# FISHERIES INVESTIGATIONS IN THE UPPER ATIGUN RIVER DRAINAGE IN RELATION TO THE ALYESKA ATIGUN MAINLINE PIPE REPLACEMENT PROJECT

By:
Jack F. Winters

Technical Report No. 92-2

**Alaska Department of Fish & Game**
Division of Habitat

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## EXECUTIVE SUMMARY

The Alaska Department of Fish and Game (ADF&G) initiated a three-year fisheries study in 1990 to gather information concerning the distribution, movements, and use of the upper Atigun River drainage by fish and how use of the upper Atigun River drainage by fish was affected by the Atigun Mainline Pipe Replacement Project. Fish sampling in summer 1990 preceded instream work associated with the pipeline replacement project. In addition, we evaluated the rehabilitation of the Sten Creek material site and documented movements of Arctic grayling (*Thymallus arcticus*) using the upper Atigun River to suspected overwintering areas in Galbraith and Tea lakes. Results of the first two years of study are presented here.

In 1990, we fin-clipped or tagged 916 fish in the Atigun River drainage upstream of Galbraith and Tea lakes: 852 Arctic grayling, 43 Dolly Varden (*Salvelinus malma*), 20 round whitefish (*Prosopium cylindraceum*), and 1 slimy sculpin (*Cottus cognatus*). In 1991, we fin-clipped or tagged an additional 261 fish in the upper Atigun River drainage: 247 Arctic grayling, 7 Dolly Varden, and 7 round whitefish.

Fish, primarily Arctic grayling, occupied the East Fork Atigun River throughout the 13.7 km (8.5 mi) project area, from the downstream limit of the project near pipeline mile 157 to Check Valve 30 (pipeline mile 164.5). Fish used an area of multiple channels in flooded willow-dominated habitat near Check Valve 29 extensively in 1990 and the Sten Creek ponds in 1990 and 1991.

Fish were present in the Sten Creek pond when we first sampled in late June 1990; fish arrived here in mid June 1991. Arctic grayling were the most abundant fish caught in the Sten Creek ponds. Small numbers of round whitefish and Dolly Varden also were caught in the ponds.

Most Arctic grayling captured in the Sten Creek ponds and the East Fork Atigun River were less than 300 mm (12 in) in length. These mostly subadult and juvenile Arctic grayling use this area as summer rearing habitat. The lack of many adult-sized Arctic grayling or any young-of-the-year Arctic grayling indicates this area is not used by Arctic grayling for spawning.

The mean length of Arctic grayling captured in the Sten Creek ponds decreased over the summer. Most larger Arctic grayling left the Sten Creek ponds and the surrounding streams after early August. Small Arctic grayling (less than 140 mm [5.5 in]) moved into the Sten Creek ponds in mid-to-late August. Few fish remained in the upper East Fork Atigun River in late August and early September. All fish left the Sten Creek ponds and the upper East Fork Atigun River by mid September.

In May 1991, the size of the lower Sten Creek pond was doubled to about 0.75 ha, and its shoreline complexity increased to enhance fish habitat to mitigate impacts of the pipeline replacement project. Construction of two additional ponds (0.9 ha) upstream of the Dalton Highway and installation of a larger culvert in the Sten Creek Dalton Highway crossing completed the primary phase of the Sten Creek enhancement project. We observed fish throughout the lower Sten Creek pond in mid- and late June, and first observed fish in both upper Sten Creek ponds during late July. Fish used all ponds through the end of August.

We recaptured most fish tagged in the upper Atigun River drainage within 2 km of their original capture location within and between sampling years. We recaptured fish tagged

in the Sten Creek ponds most often in the Sten Creek ponds. We recaptured tagged fish also in the East Fork Atigun River as far upstream as Check Valve 30.

We caught two tagged Arctic grayling and one fin-clipped Arctic grayling, all marked in the upper Atigun River drainage, in the Galbraith Lake outlet in mid September 1991 as they presumably attempted to enter Galbraith Lake for overwintering. This observation confirms many years of speculation that at least some of the fish using the upper Atigun River during summer use Galbraith Lake for overwintering.

Use by fish of the East Fork Atigun River from the confluence of Spike Camp Creek and the Atigun River to Check Valve 30 was lower in summer 1991 than in 1990. The number of Dolly Varden distributed in stream segments within this reach of the East Fork Atigun River in 1991 differed significantly from that observed in 1990. Suspected reasons for the decreased use are an increase in average stream velocity and a lack of well-developed pools in this reach of the Atigun River following the near complete upheaval and reconstruction of the stream channel during pipeline installation activities in winter 1990-1991.

Construction of a diversion dike to protect the pipeline work area in 1991 redirected the flow of the Atigun River and prevented the river from filling multiple channels in a willow-dominated area around Check Valve 29. This activity removed an important summer rearing area from use by Arctic grayling in summer 1991 and forced fish using this habitat in 1990 to occupy other undetermined habitats in 1991.

In mid May 1991, we observed Arctic grayling tagged in the East Fork Atigun River in 1990 in spawning condition in Spring Creek, a known Arctic grayling spawning stream in the Atigun River valley about 11 km upstream of Galbraith Lake. We suspect that some of these fish may have spawned here.

Whether perceived changes in use of the upper Atigun River by fish, particularly the East Fork Atigun River upstream of Spike Camp Creek, represents a short-term or long-term change in use can only be assessed through future sampling.

# Fisheries Investigations in the Upper Atigun River Drainage in Relation to the Alyeska Atigun Mainline Pipe Replacement Project

## INTRODUCTION

Most streams north of the Brooks Range in Alaska contain populations of resident fish and some support populations of anadromous fish. Freshwater fish may be year-round residents or they may use certain streams or stream reaches only during part of the year, as many streams or stream reaches freeze solid during winter. Many of the northern river and stream valleys represent potential resource development transportation corridors through the northern foothills and the Brooks Range, as they are generally linear, relatively flat, and contain abundant gravel, sand, and rock needed for construction of roads, pipelines, and other facilities. The Atigun River is one such river that contains fish and its valley serves as a transportation corridor containing the Trans-Alaska oil pipeline and the Dalton Highway.

In 1990, Alyeska Pipeline Service Company (APSC) began work to replace 13.7 km (8.5 mi) of corrosion-weakened buried oil pipeline within the active floodplain of the Atigun River (Figures 1 and 2). In September 1990, APSC began workpad excavations as preparatory work for installation of the new section of buried pipeline within the Atigun River floodplain. Geotechnical considerations precluded replacing the corroded pipeline with elevated pipeline located out of the Atigun River floodplain. These excavations included a virtually complete excavation of the streambed of the Atigun River from about mile 163.6 (distance south in miles along the Trans-Alaska Pipeline from Pump Station 1 in the Prudhoe Bay oilfields) to its headwaters at mile 165.6 at the base of Atigun Pass. Between mile 157.1 and mile 163.6, excavations occurred in portions of the Atigun River floodplain containing secondary stream channels or generally dry stream channels, or upland areas on the margins of the floodplain.

The corroded segment of pipeline was replaced during March and April 1991 with a new pipeline segment buried about 10 m from the existing pipeline for much of the 13.7 km. Reconstruction of disturbed stream channels began in early April 1991 and continued through mid June, although most of the major channel reconstruction activity was

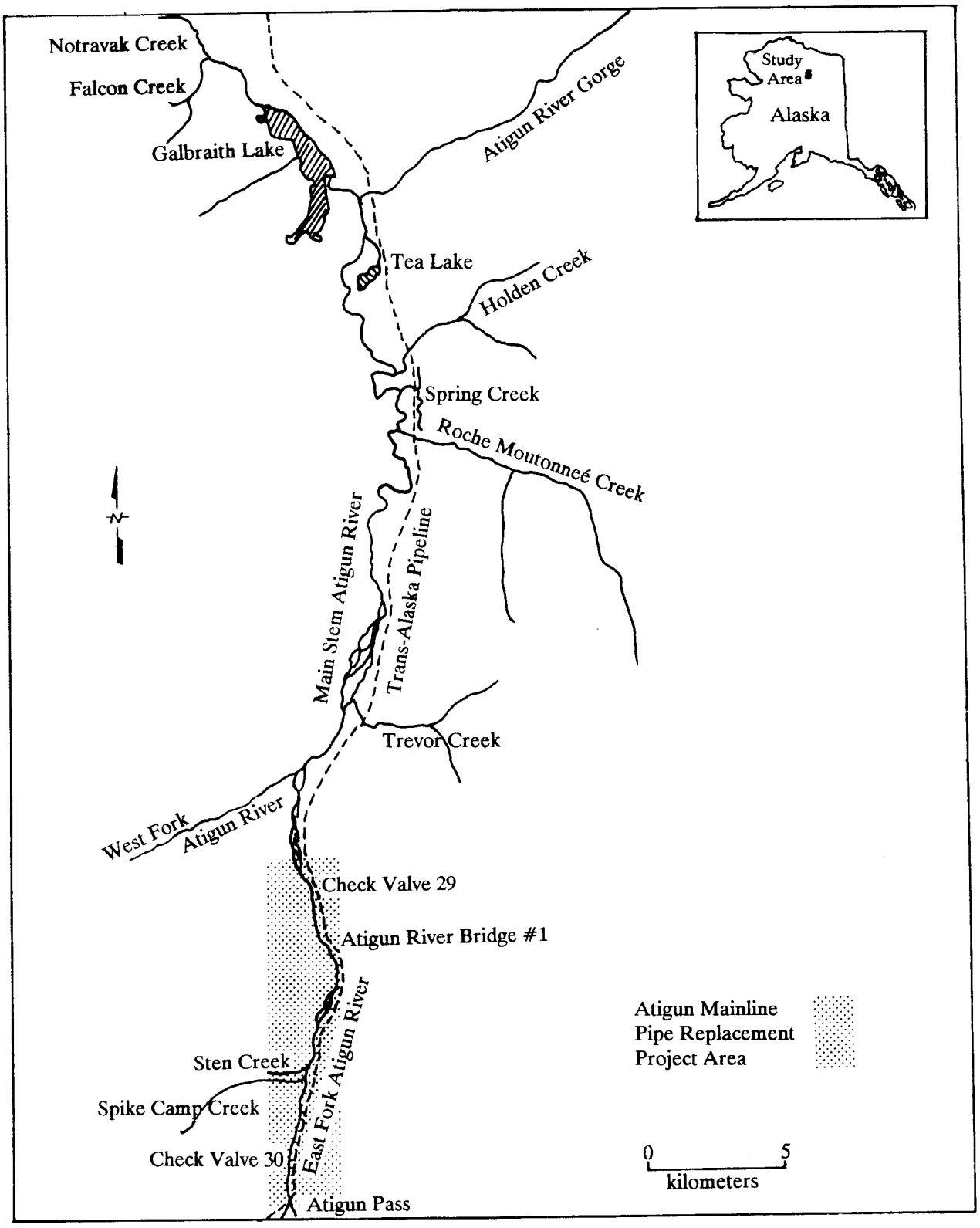


Figure 1. Map of the Atigun River drainage.

