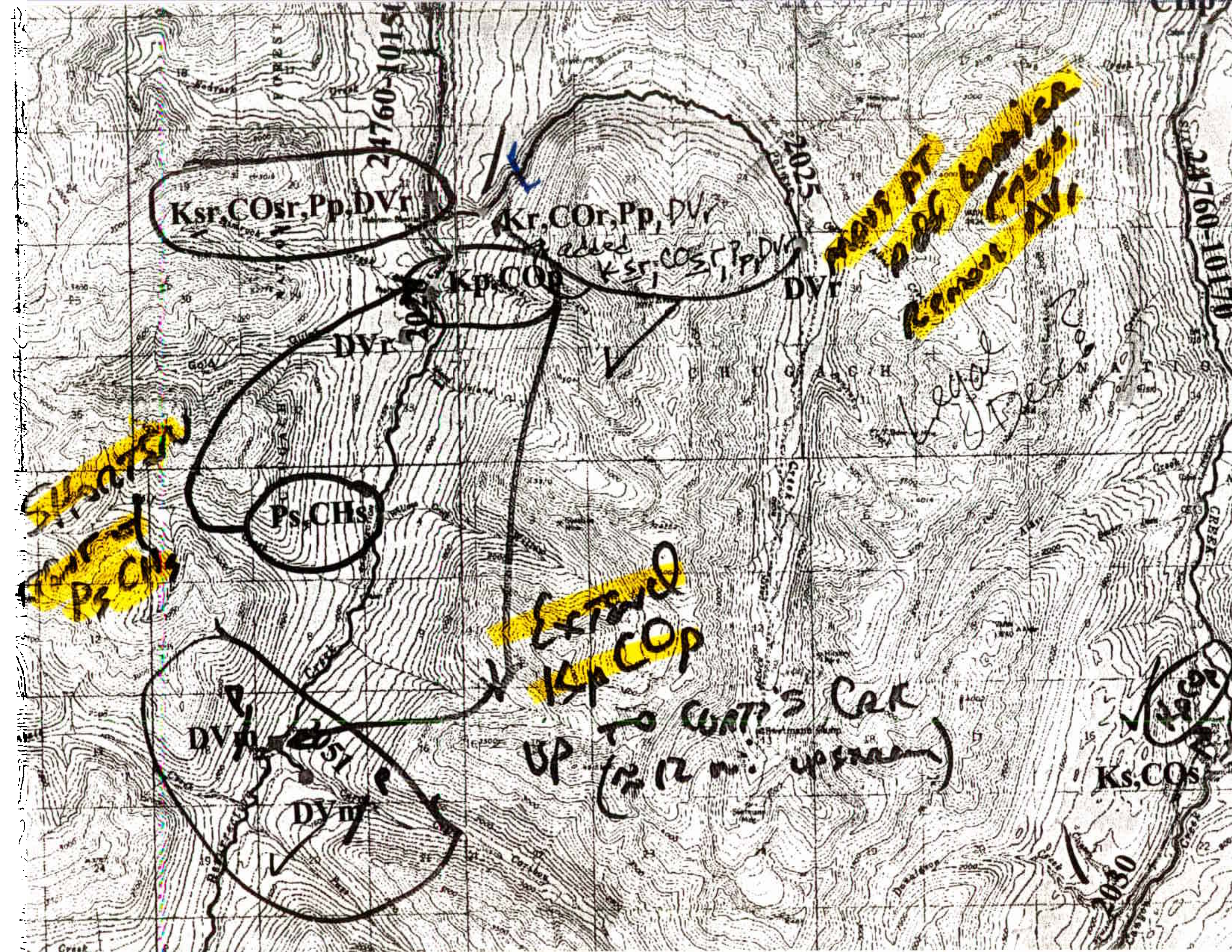


Figure 2. Resurrection Creek Fish Habitatat Enhancement Project Study Area, showing fish sampling sites.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