

Eulachon subsistence harvest opportunities. USDA Forest Service, Cordova Ranger District, Cordova, Alaska

Abstract: The purpose of this study was to determine if sufficient harvest opportunities are available for eulachon, *Thaleichthys pacificus*, on the Copper River Delta to meet the subsistence needs of Cordova residents. The project was conducted by the U. S. Forest Service (USFS), Native Village of Eyak (NVE) and Alaska Department of Fish and Game (ADF&G), and was funded by the U.S. Fish and Wildlife Service (USFWS) through the Office of Subsistence Management (OSM). In-kind funding for staff biologists was provided by the Bureau of Indian Affairs (BIA), and USFS. In-kind funding for a staff social scientist was provided through the USFWS Partners for Fisheries Monitoring Program. This report summarizes results from the two-year (2002, 2003) project. Objectives for the project were to:

- (1) Identify key eulachon harvesters in the community;
- (2) Obtain information on traditional harvest areas and the presence of eulachon at these areas;
- (3) Check local streams and traditional harvest areas on a weekly basis throughout the late winter and spring to check for the presence of eulachon;
- (4) Estimate the harvest of eulachon from each location where subsistence fishing occurs, and the number of days that eulachon are present; and
- (5) Determine if ample harvest opportunity exists for eulachon on the Copper River Delta using catch data and data from the Community Profile Database

Presence/absence surveys were conducted from mid-January to the end of June in 2002 and from mid-January to early June in 2003. The run timing of eulachon on the Copper River Delta extended later in 2002 than any year since 1998. Eulachon were present in the Copper River, Alaganik Slough and Eyak River at various times from approximately 24 May to 24 June 2002. No eulachon were present in Ibeck Creek in 2002. In 2003, eulachon were present in Ibeck Creek from approximately 15 February to 1 March, in the Alaganik River from approximately 19 February until 27 February as well as in the Copper River in early March. A much larger run of eulachon returned to both the Alaganik and the Copper Rivers in late May and early June. A creel survey of subsistence harvesters was conducted at Flag Point Channel (27-mile) on the Copper River from 25 May to 30 June 2002 and at 35-mile and 37-mile channels from 30 May to 1 June in 2003. A creel survey was also conducted at Ibeck Creek in 2003 from 17 February to 1 March. Estimated eulachon harvest in 2002 was 1,123 kg edible weight, with 95% confidence intervals ranging from 501 to 1,744 kg. The age of eulachon based on otolith samples in 2002 ranged from 3 to 5 years, with the majority being age-4 fish. The majority of eulachon sampled were males (69%), and the average size of eulachon in the 37-Mile channel was significantly different than the average size of eulachon at the Flag Point channel. The estimated eulachon harvest in 2003 was 716 kg edible weight, with 95% confidence intervals ranging from 665 to 767 kg. The age of eulachon ranged from 2 to 5 years in Ibeck Creek, with the majority of the fish being age-3 fish and nearly all (94.6%) of the fish sampled being males. The age of eulachon in the Copper River in 2003 ranged from 3 to 5 years with the majority of the fish sampled being age-5 with 70% being males. As was the case in 2002, the average size of eulachon in the 37-Mile Channel was significantly different than eulachon in the Flag Point Channel.

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