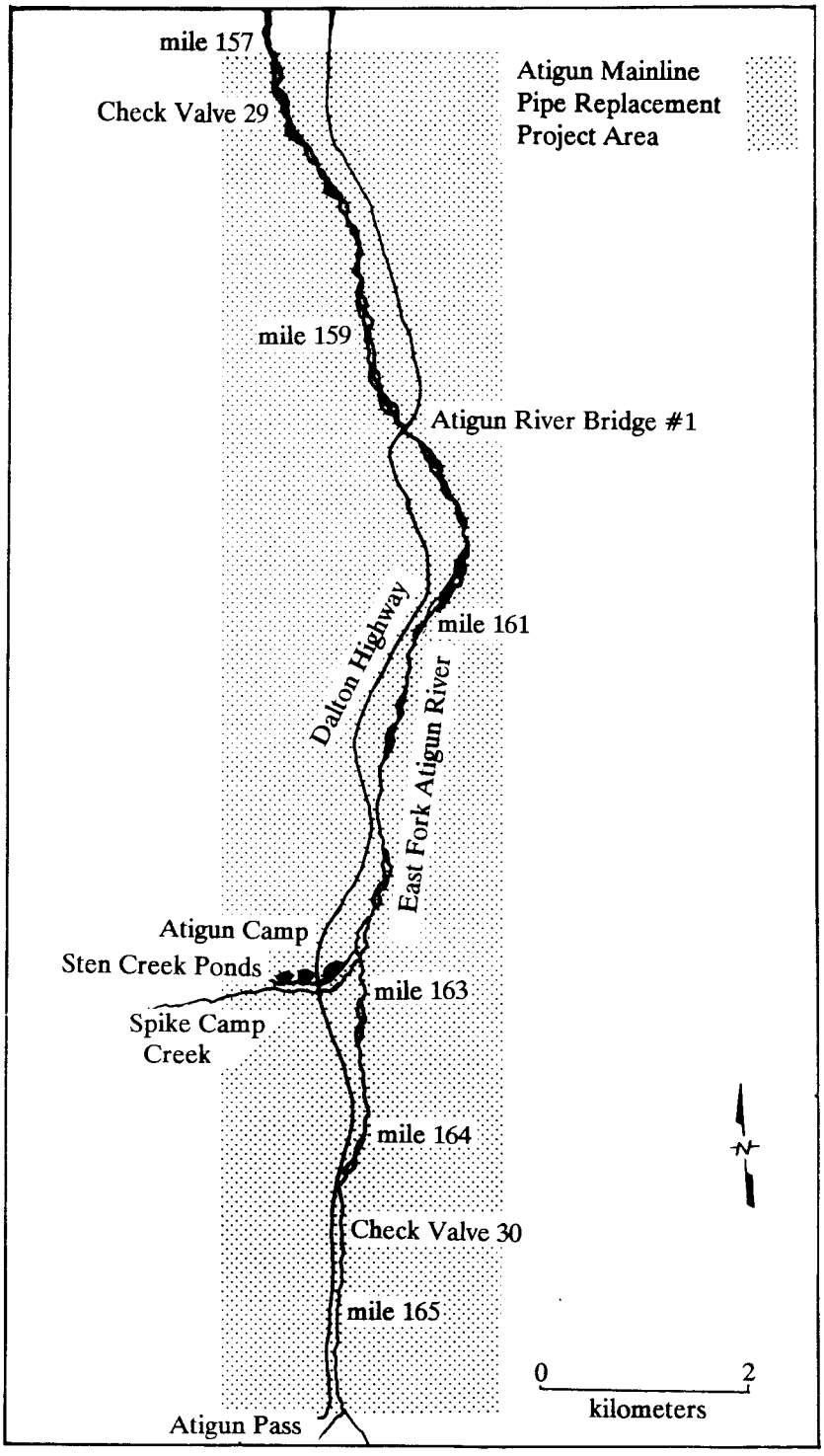


Figure 2. Map of the upper Atigun River drainage in the area of the pipeline replacement project.

completed before mid May. The river channel in the upper canyon (mile 163.6 to mile 165.6) was reconstructed on the east side of the narrow floodplain in an effort to keep the river from flowing over the newly buried pipeline. Additional material was placed over the buried pipeline to serve as an access route for maintenance of pipeline Check Valve 30 and to serve as a dike or berm to keep the river on the east side of the valley. Stream reconstruction activities included the incorporation of sinuosity to the new channel and the addition of boulders to the channel to decrease stream water velocities and enhance pool development. In areas other than the upper canyon, reconstruction activities included removal of material from existing stream channels, and construction of two major stream crossings and small cross-drainage channels across the pipeline workpad.

The pipeline replacement required excavations for the pipeline ditch in active stream channels used seasonally by Arctic grayling, round whitefish, and Dolly Varden. The pipeline replacement activities also disturbed, and in places, eliminated willow-dominated riparian habitat important to fish and wildlife species. Many of the potential direct effects of pipeline construction on fish were avoided, as most of the pipeline construction activities were completed during winter when fish were not present in this reach of the Atigun River.

The Alaska Department of Fish and Game (ADF&G) initiated a three-year fisheries study in the Atigun River valley in June 1990 to gain knowledge of the fish resources of this area to (1) assist the ADF&G in issuing Fish Habitat Permits for the pipeline replacement project so that impacts of pipeline construction activities to fish and their habitat were minimized, (2) to provide information that may be used for future development projects in the Atigun River valley, and (3) to provide information that may be applied to development projects in other North Slope streams and rivers. The general objectives of this study were to:

1. Document the use of the upper Atigun River, Sten Creek, Spike Camp Creek, and other Atigun River tributaries by Arctic grayling, round whitefish, and Dolly Varden during the open water period;

2. Identify overwintering areas of fish that use the upper Atigun River system in summer;

3. Evaluate the rehabilitation of Sten Creek within the Sten Creek material site; and

4. Evaluate the effects of the Atigun River Mainline Pipe Replacement project (reroute project) on fish habitat within the Atigun River floodplain.

This report summarizes data collected on the fish and their use of habitat in the upper Atigun River valley during the first two years of the study (summer 1990 and 1991). This report also examines the rehabilitation of Sten Creek and the Sten Creek ponds, an evaluation of the effects of the pipeline replacement project on fish distribution and habitat, and the entry of Arctic grayling, known to have used the upper Atigun River drainage, into Galbraith Lake for overwintering.

## STUDY AREA

The Atigun River valley is located in the northcentral Brooks Range about 240 km south of Prudhoe Bay. The Atigun River originates at the crest of the Brooks Range and flows northward approximately 38 km before turning abruptly and flowing northeastward about 18 km to its confluence with the Sagavanirktok River. The upper 28 km of the Atigun River consists of a series of braided channels with a gradient ranging from 3.6% at its upper end to 0.7% at the lower end of this river segment. The river changes to a single channel with an average gradient of 0.2% for the next 11 km before it enters Atigun Gorge. Through Atigun Gorge, the river descends 175 m in 18 km (an average gradient of 1.0%) before joining the Sagavanirktok River.

Upstream of Atigun Gorge, the Atigun River is fed primarily by surface runoff, although several small groundwater discharges occur within a several kilometer section of the East Fork Atigun River from Atigun River Bridge #1 to the confluence of the east and west forks of the Atigun River. The West Fork Atigun River is similar in discharge to the East Fork Atigun River. Aufeis fields form each year in these areas of groundwater discharge. Breakup occurs in mid-to-late May, with freeze-up occurring in September and early October. The East Fork Atigun River is clear except during storm events and flows associated with snowmelt and breakup. The lower Atigun River, in its single channel reach upstream of Atigun Gorge, remains turbid at moderate flows from runoff and glacial meltwater carried by some mountain tributaries. At low flows in late summer, this portion of the river is clear. The East Fork Atigun River generally is less than 1 m deep during low to moderate flows. In the single channel reach of the Atigun River upstream of the Galbraith Lake outlet, Elliott (1982) recorded a minimum of 19 pools with depths ranging from 1.5 to 2.4 m. The substrate of the Atigun River ranges from

cobble and boulder in the upper East Fork Atigun River to fine gravel, sand, and silt in the lower river near the Galbraith Lake outlet. The entire 13.7 km segment of pipeline buried in the Atigun River valley lies beneath the East Fork Atigun River.

Several tributary streams enter the Atigun River upstream of Atigun Gorge. These streams are mostly high gradient mountain streams that drain small watersheds and respond rapidly to rainfall events. Major tributary streams include Holden, Roche Moutonnée, Trevor, and Spike Camp creeks. These streams typically cross alluvial fans as they leave their source mountain valleys and enter the Atigun River valley. Some reaches of these streams have discontinuous flow where they cross their alluvial fans, particularly during dry periods and in reaches that flow through material sites or other human-disturbed areas. Some of the smaller tributary drainages have intermittent or no flow except during spring snowmelt or rain events. The larger tributary streams stop flowing during winter.

Several small streams arise from subsurface flow at the base of some mountain slopes and from some material sites created during pipeline and road construction. Spring, Vanish, One-one-three, and Leentha creeks are four such streams that occur near Roche Moutonnée and Holden creeks. These streams have a more stable discharge than do the mountain streams. Most stop flowing during winter. Aufeis may form in the lower reaches of Vanish Creek.

Several species of fish occur within the Atigun River and its tributaries. Arctic grayling is the most common species found in this drainage. Lesser numbers of round whitefish, Dolly Varden, and slimy sculpin also occur in the streams. Lake trout (*Salvelinus namaycush*), burbot (*Lota lota*), and Arctic char (*Salvelinus alpinus*) (DenBeste and McCart 1984b) occur in the deep lakes of the drainage and may enter the Atigun River and its tributaries in the vicinity of the lakes.

Suspected overwintering areas for fish using the Atigun River and its tributaries include the lower portions of the Atigun River near Galbraith Lake and several adjacent lakes (DenBeste and McCart 1984b, Elliott 1982), and Tea, Galbraith, and other deep lakes in the Atigun River drainage (DenBeste and McCart 1984b, Elliott 1982, McCart et al. 1972). The East Fork Atigun River freezes to the bottom except near Atigun River Bridge #1 where small areas of open water occur, in part from thermal irregularities created by the buried hot-oil pipeline. Limited numbers of juvenile Arctic grayling have

been observed wintering in small open-water areas near Atigun River Bridge #1 (Elliott 1982). Some fish may move as far downstream as the Sagavanirktok River to overwinter, but their numbers are presumed to be small because of the difficulty in migrating back upstream through Atigun Gorge (DenBeste and McCart 1984b).

## AREAS SURVEYED

Primary sampling areas are discussed here and elsewhere in the text. Secondary sampling areas are discussed in Appendix 1.

### Streams

The East Fork Atigun River parallels the Dalton Highway from its source at Atigun Pass to its confluence with the West Fork Atigun River about 19 km downstream. The uppermost East Fork Atigun River from about mile 165.5 to mile 163.5 flows within a narrow canyon and has an average gradient of about 3.6%. Downstream of this reach to its confluence with the West Fork Atigun River, the river valley widens, the gradient decreases to about 1.3% at its lower end, and the river becomes more braided. At some locations, the braided channels span a distance about 400 m wide. Most of the channels in this area occur in unvegetated or sparsely vegetated floodplain. In 1990, between mile 157 and 158 (the Check Valve 29 area), 90% of the river flowed through multiple natural channels in willow-dominated riparian vegetation. In spring 1991, a diversion dike was constructed in the Check Valve 29 area to keep the river from crossing or flowing down the pipeline workpad and interfering with the completion of the reroute project. This diversion dike also served to direct the Atigun River to the western side of its floodplain and prevented the river from flowing through the willow-dominated area surrounding Check Valve 29. We sampled fish extensively in the East Fork Atigun River in 1990, particularly in the Check Valve 29 area and between mile 161.5 and Check Valve 30 (mile 164.5). Our upper limit of sampling in the East Fork Atigun River was 100 m upstream of Check Valve 30. Angling, particularly in the Check Valve 29 area, and electrofishing, were the two techniques used to capture fish in these reaches of the river in 1990. We sampled fish by electrofishing in the East Fork Atigun River from mile 163 to 164.5 in late July 1991. High water levels and turbid water precluded sampling this reach of river in late June 1990 and 1991.

Spike Camp Creek is the uppermost major tributary of the Atigun River, drains an area

west of the East Fork Atigun River and enters the East Fork Atigun River at about mile 163. This stream is braided, and has channels with limited riparian cover and few, well-developed pools. Substrate in this stream is gravel and cobble. We used electrofishing to capture fish in this stream.

Sten Creek is a small tributary of the Atigun River that originates within material site (MS) 111-1A, a material site constructed in 1974-75 within the floodplain of Spike Camp Creek. The creek originates from several small seeps (subsurface flow of Spike Camp Creek exposed during excavation of the material site) at the upper end of the material site. The creek connects with two human-created ponds (the upper Sten Creek ponds) located upstream of the Dalton Highway, flows through a culvert under the Dalton Highway, and enters the lower Sten Creek pond (Figure 3). The creek upstream of the lower pond generally is between 15 to 45 cm deep, although one pool at the upper limit of the creek is in excess of 1.0 m deep. Upon leaving the lower Sten Creek pond, the creek is about 0.5 m deep throughout much of the summer and flows about 300 m before entering the Atigun River. Sten Creek continued to flow into early October in 1990 at the Sten Creek pond (most other streams in the area were dry by mid September), but the stream channel was dry and frozen about 100 m downstream of the pond. We used electrofishing as the fish sampling technique in Sten Creek.

**Human-created Ponds**

In 1990, Sten Creek pond was a nearly circular pond about 75 to 100 m in diameter within the lower Sten Creek material site (MS 111-1A). Sten Creek flowed through this pond before entering the Atigun River. About one half of this pond was less than 0.6 m deep; the remainder varied from 0.6 to 1.2 m deep. The bottom of the pond was covered with up to 15 cm of unconsolidated silt and sand. There was no submerged vegetation and virtually no emergent vegetation in this pond. Fish used this pond throughout the summer. We captured fish in the pond throughout the summer with a fyke net.

In mid May 1991, APSC excavated approximately 15,300 $m^3$ of rock and gravel within the material site surrounding the lower (original) Sten Creek pond to enhance fish habitat to mitigate impacts of the Atigun Mainline Pipe Replacement project. This excavation enlarged the existing pond, and created a pond twice as large as the original pond that now encompasses 0.75 ha (Figure 3). The new pond has an irregular shoreline with side slopes varying from 3:1 to 10:1. The depth of the pond also varies from 1.2 m within the

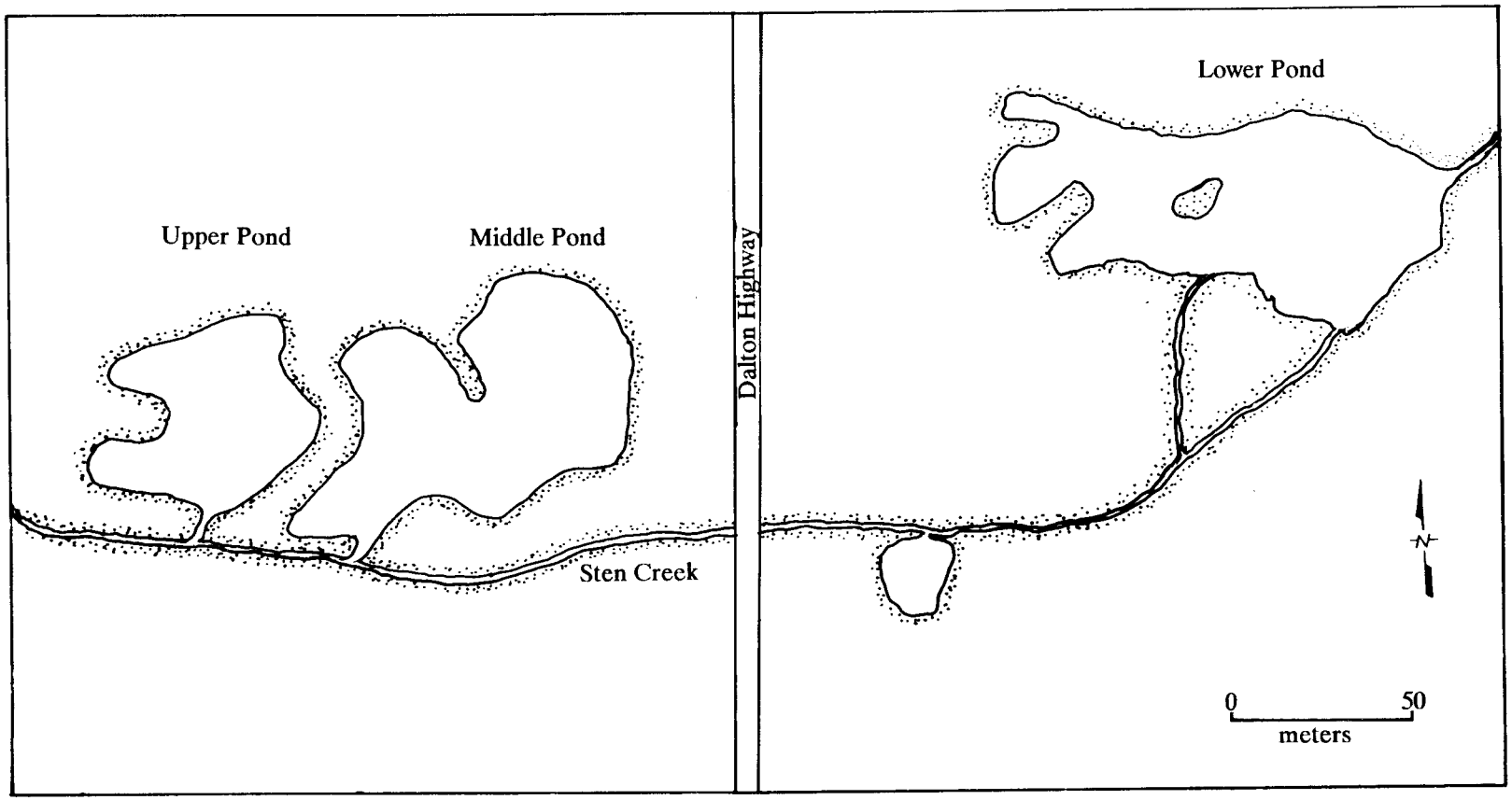


Figure 3. Sketch of the Sten Creek ponds.

margins of the original pond, to 0.5 to 0.9 m in the newly excavated regions. In addition, a small pond about 15 m in diameter, with a maximum depth of 1.5 m, was excavated and connected to Sten Creek immediately downstream of the Dalton Highway culvert crossing.

In association with the expansion of the lower Sten Creek pond, APSC constructed two ponds upstream of the Dalton Highway in the first 10 days of June 1991. These two ponds are about 0.6 ha (middle pond) and 0.3 ha (upper pond) in size and required the excavation of about 12,200 $m^3$ of material. Both ponds have side slopes of 3:1 to 10:1. The upper pond has variable water depths ranging from 0.5 to 1.0 m and the middle pond has a more uniform depth of 1.0 to 1.2 m. Both ponds connect to Sten Creek by single channels about 3 m wide. An extensive layer of fine sediment up to 15 cm deep covers the bottom of each pond. When disturbed, this sediment causes the ponds to remain turbid for several days. Revegetation of the slopes surrounding the ponds, and possibly the shallow margins of the ponds (along with other areas of the reroute project), is planned for 1992.

As part of the Sten Creek habitat enhancement component of the pipeline project, the Alaska Department of Transportation and Public Facilities, in cooperation with APSC, replaced the existing 0.6 m (24 inch) culvert at the Sten Creek crossing of the Dalton Highway with a 1.5 m (60 inch) culvert. This 1.5 m culvert, although not properly set within the streambed, reduced the velocity of water such that the stream crossing is no longer a barrier to fish passage. The 0.6 m culvert was a virtual barrier to fish passage because of excessive water velocity.

Roche Moutonnée pond is a small pond within MS 113-2 that is located within the alluvial fan of Roche Moutonnée Creek. The pond is about 100 m in diameter, and has a small spring seep from the material site that serves as an inlet stream. The pond is less than 0.6 m deep in its eastern half; the western half generally is less than 1.2 m deep, although one or two small regions are deeper than 1.2 m. The bottom of the pond is cobble, generally covered with a thin layer of silt. The outlet channel (known as One-one-three Creek [Elliott 1982]) from the pond is less than 50 mm deep in several places and may prevent fish from entering the pond. Elliott (1982) recorded juvenile Arctic grayling in the pond in 1980. We did not see any fish in this pond nor did we catch any in a fyke net set here in late June 1990.

### Natural Ponds

A small tundra pond at the toe of the alluvial fan of a mountain tributary of the Atigun River at mile 159.9 contained Arctic grayling in 1991. The pond is fed by surface runoff and seeps from nearby mountain slopes. Low shrub vegetation surrounds about 60% of the pond. This pond is about 100 m long by 10 to 15 m wide, is a maximum of about 1.2 m deep, and connects with the Atigun River by a small channel that crosses the pipeline right-of-way. Outwash gravels from the mountain tributary are beginning to fill the lower end of the pond.

### Lake Outlets

Two large lakes within the Atigun River valley are connected to the Atigun River with outlet channels deep enough to allow fish passage during the open-water season. Tea and Galbraith lakes are deep lakes that support fish populations year-round and are suspected of providing overwintering habitat for most of the fish that spend the summer months in the streams of the Atigun River drainage. The outlets of these lakes served as fyke net sites for our late summer attempt to capture fish tagged in the Atigun River drainage as they possibly entered the lakes for overwintering. Sampling periods at the outlets of these lakes were 28-30 August and 11-15 September 1990, and 26-30 August and 3-12 September 1991.

## METHODS

We captured and marked fish in the Atigun River system to document local movements and to document movements of fish to suspected overwintering areas. We made no effort to quantify the number of fish in particular stream reaches. We used fyke nets to capture fish at the outlets of Tea and Galbraith lakes in late summer 1990 and 1991 to check for marked fish entering the lakes for overwintering. We used several techniques to capture fish for marking and tagging within the Atigun River and its tributaries. We placed fyke nets in the Sten Creek and Roche Moutonnée Creek material site ponds at various times during summer 1990 and in the Sten Creek ponds in 1991. We used the same fyke net sites when sampling in the Sten Creek ponds and at the Galbraith and Tea lake outlets. When water levels permitted, electrofishing with a Smith-Root model 15-A backpack electrofisher (use of manufacturer's name does not constitute endorsement) proved effective in channels of the Atigun River, Holden Creek, Spike Camp Creek, and

Sten Creek. Angling was effective for capturing Arctic grayling, particularly near flooded vegetation and in some deeper pools. We measured all fish (except some slimy sculpin at the Galbraith Lake outlet in September 1990 and 1991; except Arctic grayling on 6-7 September 1991, and no fish were measured following 7 September 1991) to the nearest millimeter (fork length [FL]) and clipped adipose fins on all fish caught in the Atigun River drainage upstream of the lake outlets (with the exception of fish in Spring Creek in 1991). We also clipped the top lobe of the caudal fin on all fish caught in June, July, and on 3 August 1990. We tagged all fish greater than 189 mm [7.5 in] (except the occasional fish that responded poorly following electrofishing) with numbered yellow floy tags. We did not clip any fins or tag any fish caught at the Tea or Galbraith lake outlets in 1990. We tagged (but generally did not fin-clip) all fish greater than 189 mm caught at Galbraith and Tea lake outlets between 27 August and 5 September 1991. We handled, measured, and marked all fish without anesthetics. Sampling periods were 22-28 June, 17-19 July, 3-6 August, 27-31 August, and 11-15 September during 1990; and 7-9 May, 13-24 May, 29 May-1 June, 4-7 June, 13-14 June, 19-27 June, 27-30 July, 26-30 August, and 3-12 September in 1991.

Statistical comparisons of mean fork lengths of Arctic grayling were conducted at the 0.05 level of significance with the Student's t-test. Statistical comparisons of distributions of length frequencies of Arctic grayling by the Kolmogorov-Smirnov test also were conducted at the 0.05 level of significance. Statistical comparisons of mean lengths or length frequencies of Arctic grayling were not performed between samples from the Sten Creek ponds and stream sampling areas because of the different sampling techniques used (fyke nets in the ponds; electrofishing or angling in streams) and the different types of aquatic habitat (static versus flowing water).

## RESULTS

### Summer 1990

During summer 1990, we fin-clipped or tagged 916 fish within the Atigun River and its tributaries, most of which (852) were Arctic grayling (Table 1). The remainder of the catch consisted of 43 Dolly Varden, 20 round whitefish, and 1 slimy sculpin. Of this catch of 916 fish, 323 were large enough to receive numbered floy tags: 298 Arctic grayling, 17 round whitefish, and 8 Dolly Varden. Within the immediate area of the project (mile 157.1 to 164.5), we captured 696 Arctic grayling, 42 Dolly Varden, and 16

Table 1. Number of fish caught at each sampling location in the Atigun River drainage, June - September 1990.

| Area | Species | | | | | |
|---|---|---|---|---|---|---|
| | Arctic Grayling | | Dolly Varden | | Round Whitefish | |
| Project Area | | | | | | |
| **Sten Creek** (mi 163.0) | 17[a] | (15)[b] | 1 | (1) | 1 | (1) |
| **Sten Creek Pond** (mi 163.0) | 428 | (92) | 18 | (0) | 13 | (11) |
| **Spike Camp Creek** (mi 163.0) | 15 | (15) | 1 | (1) | - | |
| **Atigun River** - Spike Camp Creek to Check Valve 30 (mi 163.1-164.5) | 95 | (50) | 22 | (7) | 1 | (1) |
| **Atigun River** - Spike Camp Creek to Bridge #1 (mi 163.0-159.6) | 28 | (21) | - | | 1 | (1) |
| **Atigun River** - Check Valve 29 area (mi 157.2-158.0) | 113 | (70) | - | | - | |
| **subtotal** | **696** | **(263)** | **42** | **(8)** | **16** | **(14)** |
| Secondary Areas | | | | | | |
| **Trevor Creek** (mi 154.1) | 23 | (16) | - | | - | |
| **Main Stem Atigun River** (mi 153.0) | 22 | (3) | - | | 2 | (2) |
| **Roche Moutonnée Creek** (mi 147.6) | 6 | (1) | 1 | (0) | - | |
| **Spring Creek** (mi 146.5) | 72 | (2) | - | | - | |
| **Holden Creek** (mi 146.0) | 33 | (13) | - | | 2 | (1) |
| **subtotal** | **156** | **(35)** | **1** | **(0)** | **4** | **(3)** |
| **TOTAL** | **852** | **(298)** | **43** | **(8)** | **20** | **(17)** |

[a]total number marked
[b]number marked with numbered floy tags

round whitefish. We caught most of the Arctic grayling (428), round whitefish (14), and Dolly Varden (18) in the project area in the Sten Creek pond. Of these fish, 263 Arctic grayling, 8 Dolly Varden, and 14 round whitefish received numbered floy tags. We recaptured 91 (88 Arctic grayling, 2 round whitefish, and 1 Dolly Varden) of the 916 fish over the summer, 57 in the Sten Creek pond and all within the project area. We did not observe any young-of-the-year Arctic grayling, Dolly Varden, or round whitefish in any streams within the project area.

**Sten Creek Pond - Arctic grayling**

Arctic grayling inhabited the Sten Creek pond when we initiated sampling on 22 June 1990. Fish from 200 to 260 mm FL dominated the catch (Figure 4, Table 2). By early August, the catch of Arctic grayling contained fish primarily between 160 and 240 mm FL. The size composition of Arctic grayling captured in the Sten Creek pond continued to shift downward in late August. An influx of Arctic grayling in the 101 to 120 mm FL size class occurred between early and late August and composed 50% of the fyke net catch in late August (Figure 4). Virtually all fish left the Sten Creek pond by 11 September 1990. Two Arctic grayling, 103 and 150 mm long, were the only fish we caught in the Sten Creek pond from 11 to 15 September 1990.

The mean fork length of Arctic grayling caught in early August was significantly smaller than that of Arctic grayling caught in late June in the Sten Creek pond (Table 2). Similarly, the mean fork length of Arctic grayling caught in late August was significantly smaller than that recorded for Arctic grayling caught in early August. The distribution of length frequencies of Arctic grayling caught in late June did not differ significantly from that of Arctic grayling captured in early August. The distributions of length frequencies of Arctic grayling did not differ significantly for any of the time periods or sampling areas for which we compared mean lengths of Arctic grayling.

**East Fork Atigun River and Tributaries - Arctic grayling**

Sten Creek. We did not see or capture any fish within Sten Creek upstream of the Dalton Highway in June, July, or August 1990. By late August, upper Sten Creek was channelized and the material site leveled as part of the pipeline reroute project. We captured Arctic grayling in the plunge pool downstream of the Dalton Highway culvert

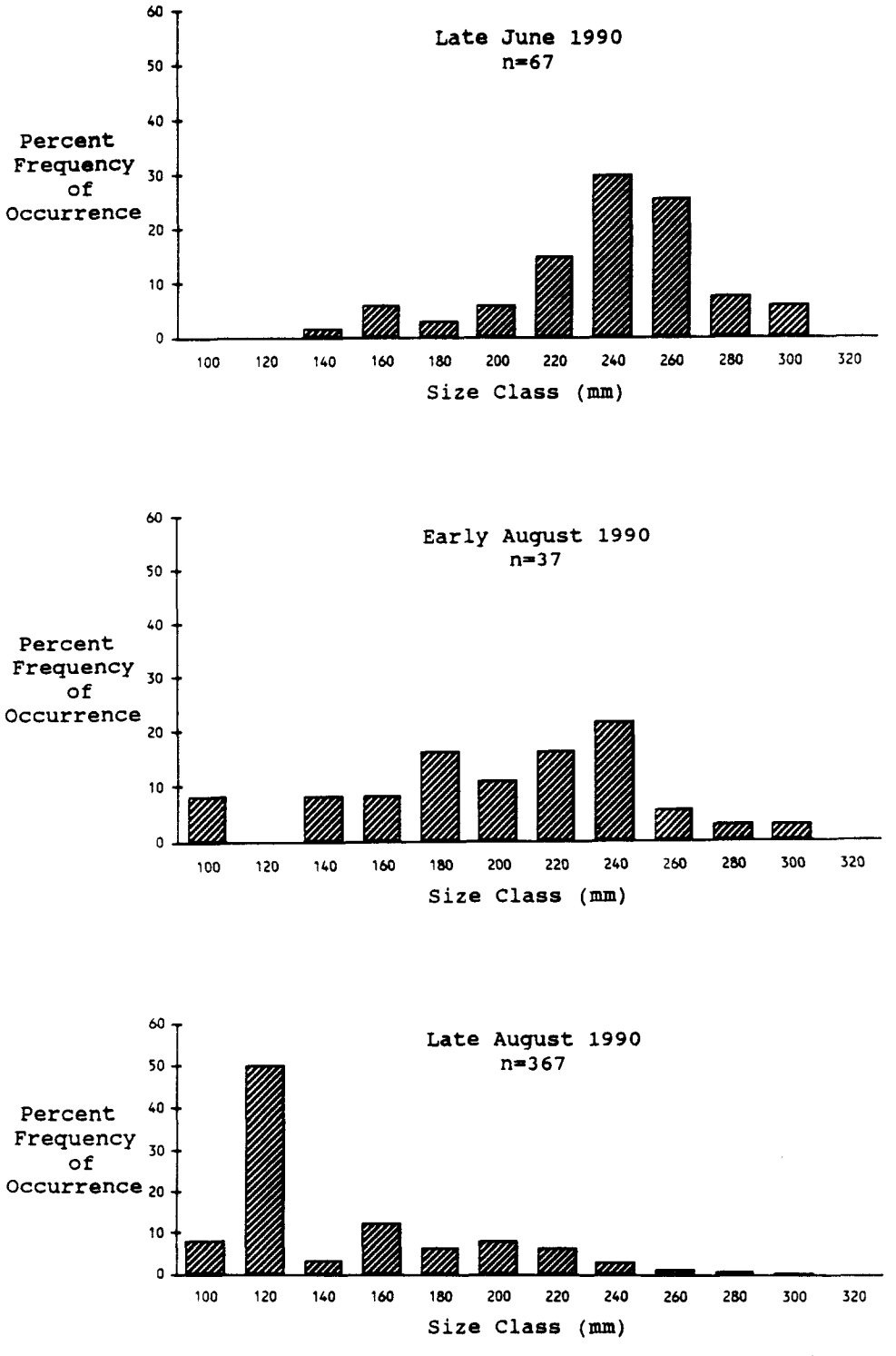


Figure 4. Length-frequencies of Arctic grayling caught in the Sten Creek pond during June and August 1990. (Size classes in 20 mm increments: e.g., size class 100 includes 81-100 mm fish)

Table 2. Mean fork lengths (mm) of Arctic grayling caught in the upper Atigun River drainage in 1990.

| Area | | Late June | Early August | Late August |
|---|---|---|---|---|
| **Sten Creek Ponds** | $\bar{x}$ | 227.9[a] | 190.4 [a,b] | 137.3[b] |
| (mi 163.0) | sd | 35.0 | 49.4 | 42.1 |
| | n | 67 | 37 | 367 |
| | range | 132-297 | 88-299 | 86-284 |
| **Sten Creek** | $\bar{x}$ | 232.6 | 217.9 | - |
| (mi 163.0) | sd | 38.8 | 46.5 | - |
| | n | 10 | 7 | - |
| | range | 171-312 | 164-302 | - |
| **Atigun River** - | $\bar{x}$ | - | 227.8 [c] | 172.6[c] |
| Spike Camp Creek | sd | - | 34.3 | 44.3 |
| to Check Valve 30 | n | - | 63 | 46 |
| (mi 163.1-164.5) | range | - | 147-318 | 100-301 |
| **Atigun River** - | $\bar{x}$ | 192.8 | 225.4 | - |
| Bridge #1 to Sten Creek | sd | 50.8 | 47.7 | - |
| (mi 159.6-163.1) | n | 6 | 28 | - |
| | range | 154-291 | 99-317 | - |

[a-c] indicates significant differences between mean values with the same letter.

on several occasions, which, along with the lack of fish upstream of the culvert, suggested that this 0.6 m culvert was a barrier to fish passage during 1990.

Arctic grayling resided within lower Sten Creek during June, July, and August. The mean fork length of Arctic grayling caught in the creek was slightly larger than that of Arctic grayling caught in the Sten Creek pond for the June and early August sampling periods (Table 2). Fish caught in Sten Creek included fish tagged previously in the Sten Creek pond and fish tagged in the East Fork Atigun River upstream of Sten Creek.

Spike Camp Creek. We sampled Spike Camp Creek on two occasions in early August, and caught a relatively small number of fish (15 Arctic grayling, 1 Dolly Varden) in the lower 1.6 km of the stream. Several fish were in small side-channel pools with insufficient water to allow fish to leave these pools in early August. Most or all of these fish were able to leave these pools by late August as evidenced by visual inspection of the pools and by the recovery of an Arctic grayling in the East Fork Atigun River tagged previously in one of the isolated pools.

East Fork Atigun River - Atigun River Bridge #1 upstream to Spike Camp Creek. High stream flows within the main channels of the East Fork Atigun River prevented sampling of most of the river upstream of Atigun River Bridge #1 until early August. Arctic grayling and round whitefish occupied and travelled through this portion of the river in mid June as these species were in Sten Creek and the Sten Creek pond in late June. A few fish occupied small side channels between Atigun River Bridge #1 (mile 159.6) and the mouth of Spike Camp Creek (about mile 163) from late June through August. The mean fork length of Arctic grayling in these side channels in June was smaller than that recorded for Arctic grayling caught in the Sten Creek pond in June (Table 2). The mean fork length of Arctic grayling in the Atigun River from Atigun River Bridge #1 to Spike Camp Creek in early August was larger than that of Arctic grayling found in the Sten Creek pond in early August (Table 2). The mean fork length of Arctic grayling in the East Fork Atigun River in early August did not differ significantly between the river segments Atigun River Bridge #1 to Spike Camp Creek and Spike Camp Creek to Check Valve 30 (Table 2).

East Fork Atigun River - Spike Camp Creek upstream to Check Valve 30. In early August, fish occupied the upper East Fork Atigun River to a point about 100 m upstream of Check Valve 30 (about milepost 164.5). Arctic grayling were the most common fish

in the reach of the East Fork Atigun River between Spike Camp Creek and Check Valve 30. One to three fish generally occupied each small pool. The mean fork length of Arctic grayling in this reach of the Atigun River was larger than that of Arctic grayling in the Sten Creek pond in early August (Table 2).

In late August, as in the Sten Creek pond, Arctic grayling captured in the uppermost reaches of the East Fork Atigun River between Spike Camp Creek and Check Valve 30 were significantly smaller than Arctic grayling captured there in early August (Table 2). This difference reflects the influx of substantial numbers of Arctic grayling in the 101 to 120 mm FL size class to the upper Atigun River and Sten Creek pond area between early and late August. Arctic grayling in the 101 to 120 mm FL size class essentially were absent in the catches before late August. However, Arctic grayling in this reach of river were larger than those in the Sten Creek pond (Table 2). Arctic grayling were most numerous between the mouth of Spike Camp Creek and a point about 0.8 km upstream in the Atigun River. The number of fish between this point (mile 163.5) and Check Valve 30 (mile 164.5) declined from a catch of 31 in early August to 6 on 29 August.

Check Valve 29 area. A 1.2 km reach of the East Fork Atigun River (mile 157.2 to 157.9) located around Check Valve 29 was used extensively by Arctic grayling. In this area, the river flowed in multiple channels through a vegetated area dominated by willows. Much of the area outside defined channels was flooded to a depth of 150 to 300 mm, and provided fish with extensive rearing habitat. Arctic grayling were present in this area in late June; however, high water precluded sampling until mid July and early August. The mean fork length of Arctic grayling caught by electrofishing in this area in mid July was 197.2 mm FL (sd = 31.5, n=32). The mean fork length of Arctic grayling caught by angling in this area in early August was 218.4 mm FL (sd = 46.26, n=70). By late August, the number of fish declined as fish began moving to overwintering areas. By mid September, only an occasional small Arctic grayling remained.

### Other Species

We captured round whitefish in the Sten Creek pond in June, July, and August 1990, although their frequency of capture (n=14) was much lower than that of Arctic grayling. Round whitefish in June, July, and early August ranged from 254 to 355 mm FL (mean = 323.9 mm, sd = 26.3, n=12), although the two round whitefish caught in late August (160 and 154 mm FL) were considerably smaller than those caught earlier in the year. We did

not catch any round whitefish in the Sten Creek pond in September 1990. We caught only four round whitefish in the Atigun River or its tributary streams within the project area. One of these round whitefish was caught in early August in the Atigun River at Check Valve 30, the upstream limit of fish distribution recorded in 1990.

Dolly Varden also used the Sten Creek pond. We caught the first two Dolly Varden in the pond on 4 August 1990, and caught two additional fish over the next two days. These four fish ranged from 147 to 156 mm FL. We captured an additional 15 Dolly Varden in Sten Creek pond in late August. These fish ranged from 131 to 188 mm FL. The mean fork length of these fish was 157.9 mm (sd = 20.1, n=15). We did not catch any Dolly Varden in the Sten Creek pond in September.

We also found a few Dolly Varden in scattered pools in the Atigun River upstream of Sten Creek in early August. Dolly Varden captured in this reach of the Atigun River were larger than the Sten Creek pond Dolly Varden and ranged from 128 to 237 mm FL. The larger Dolly Varden generally occupied pools near the upper limit of fish distribution (i.e., between mile 164.0 and Check Valve 30 [mile 164.5]). We found only one Dolly Varden in these upper pools in late August, as most Dolly Varden and Arctic grayling had moved downstream to overwintering areas.

### Summer 1991

From May through August 1991, we fin-clipped or tagged 261 fish within the upper Atigun River drainage, 247 of which were Arctic grayling (Table 3). The remainder of the catch consisted of seven Dolly Varden and seven round whitefish. Of this catch of 261 fish, 113 were large enough to receive numbered floy tags: 108 Arctic grayling, 1 Dolly Varden, and 4 round whitefish. We caught all fish within the reroute project area and caught most in the Sten Creek ponds. In addition, we captured 58 Arctic grayling and 1 round whitefish outside of the project area at Tea Lake and Spring Creek from mid May to early June (Table 3).

### Sten Creek Ponds and the East Fork Atigun River and Tributaries

We first observed Arctic grayling in the Sten Creek ponds in 1991 on 13 June. We caught mostly Arctic grayling in the Sten Creek ponds in 1991. As in 1990, the mean

Table 3. Number of fish caught at each sampling location in the Atigun River drainage, May - August 1991.

| Area | Species | | | | | |
|---|---|---|---|---|---|---|
| | Arctic Grayling | | Dolly Varden | | Round Whitefish | |
| Project Area | | | | | | |
| **Atigun River** - Spike Camp Creek to Check Valve 30 (mi 163.1-164.5) | 12[a] | (9)[b] | 3 | (1) | 1 | (1) |
| **Sten Creek Ponds** (mi 163.0) | 211 | (85) | 3 | (0) | 6 | (3) |
| **Spike Camp Creek** (mi 163.0) | 9 | (6) | 1 | (0) | | - |
| **Tundra Pond** (mi 159.9) | 15 | (8) | | - | | - |
| **Total** | **247** | **(108)** | **7** | **(1)** | **7** | **(4)** |
| Secondary Areas[c] | | | | | | |
| **Tea Lake Inlet** (mi 143.5) | 32 | | | - | 1 | |
| **Tea Lake Outlet** (mi 143.4) | 5 | | | - | - | |
| **Spring Creek** (mi 146.5) | 21 | | | - | - | |
| **Total** | **58** | | | **-** | **1** | |

[a]total number marked
[b]number marked with numbered floy tags
[c]catches from mid May to early June only

fork length of Arctic grayling caught in the Sten Creek ponds decreased over the summer (Figure 5). Arctic grayling in the 221-240 mm FL size class were the most abundant size class in late June 1991 as in 1990. The late July catch of Arctic grayling in the Sten Creek ponds lacked fish less than 100 mm FL that appeared in the early August 1990 sample; this probably reflected the slightly earlier sampling period in 1991. The late August 1991 catch had a bimodal distribution with larger numbers of fish occurring in the 81 to 120 mm and 141 to 160 mm FL size classes.

The mean fork length of Arctic grayling using the Sten Creek ponds in June 1991 was not significantly different from the mean fork length of Arctic grayling in the ponds in June 1990 (Table 4). A similar comparison of mean fork lengths of Arctic grayling using the Sten Creek ponds in early August 1990 and late July 1991 also found no significant difference between means. The mean fork length of Arctic grayling in the Sten Creek ponds in late August 1991 was significantly larger than that recorded for Arctic grayling here in late August 1990 (153 vs 137 mm FL). Between year variation in mean length was not significant for Arctic grayling in Spike Camp Creek and for Arctic grayling in the Atigun River between Spike Camp Creek and Check Valve 30.

We caught Arctic grayling in all three Sten Creek ponds in July 1991, whereas at the end of June 1991, we caught Arctic grayling only in the lower pond. The mean fork length of Arctic grayling in the Sten Creek ponds (values for fish in all three ponds combined) in late July 1991 was smaller than the mean fork length of Arctic grayling in the Atigun River between Spike Camp Creek and Check Valve 30 (Table 4). Differences in mean fork length of Arctic grayling in Spike Camp Creek and the Atigun River between Spike Camp Creek and Check Valve 30 for late July 1991 were not significant (Table 4). The mean fork length of Arctic grayling in the Sten Creek ponds in late July 1991 also was smaller than the mean fork length of Arctic grayling in Spike Camp Creek (Table 4).

The segment of the East Fork Atigun River upstream of mile 163.6 to its headwaters was disrupted completely by pipeline construction activities and then reconstructed in spring 1991. Active stream channels within the segment of river from mile 163.1 to mile 163.6, although not excavated or altered by construction activities, were different in 1990 versus 1991. The reconstructed channel upstream of this section directed water to channels that were active and to channels that were dry in 1990. The only section of the upper East Fork Atigun River relatively unaffected by the construction activities was the confluence of Spike Camp Creek and the Atigun River.

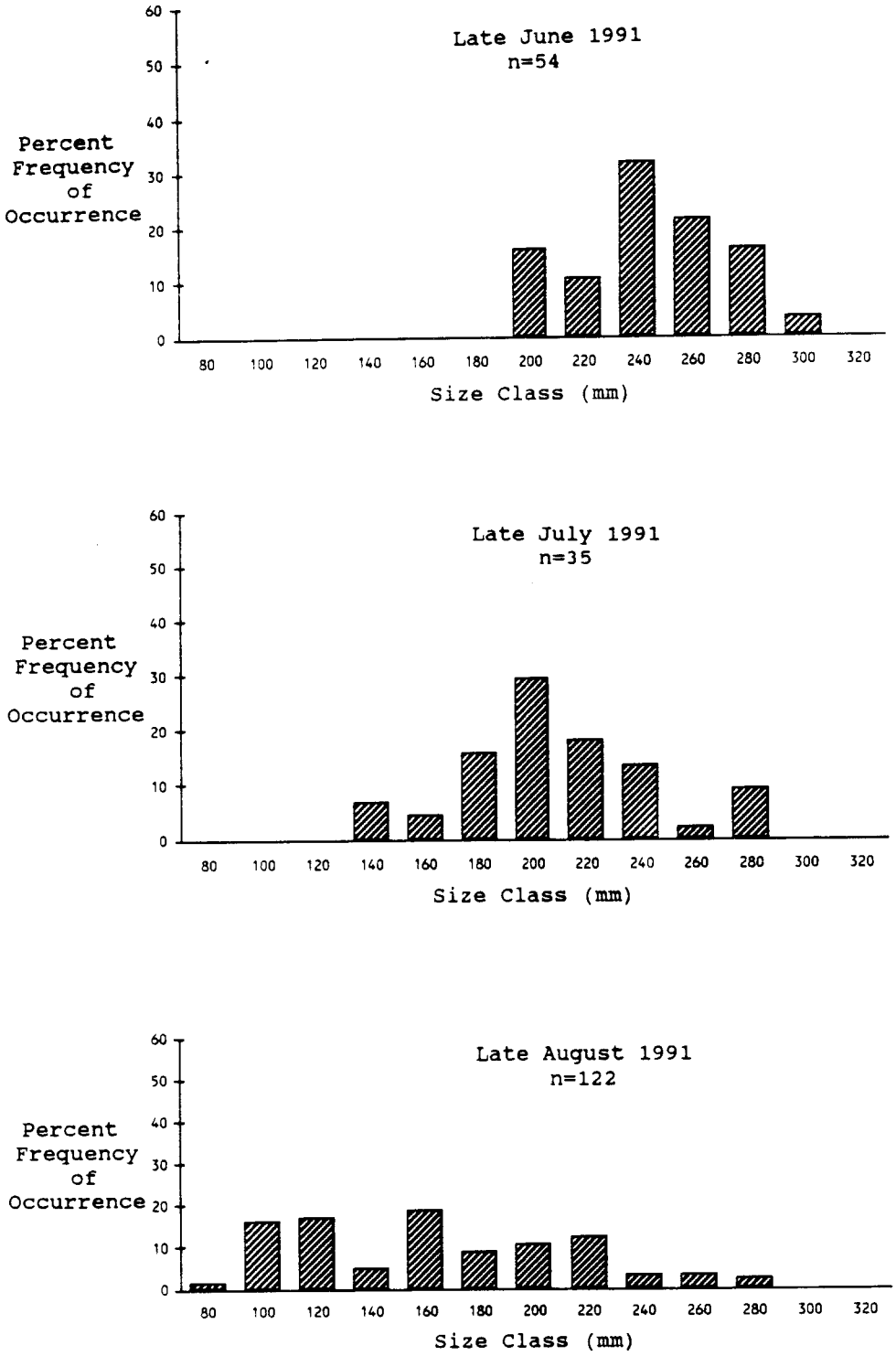


Figure 5. Length-frequencies of Arctic grayling caught in the Sten Creek ponds June through August 1991. (Size classes in 20 mm increments: e.g., size class 100 includes 81-100 mm fish)

Table 4. Comparison of mean fork lengths of Arctic grayling in sections of the upper Atigun River drainage, 1990 and 1991.

| Area | | Late June | | Early August | Late July | Late August | |
|---|---|---|---|---|---|---|---|
| | | 1990 | 1991 | 1990 | 1991 | 1990 | 1991 |
| **Sten Creek Ponds**[a] | $\bar{x}$ | 227.9 | 234.0 | 190.4 | 195.6 | 137.3[b] | 153.8[b] |
| (mi 163.0) | sd | 35.0 | 27.3 | 49.4 | 35.4 | 42.1 | 50.7 |
| | n | 67 | 54 | 37 | 35 | 367 | 122 |
| | range | 132-297 | 187-294 | 88-299 | 129-278 | 86-284 | 70-270 |
| **Spike Camp Creek** | $\bar{x}$ | - | - | 233.3 | 224.9 | - | - |
| (mi 163.0) | sd | - | - | 28.4 | 10.2 | - | - |
| | n | - | - | 15 | 7 | - | - |
| | range | - | - | 193-285 | 186-280 | - | - |
| **Atigun River** - | $\bar{x}$ | - | - | 227.8 | 217.5 | - | - |
| Spike Camp Creek | sd | - | - | 34.3 | 31.2 | - | - |
| to Check Valve 30 | n | - | - | 63 | 15 | - | - |
| (mi 163.1-164.5) | range | - | - | 147-318 | 185-280 | - | - |

[a] in 1990 only one pond existed; in 1991, three ponds existed
[b] indicates significant difference between mean values with the same letter

In the 2.4 km section of the Atigun River upstream of Spike Camp Creek to Check Valve 30, use by Arctic grayling and Dolly Varden was considerably lower in 1991 than in 1990 (Table 5), probably because of an increase in average water velocity and a reduction in the number of well-developed pools in this reach of the river. However, the number of Arctic grayling captured in undisturbed habitat (at the Atigun River/Spike Camp Creek confluence) and disturbed habitat (mile 163.1 to 164.5) was not significantly different ($\chi^2 = 0.71$, df = 1, $p > 0.05$) between 1990 and 1991. The number of Dolly Varden distributed in stream segments of the East Fork Atigun River (mile 163.1 to 164.5) in 1991 was significantly different ($\chi^2 = 6.29$, df = 2, $p < 0.05$) from that observed in 1990.

**Movements of Tagged Fish in 1990 and 1991**

The recapture of tagged fish provided indications of the movements of fish within the upper Atigun River drainage. Of the 192 fish (171 Arctic grayling, 8 Dolly Varden, and 13 round whitefish) marked with numbered floy tags upstream of the Atigun River Bridge #1 in 1990, we recaptured 49 (47 Arctic grayling and 2 round whitefish) upstream of Atigun River Bridge #1 in July and August 1990 (Table 6). We recaptured 30 (29 Arctic grayling and 1 round whitefish) of the 110 fish (99 Arctic grayling and 11 round whitefish) marked with floy tags in the Sten Creek pond in 1990. We caught twenty of these recaptured fish one or more times in July or August in the Sten Creek pond. The other 10 recaptured fish (9 Arctic grayling and 1 round whitefish) initially marked in the Sten Creek pond, moved into Sten Creek, lower Spike Camp Creek, or the East Fork Atigun River upstream of Sten Creek. Seven of eight Arctic grayling that moved upstream of Sten Creek, moved into the East Fork Atigun River and then upstream as far as 2.4 km (up to the Check Valve 30 area [mile 164.5]) by early August; the other Arctic grayling moved downstream in the East Fork Atigun River about 1.5 km below the Sten Creek pond outlet.

Most of the Arctic grayling initially tagged in Sten Creek and later recaptured were caught in the Sten Creek pond. The others moved to the Atigun River and remained within 2 km of the Sten Creek ponds.

Recaptured Arctic grayling that we tagged in the Atigun River upstream of the Sten Creek ponds generally stayed within 2 km of the tagging location. We recaptured several Arctic grayling several kilometers downstream of their initial capture point within a few

Table 5. Comparison of fish distribution and catches by electrofishing in the upper Atigun River, 3-5 August 1990 and 27-29 July 1991.

| Location | Species | Number of Fish 1990 | 1991 |
|---|---|---|---|
| Spike Camp Creek/ | AG | 8 | 3 |
| Atigun River Confluence | DV | - | - |
| (mile 163) | RWF | - | - |
| Mile 163.1-163.6[a] | AG | 24 | 7 |
| | DV | 1 | 2 |
| | RWF | - | 1 |
| Mile 163.6-164.0[b] | AG | 12 | 3 |
| | DV | 8 | 1 |
| | RWF | - | - |
| Mile 164.0-164.5[b] | AG | 19 | 1 |
| (Check Valve 30) | DV | 5 | - |
| | RWF | 1 | - |
| Total | AG | 63 | 14 |
| | DV | 14 | 3 |
| | RWF | 1 | 1 |

AG = Arctic grayling
DV = Dolly Varden
RWF = round whitefish

[a] Although stream channels in this reach were not altered by construction activities, channels that were active in 1991 were different from those active in 1990; upstream reconstructed stream channels directed flow in 1991 to channels that were dry in 1990.

[b] The stream channel in this reach of the Atigun River was disturbed during pipeline construction activities and reconstructed in spring 1991.

Table 6. Locations of recapture of fish tagged in the Atigun River drainage in 1990 and recaptured in 1990 and 1991.

| Original Capture Location and Number Tagged in 1990 | | Recapture Location: Sten Creek Ponds 1990 | Sten Creek Ponds 1991 | Sten Creek 1990 | Sten Creek 1991 | Spike Camp Creek 1990 | Spike Camp Creek 1991 | Atigun Up[a] 1990 | Atigun Up[a] 1991 | Atigun Down[b] 1990 | Atigun Down[b] 1991 | Check Valve 29 1990 | Check Valve 29 1991 | Tundra Pond[c] 1990 | Tundra Pond[c] 1991 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sten Creek Ponds | | | | | | | | | | | | | | | |
| Arctic grayling | 92 | 19 | 8 | 1 | - | 1 | - | 7 | - | 1 | - | - | - | - | - |
| Round whitefish | 11 | - | 2 | - | - | - | - | - | - | 1 | - | - | - | - | - |
| Sten Creek | | | | | | | | | | | | | | | |
| Arctic grayling | 15 | 6 | - | - | - | - | 1 | 2 | - | 2[d] | - | - | - | - | - |
| Round whitefish | 1 | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Spike Camp Creek | | | | | | | | | | | | | | | |
| Arctic grayling | 15 | - | - | - | - | - | - | 1 | - | 1[d] | - | - | - | - | - |
| Atigun Up | | | | | | | | | | | | | | | |
| Arctic grayling | 50 | - | 3 | - | - | - | 1 | 3[d] | - | 1[d] | - | - | - | - | - |
| Round whitefish | 1 | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - |
| Atigun Down | | | | | | | | | | | | | | | |
| Arctic grayling | 21 | - | - | - | - | - | - | 1 | - | - | - | - | - | - | 1 |
| Round whitefish | 1 | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - |
| Check Valve 29 | | | | | | | | | | | | | | | |
| Arctic grayling | 70 | - | 1 | - | - | - | - | - | - | - | - | 1 | - | - | - |
| Tundra Pond | 0 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

[a] Atigun Up = Atigun River upstream of and including the Spike Camp Creek/Atigun River confluence

[b] Atigun Down = Atigun River downstream from the Spike Camp Creek/Atigun River confluence to Atigun River bridge #1

[c] Tundra Pond = small tundra pond connected to the Atigun River at mile 159.9

[d] capture-related movement of one fish in each indicated category

days after their initial capture. This movement probably was capture-induced and has been recorded for other Arctic grayling captured by electrofishing (Clark 1989, Ridder 1983, Tack 1974).

Most fish tagged in 1990 and recaptured in the upper Atigun River drainage in 1991, as in 1990, were recaptured within a few kilometers of their tagging location (Table 6). Of the 11 tagged Arctic grayling and 3 tagged round whitefish recaptured in the Sten Creek ponds in June, all but one Arctic grayling were tagged in the Sten Creek pond (8 Arctic grayling and 2 round whitefish) or in the Atigun River between Spike Camp Creek and Check Valve 30 (2 Arctic grayling and 1 round whitefish) in 1990. The one other tagged Arctic grayling recaptured in the Sten Creek ponds was tagged in the Check Valve 29 area (mile 157.2 to 157.9) in early August 1990 (an area not accessible to fish in 1991 because of channel diversions associated with pipeline construction activities). This fish travelled a documented 6 to 7 km farther upstream in 1991 than in 1990. No Arctic grayling tagged in the Check Valve 29 area or farther downstream in 1990 had been recaptured upstream of Atigun River Bridge #1 before this fish.

In July and August 1991, we recaptured an additional 15 tagged Arctic grayling and one tagged round whitefish in the upper Atigun River drainage within a few kilometers of their original tagging location. All recaptured Arctic grayling in the Atigun River from Spike Camp Creek to Check Valve 30 in 1991 (n=3) were tagged in the Sten Creek ponds in 1991; no fish tagged in 1990 were recaptured in the upper East Fork Atigun River in 1991. Two Arctic grayling tagged in the Sten Creek ponds in June 1991 moved to the Atigun River and then upstream about 1 km to a section of natural stream channel. Six Arctic grayling tagged in the Sten Creek ponds in June or July 1991 were recaptured in the Sten Creek ponds in July and late August 1991. Two Arctic grayling recaptured in Spike Camp Creek were tagged at the mouth of Spike Camp Creek and in Sten Creek in 1990. One Arctic grayling captured in the tundra pond at mile 159.9 was tagged in 1990 in a channel of the Atigun River next to the tundra pond. One Arctic grayling recaptured in the Sten Creek ponds was tagged originally in the Sten Creek pond in 1990. The one round whitefish recaptured in the Sten Creek ponds was tagged originally in the Atigun River 1.5 km downstream of the Sten Creek ponds in 1990.

In summary, of the 28 tagged fish (24 Arctic grayling, 4 round whitefish) recaptured in 1991, 19 (15 Arctic grayling, 4 round whitefish) were tagged in 1990 (Table 6), and 9 Arctic grayling were tagged in 1991 (Table 7). Most (9 of 15) of the recaptured Arctic

Table 7. 1991 recapture locations of Arctic grayling and round whitefish tagged in the upper Atigun River drainage in 1991.

| Original Capture Location and Number Tagged in 1991 | | Number Recaptured and Recapture Location in 1991 | | | | | |
|---|---|---|---|---|---|---|---|
| | | Sten Creek Ponds | Sten Creek | Spike Camp Creek | Atigun Up[a] | Atigun Down[b] | Tundra Pond[c] |
| Sten Creek Ponds | | | | | | | |
| Arctic grayling | 78 | 6 | - | - | 3 | - | - |
| Round whitefish | 3 | - | - | - | - | - | - |
| Sten Creek | | | | | | | |
| Arctic grayling | 2 | - | - | - | - | - | - |
| Round whitefish | - | - | - | - | - | - | - |
| Spike Camp Creek | | | | | | | |
| Arctic grayling | 6 | - | - | - | - | - | - |
| Atigun Up | | | | | | | |
| Arctic grayling | 9 | - | - | - | - | - | - |
| Round whitefish | 1 | - | - | - | - | - | - |
| Atigun Down | | | | | | | |
| Arctic grayling | - | - | - | - | - | - | - |
| Round whitefish | - | - | - | - | - | - | - |
| Tundra Pond | | | | | | | |
| Arctic grayling | 6 | - | - | - | - | - | - |

[a] Atigun Up = Atigun River upstream of and including the Spike Camp Creek/Atigun River confluence (mi 163.0-164.5)
[b] Atigun Down = Atigun River downstream from the Spike Camp Creek/Atigun River confluence to Atigun River bridge #1 (mi 159.6-163.0)
[c] Tundra Pond = a small tundra pond connected to the Atigun River at mile 159.9

grayling were tagged originally in 1990 in the Sten Creek pond. Nine Arctic grayling tagged in 1991 in the Sten Creek ponds were recaptured again in 1991 in the ponds or in the Atigun River upstream of Spike Camp Creek (Table 7). A similar situation existed for round whitefish.

Differences in the number and locations of recaptured tagged fish between 1990 and 1991 reflect differences in sampling effort and available habitat. In 1991, no sampling was conducted in lower Sten Creek or in the Atigun River downstream of its confluence with Spike Camp Creek. The lack of any recapture of tagged fish in the Atigun River upstream of Spike Camp Creek probably reflects the reduced habitat quality caused by construction activities in the Atigun River upstream of its confluence with Spike Camp Creek.

**Movement of Fish in Fall 1990 and 1991**

Some Arctic grayling began leaving the headwater reaches of the Atigun River system in August and presumably moved downstream toward potential overwintering areas in or near Galbraith and Tea lakes. Most of the larger fish (>200 mm FL) had left the area by the end of August 1990, and only some of the younger age classes remained (age 1 or 2 fish, 100 to 140 mm FL [based on data from McCart et al. 1972, Elliott 1982., and Craig and Poulin 1975]). These remaining fish, fewer in number than in early August, exhibited behaviors (e.g., not feeding actively, not defending summer-sized feeding territories) that suggested they were preparing to move downstream to overwintering areas (P. Scannell, USFWS, Fairbanks, pers. comm.; Vascotto and Morrow 1973). Fish left the East Fork Atigun River between 31 August and 11 September, probably on 2 or 3 September. Minimum air temperatures recorded at Galbraith Lake airport, about 35 km to the north, dropped to -12° C (11° F) on 2 September and -10° C (14° F) on 3 September (J. Lingaas, Meteorologist, National Weather Service, Fairbanks, pers. comm.). Low stream flow at this time, combined with reduced stream temperatures and possible ice formation, probably induced the downstream movement of the remaining fish in the East Fork Atigun River on or soon after these dates. By 12 September, no fish remained in pools adjacent to the Check Valve 29 access road (mile 157.7), a location that contained fish throughout the summer. We observed only five Arctic grayling in the Check Valve 29 area at this time, all of which were age 1 or age 2 fish (i.e., <140 mm FL). We did not see any other fish in open water of the Atigun River upstream of the Check Valve 29 area. We saw one 120 mm Arctic grayling at the downstream end of the Check Valve 29

area on 10 October--the only fish observed in any open water in the East Fork Atigun River at this time.

A similar pattern of downstream movements of fish was noted in fall 1991. By the end of August, mostly smaller size classes of Arctic grayling remained in the Sten Creek ponds. By 4 September, all fish had left the Sten Creek ponds. Numbers of fish caught at the Galbraith Lake outlet increased between 8 and 12 September as air temperatures declined to between -4°C (25°F) and -9°C (15°F). Water temperatures in the Atigun River at the Galbraith Lake outlet declined from more than 7°C on 7 September to 3.4°C by 9 September.

**Catches of Fish at Galbraith and Tea Lakes - Fall 1990 and 1991**

We recaptured three Arctic grayling marked in the upper Atigun River drainage at the outlet of Galbraith Lake in mid September 1991, indicating that at least some of the Arctic grayling using the upper Atigun River drainage overwinter in Galbraith Lake. Two of the Arctic grayling were marked with numbered floy tags; one smaller Arctic grayling was marked only with a clipped adipose fin. One tagged Arctic grayling caught at the Galbraith Lake outlet on 12 September 1991 was marked 6 August 1990 in Spike Camp Creek near its confluence with the Atigun River. The other tagged Arctic grayling caught at the Galbraith Lake outlet on 11 September was marked in the lower Sten Creek pond on 20 June 1991. The small Arctic grayling, caught on 8 September 1991 was marked with a clipped adipose fin only. This mark indicated that it was marked after 3 August 1990 in the upper Atigun River drainage within the project area or possibly in Trevor Creek (as Arctic grayling marked before this date also had a caudal fin clip and fish downstream of Trevor Creek were not marked after 19 July 1990).

We did not catch any tagged or fin-clipped fish in fyke nets set at the outlets of Tea and Galbraith lakes in late August or mid September 1990. Catches at the Galbraith Lake outlet were higher in September 1991 than in September 1990 (Table 8). Large numbers of round whitefish caught between 8 and 12 September 1991 made up much of the difference between the catches for the two years. These round whitefish mostly were between 170 and 270 mm FL, although about 25% of the round whitefish were less than 100 mm FL. Catches of fish at the Tea Lake outlet were low in 1990 and 1991.

Table 8. Numbers and species of fish caught in fyke nets set at the outlets of Tea and Galbraith lakes, 1990 and 1991.

| | 1990 | | 1991 | |
|---|---|---|---|---|
| | 28-30 Aug. | 11-15 Sept. | 26-30 Aug. | 3-12 Sept. |
| **Tea Lake** | | | | |
| Arctic grayling | 10 | 22 | 1 | 11 |
| Round whitefish | - | 2 | - | 1 |
| Slimy sculpin | 8 | 10 | - | 2 |
| Burbot | 6 | 10 | - | 2 |
| **Galbraith Lake** | | | | |
| Arctic grayling | 5 | 34 | 12 | 123 |
| Round whitefish | 24 | 51 | 21 | 889 |
| Slimy sculpin | 33 | 196 | 54 | 335 |
| Lake trout | 2 | - | 2 | 6 |
| Burbot | 3 | 5 | 1 | 6 |
| Dolly Varden | - | 9 | - | - |

### Fish Observations - Early Spring 1991

One Arctic grayling in the Tea Lake inlet stream at the pipeline workpad low-water crossing and five Arctic grayling in Tea Lake at the mouth of the inlet on 8 May were the first fish we observed in the Atigun River valley in spring 1991. We did not see any fish at any location in the preceding week. By 14 May, Arctic grayling were present in the Tea Lake inlet stream to a point about 350 m above the lake and were distributed throughout the Tea Lake outlet stream. Within a week of the opening of the outlets of Tea and Galbraith lakes (between 8 and 13 May), Arctic grayling were distributing themselves upstream in the Atigun River drainage (Table 9). We observed Arctic grayling in Holden and Spring creeks on 15 and 17 May, respectively. Fish did not reach the upper Atigun River in the area of the reroute project until sometime between 7 to 13 June. We observed Arctic grayling in the lower Sten Creek pond on 13 June.

Several of the Arctic grayling observed and captured in the Tea Lake inlet stream, beginning on 14 May, were sexually mature, exhibited pre-spawning behavior, and probably spawned here. Arctic grayling caught in the Tea Lake inlet stream from 16 to 19 May ranged from 154 to 367 mm FL. Some, but not all individual fish, exuded eggs or sperm when handled. These mature fish included males from 289 to 367 mm FL and females 285 to 363 mm FL.

Spring Creek also contained Arctic grayling in spawning condition in mid May 1991. Individual male Arctic grayling that exuded sperm when handled ranged from 237 to 331 mm FL. One 336 mm FL female exuded eggs when handled. Included in the sampled Arctic grayling captured in Spring Creek were fish originally tagged in 1990 in the upper Atigun River and its tributaries (Table 10). Some or all of these tagged Arctic grayling probably spawned in this small stream.

## DISCUSSION

### Use of the East Fork Atigun River

The East Fork Atigun River, its tributaries, and the Sten Creek ponds are used exclusively as summer rearing habitat by Arctic grayling, a few round whitefish, and a few Dolly Varden. Arctic grayling are the dominant species in this portion of the Atigun River drainage. Arctic grayling composed 93% of the fish caught during the two years of this study. Similar results (89-91% for Arctic grayling) were recorded by DenBeste and

Table 9. First sightings of Arctic grayling at selected locations within the Atigun River drainage, spring 1991.

| Location | Date | Length of Fish (mm) | Distance from Galbraith Lake outlet (km)[b] |
|---|---|---|---|
| Tea Lake Inlet | 8 May | 200-260 | [a] |
| Holden Creek | 15 May | 120-260 | 7 km |
| Spring Creek | 17 May | 120-315 | 11 km |
| Atigun River | 30 May | 120-280 | 16 km |
| Atigun River | 1 June | 120 | 25 km |
| Atigun River | 13 June | 180-240 | 31 km |
| Sten Creek ponds | 13 June | 150-280 | 41 km |

[a]fish were from Tea Lake: the Tea Lake outlet was frozen at this time
[b]river kilometers

Table 10. Original tagging locations and lengths of Arctic grayling recaptured in Spring Creek in spring 1991.

| Date Recaptured | Fork Length (mm) | | Tagging Date and Location |
|---|---|---|---|
| | Initial | Recaptured | |
| 17 May | 256 | 263 | 6/23/90; Sten Creek Pond<br>8/4/90; Atigun River, mi 164 |
| 17 May | 263 | 267 | 8/6/90; Trevor Creek |
| 20 May | 246 | 256 | 6/26/90; Spring Creek |
| 23 May | 311 | 316 | 6/23/90; Trevor Creek |
| 23 May | 257 | 266 | 8/5/90; Atigun River, Check Valve 29 area |

McCart (1984b) during their studies within the Atigun River drainage from 1981 through 1983.

The size distribution of Arctic grayling caught in the East Fork Atigun River, its tributary streams, and the Sten Creek ponds suggests that these fish are, for the most part, juvenile and subadult fish, and that most adult fish spend the summer elsewhere in the Atigun River drainage. We captured only 10 Arctic grayling larger than 300 mm FL in this area, out of a total catch of 1,054 Arctic grayling for 1990 and 1991. Craig and Poulin (1975) used 300 mm as the dividing point between adults and subadults for Arctic grayling in the Kavik River system, a system about 180 km northeast of the Atigun River valley. They based this division on data that indicated all Arctic grayling greater than 295 mm FL (includes fish ages 5 to 8) in their sample were mature. We did not specifically determine sexual maturity for Arctic grayling in this study because this determination would have required the sacrifice of fish. However, our observations of Arctic grayling (including fish tagged in the upper East Fork Atigun River) in Spring Creek in 1991 indicated some fish, considerably less than 300 mm FL (as small as 237 mm), are mature within the Atigun River drainage.

The lack of many adult Arctic grayling in the East Fork Atigun River suggests that the preferred habitat for adult fish is farther downstream in the drainage. Tack (1980) reported that the uppermost 5 km of the South Fork Goodpaster River in Interior Alaska contained only subadult Arctic grayling. Tack suggested these subadults moved to this area to escape competition with larger Arctic grayling, and that headwater reaches and small headwater tributaries may be important juvenile rearing areas. The preponderance of subadult Arctic grayling in the upper reaches of the East Fork Atigun River suggests that a similar situation may be occurring here.

We found no evidence of spawning by Arctic grayling in the East Fork Atigun River within the project area. We did not observe any young-of-the-year Arctic grayling in mid or late summer, nor did we observe significant numbers of large adult Arctic grayling. Based on these observations and observations by other researchers, one can conclude that the East Fork Atigun River is used by Arctic grayling for summer rearing only. Previous studies documented young-of-the-year Arctic grayling in the East Fork Atigun River as far upstream as mile 158.2 in September 1982 (0.8 km upstream of Check Valve 29) and spawning by Arctic grayling in the Atigun River drainage as far upstream as and in Trevor Creek (4 km below the project area; 27 km upstream of Galbraith Lake)

(DenBeste and McCart 1984b). Spawning has been recorded in the lower 1 km of Holden Creek (DenBeste and McCart 1984a), in the lower 0.5 km of Vanish Creek (DenBeste and McCart 1984a), lower Roche Moutonnée Creek (DenBeste and McCart 1984a), Spring Creek (Elliott 1982), and Leentha Creek (Elliott 1982), all tributaries to the Atigun River and all within 15 km of Galbraith Lake. Spawning also has been documented in the outlet of Tea Lake (McCart et al. 1972, Elliott 1982, DenBeste and McCart 1984a). Spawning may occur in Falcon Creek and Notravak Creek, inlet streams to the north end of Galbraith Lake; and the inlet of Tea Lake as suggested by the presence of young-of-the-year Arctic grayling in the lower reaches of these streams (Elliott 1980, 1982). Elliott (1982) noted that young-of-the-year Arctic grayling were present in all Atigun River tributaries investigated where the gradient did not exceed 1%, to within 1.5 km of the confluence of the east and west forks of the Atigun River, and in small valley-floor streams (e.g., Spring Creek) where the gradient did not exceed 1.5%. No research on fish spawning or movements has been conducted on any streams draining the western side of the Atigun River valley or the West Fork Atigun River. Craig and Wells (1975) described Arctic grayling spawning habitat in the upper East Fork Chandalar River on the south side of the Brooks Range. The principal spawning habitat in this drainage was in small clearwater tributary streams with low gradient on the valley floor, similar to known spawning habitat in the Atigun River drainage (e.g., Spring Creek).

The East Fork Atigun River, with the possible exception of one small area, is unsuitable for spawning/overwintering for Dolly Varden and round whitefish. These fall-spawning fish require unfrozen water in winter for egg survival and development. Spawning areas for these species have not been identified in the Atigun River drainage. An aufeis field develops about 1 km above the confluence of the east and west forks of the Atigun River, indicating that surface water exists through much or all of the winter. To what extent this area is used by spawning or overwintering Dolly Varden or round whitefish is unknown.

**Use of the Sten Creek Ponds by Fish**

The Sten Creek ponds are used throughout the summer by Arctic grayling and round whitefish, and in late summer by Dolly Varden. Arctic grayling fed at the surface of the lower pond on calm days throughout the summer. Invertebrate drift entering the lower Sten Creek pond from Sten Creek probably provides a stable food source for fish. Because Sten Creek does not flow through the upper Sten Creek ponds as it does through

the lower pond, invertebrate drift probably is not a major contributor of fish food to the upper ponds. In these two ponds, blow-in of terrestrial insects may be more important.

The extent to which benthic invertebrates are present in the Sten Creek ponds and available to fish using the pond is unknown. However, chironomids, present within the Atigun River drainage (DenBeste and McCart 1984b, Elliott 1982), abundant in spring systems (McCart et al. 1972), and abundant in inundated gravel mine sites (Moulton 1980), probably occur in this system as well and contribute to food available to fish. Excavation of portions of the original pond and siltation from pond construction activities during 1991 may have adversely affected benthic invertebrates, although these effects probably were temporary.

The expansion of the original Sten Creek pond, and the creation of two additional ponds in the upper Sten Creek material site provided an increase in the amount of pool habitat available to fish in the upper East Fork Atigun River drainage. Discrete, deep pools with relatively slow-moving water are limited in the East Fork Atigun River, particularly during freshets and in early summer when snow melt contributes substantial flow to the river and elevated stream velocities make portions of these streams nearly continuous riffles. Pools with slow-moving water in the East Fork Atigun River generally are confined to the confluences of tributary streams with the main channel, or to some confluences of braided channels. Pools provide preferred habitat for Arctic grayling (DenBeste and McCart 1984b, Vascotto and Morrow 1973). Feeding opportunities, along with reduced water velocities and turbidity, probably serve as the attractants of fish to the Sten Creek ponds. Use of the ponds by fish probably was reduced in 1991 because of periods of turbidity (induced in part by sampling activities), particularly in the upper two ponds. Use of the three ponds should increase as the substrates of the ponds stabilize and turbidity decreases or becomes less persistent with time.

The Sten Creek ponds also appear to be a favorable place for small fish, as small fish tend to occur in areas with little current, such as small side channels or shallow pools. The negligible current in the Sten Creek ponds, along with substantial portions of the ponds possessing depths less than 0.6 m, probably serve as attractants to small fish. Such may be the case in late August when the Sten Creek ponds were occupied by up to several hundred small Arctic grayling. Elliott (1982) also noted that the heaviest use of Sten Creek occurred in late August and that most of the fish were yearling-sized.

### Use of Flooded Riparian Habitat

Arctic grayling used the multiple channels and flooded riparian shrub habitat in the Check Valve 29 area extensively in summer 1990. This area was the only area extensively flooded throughout summer 1990 in the project area. Areas of riparian vegetation, particularly in the upstream reaches of braided streams in the East Fork Atigun River valley, are limited in abundance and areal extent. Most of the braided channels flow through unvegetated or sparsely vegetated gravel and rock. A few small areas of unflooded riparian shrub vegetation occur along some cutbanks. Areas of riparian vegetation, particularly when flooded to depths capable of supporting fish, provide valuable habitat with suitable cover and feeding areas for Arctic grayling. While riparian areas may be flooded infrequently for extended periods, the extensive use of this often limited and ephemeral habitat by Arctic grayling emphasizes the importance of this habitat and the need to minimize disturbance to these areas.

### Movements of Tagged Fish

The recapture of tagged fish suggested that by mid summer, many of the Arctic grayling in the East Fork Atigun River had established their mid summer rearing areas and made limited movements from late June through early or mid August. Many of the recaptured fish were caught at their initial capture location or in nearby upstream areas. This suggests that once a fish finds a suitable pool or reach of stream, it remains there for much of the summer rearing period. Similar observations have been recorded for Arctic grayling in Interior Alaska (Vascotto and Morrow 1973). Additionally, most of the fish tagged in 1990 and recaptured in 1991 were caught at their original tagging location. The return of fish to the same location in the upper Atigun River valley may reflect a fidelity to rearing areas that has been documented in other areas (Tack 1980). The apparent limited within-summer movements in the upper Atigun River drainage also may be an artifact of the location of the sampling area. Most of the sampling area was near the upstream limit of fish distribution and thus limited the amount of upstream travel a fish could make.

Many Arctic grayling tagged in the Sten Creek pond and nearby areas were not recaptured and probably moved to areas downstream. Some of this movement may have been capture-related and immediate, particularly when electrofishing was used as the capture technique (Clark 1989, Ridder 1983, Tack 1974). Others may have moved

gradually downstream between capture events, particularly some of the larger fish between late July and late August. In 1990, some of these fish may have stopped in the Check Valve 29 area where the abundant, vegetation-lined channels offered substantial feeding habitat. Many tagged fish occupied this area but the difficulties associated with recapturing individuals here (and elsewhere in downstream areas) precluded positively identifying whether the fish were tagged in the Check Valve 29 area or elsewhere. To what extent some of these larger fish moved to the middle reaches of the Atigun River, or to or near their overwintering areas during this mid-to-late summer period is unknown.

### Late Summer Distribution of Arctic Grayling

The relative use of the Sten Creek ponds and the upper East Fork Atigun River by various size and age classes of Arctic grayling changed over the summer. In early and mid summer, larger juveniles and subadults predominate in this portion of the Atigun River drainage. In August, there is movement of the larger juveniles and subadults out of the uppermost reaches of the Atigun River drainage, but at the same time there is an upstream movement of small Arctic grayling (fish <140 mm FL). By the end of August, these small Arctic grayling predominate in these upper reaches of the East Fork Atigun River and its tributaries. Elliott (1982) noted that the heaviest use of Sten Creek by fish occurred in late August and that most were yearling-sized fish. DenBeste and McCart (1984b) observed small juvenile Arctic grayling (80 to 140 mm FL) in warm water pools (thermal irregularities) in the East Fork Atigun River at several locations between mile 157 and 161 in early-to-mid September. Elliott (1982) also reported a gradual buildup of juvenile Arctic grayling in Atigun River tributaries and the East Fork Atigun River headwaters over the summer. He attributed this buildup to the continual upstream movement of juvenile fish from more remote overwintering areas. A more plausible explanation is that as aquatic invertebrate densities increase in the late fall in the upper Atigun River (DenBeste and McCart 1984b), small juvenile Arctic grayling move upstream to take advantage of an abundant food supply without competition from larger fish that are leaving these upstream reaches. These small juvenile fish also may not appear in the upper reaches until late in the year if they are unable to negotiate natural water velocities until they have grown to a certain size.

Other studies in Arctic Alaska have noted a gradual emigration of juvenile Arctic grayling out of the stream system throughout the summer. Craig and Poulin (1975) noted that juvenile Arctic grayling entered Weir Creek in the Kavik River system (about

200 km northeast of the Atigun River valley) in large numbers soon after breakup. A large proportion of these fish, particularly the larger juveniles, left the creek by mid July. In mid July, small juveniles (<200 mm FL) and newly-emerged fry remained. These fish gradually emigrated from Weir Creek, with the peak emigration occurring in mid September as water temperatures cooled. McCart et al. (1972) reported that adult Arctic grayling entered Happy Valley Creek (about 110 km north of the Atigun River valley) in early June to spawn and left by early July to spend the summer elsewhere. Juveniles entered the stream in mid June and early July as numbers of the adult fish declined. McCart found minimal upstream movement of juveniles after early July. The juveniles remained in the stream until September. The differences in apparent use of streams studied by Craig and Poulin (1975) and McCart et al. (1972) from that recorded in the Atigun River drainage may be a reflection of the type of stream system. Happy Valley and Weir creeks are tundra streams (Craig and McCart 1975) that are used by Arctic grayling as spawning and rearing streams, whereas the Atigun River is considered a mountain stream, a type of stream generally used by Arctic grayling for rearing. In addition, Craig and Poulin (1975) and McCart et al. (1972) conducted their studies primarily in the lower reaches of these streams, whereas much of the fisheries work conducted in the Atigun River system has been on the uppermost portion of the drainage.

### Overwintering Areas

The East Fork Atigun River is not an overwintering area for Arctic grayling or other species, with the possible exception of a very small number of fish at small, isolated spring locations. The East Fork Atigun River, as stated earlier, can be considered summer rearing habitat. Spike Camp Creek, Sten Creek, the Sten Creek ponds, and the East Fork Atigun River (with the exception of portions of the Atigun River from just upstream of Atigun River Bridge #1 to the confluence of the east and west forks of the Atigun River) freeze to the bottom. Small Arctic grayling, generally less than 140 mm FL, have been observed in small pools of open water next to buried pipeline in winter in the East Fork Atigun River (A. Ott, ADF&G, Fairbanks, pers. comm.; Elliott 1982; Hemming 1982 in DenBeste and McCart 1984b). These pools contained water warmed by contact with the buried hot oil pipeline. Thermal irregularities from 2°C to 9°C have been recorded in the Atigun River where the buried pipeline underlies the stream channel (DenBeste and McCart 1984b, Elliott 1982). Some of these pools were later found dry, with the loss of all fish. The fate of fish in other pools is not known. Some of these fish

probably survived the winter in these areas, but these areas do not appear to be essential to the long-term survival of the Arctic grayling population in the Atigun River system.

Because most of the East Fork Atigun River freezes solid, potential overwintering areas are limited to the area of a small aufeis field near the confluence of the east and west forks of the Atigun River (probably a marginal area for overwintering), pools in the lower Atigun River above Atigun Gorge, lakes connected to the lower Atigun River, or the Atigun River in or downstream of the Atigun Gorge. Elliott (1982) found age 1 (50 to 75 mm FL) Arctic grayling in Spring Creek by 29 May and concluded that overwintering areas were nearby as the small size of these fish precluded the possibility of extensive movements from distant overwintering areas. This observation would support overwintering by fish in the nearby lakes or in the Atigun River above Atigun Gorge. Elliott (1982) measured the depths of pools in early September 1980 while floating a 24 km reach of the Atigun River immediately upstream of the Galbraith Lake outlet. He found a minimum of 19 pools with depths greater than 1.5 m. The approximate lengths of these pools ranged from 5 to 91 m. Considering that ice thickness on waterbodies north of the Brooks Range often approaches 2 m, this leaves little area in these pools for fish to overwinter. Such conditions in the lower Atigun River would tend to favor Galbraith and Tea lakes as the prime overwintering areas for fish in the Atigun River drainage upstream of Atigun Gorge. No measurements of overwintering potential have been made for Atigun Gorge or for that portion of the river downstream of Atigun Gorge.

The capture of Arctic grayling tagged in the upper Atigun River drainage in the Galbraith Lake outlet in September 1991 confirms that Galbraith Lake serves as an overwintering area for some (probably most) of the fish in the Atigun River drainage. The low catches of fish and the lack of any recaptured tagged fish at the Tea Lake outlet in 1990 or 1991 suggests that Tea Lake is not a major overwintering area for fish using the upper Atigun River valley.

The lack of substantial numbers of fish in our fyke net catches at the Galbraith Lake outlet in mid September 1990 suggests that the majority of the fish in the system probably had entered the lake, or remained in the Atigun River and moved downstream of the net sites by this time. At times during mid September 1990, the Atigun River near the Galbraith Lake outlet contained frazil ice and ice also formed on the stream bottom. These conditions probably were not favorable to fish and any significant numbers of fish

in the Atigun River probably would have moved into the warmer water of the lakes. As we did not catch many fish during these conditions, we assume that similar conditions probably occurred during the cold period beginning 2 or 3 September and caused fish to seek warmer water at this time. Continuous sampling, from late August until ice formation precludes sampling in the lake outlet, is necessary to fully document the fall migration for overwintering in Galbraith Lake.

**Effects of Construction Activities on Fish Distribution**

The catches of fish in the upper Atigun River canyon (mile 163.1 to mile 164.5 [Check Valve 30]; see Table 5) in late July 1991 were lower than those recorded there in early August 1990, although the differences in use were significant only for Dolly Varden. It appears that decreased use of this reach of the Atigun River by fish is a direct result of construction activities. Reconstruction of the stream channel failed to restore the river to its previous condition because of limitations imposed by working with frozen material, limitations imposed by the type of equipment used during channel reconstruction, reconstruction of most of the channel when no water was flowing that could aid in determining if gradients and pool reconstruction were adequate, and the restriction of the river to the eastern portion of the floodplain. Fewer well-developed pools were present in this reach of the river in 1991 than were present in 1990, the result of the near total reconstruction of the stream channel. Several pools with vegetated banks that contained Arctic grayling in 1990 were eliminated by a channel change caused by placement of the river on the eastern side of the floodplain. Several locations that contained pools used by fish in 1990 (e.g., pools along rock outcrops along the western side of the floodplain) were buried by the pipeline access road and erosion protection structures. The river was restricted to the eastern half to two-thirds of the floodplain to keep the main channel from flowing over or frequently crossing the newly buried pipeline. Water velocities in this reach increased as the area available for meander formation was reduced from that found in 1990. The decrease in the number of pools available in the upper Atigun River canyon probably is the principal cause of the observed reduction in the numbers of Arctic grayling and Dolly Varden in this reach of the Atigun River. Supporting the contention that habitat changes were the cause of the substantial differences in use of the upper canyon between 1990 and 1991 are the comparable catches of fish between years for the Sten Creek ponds and lower Spike Camp Creek, and similar water levels during the 1990 and 1991 sampling periods (water levels and velocities estimated by the same personnel

in both years). Furthermore, researchers have established that creation of aquatic habitat (e.g., pond habitat created by connection of gravel mine sites to rivers) are used extensively by Arctic grayling (Hemming 1990, Moulton 1980, Winters 1990).

The decrease in the use of the upper Atigun River canyon by fish from 1990 to 1991 probably is temporary, similar to that which probably occurred during the original pipeline installation. As the stream channel stabilizes, braided channels develop, well-developed pools form, and algal and invertebrate populations rebuild, use of the area by fish probably will return to levels comparable with those documented in 1990.

Portions of the floodplain disrupted by construction activities within the project area downstream of the upper Atigun River canyon should recover over varying periods of time. Stream channels altered by construction activities should recover in a manner similar to that described for the upper Atigun River canyon in a relatively short period of time. Areas of riparian willows eliminated by construction activities within the pipeline right-of-way (e.g., riparian willows in the Check Valve 29 area); however, will take considerable time (perhaps decades) to develop stands comparable to preconstruction conditions.

In 1990, the major portion of the flow of the Atigun River flowed through multiple channels that flooded an extensive area dominated by willows around Check Valve 29. In 1991, a diversion dike was constructed to keep the river from crossing and flowing down the pipeline workpad and interfering with the completion of the reroute project. This diversion dike directed the Atigun River to the western side of its floodplain and prevented the river from flowing through the willow-dominated area around Check Valve 29. This construction activity removed an important summer rearing area from use by Arctic grayling in summer 1991, and forced fish using this habitat in 1990 to occupy other undetermined habitats in 1991.

High levels of turbidity observed and recorded in the upper Atigun River in spring 1991 may have altered the normal patterns and timing of migrations of Arctic grayling in this system. From 22 May through 7 June, the Atigun River was turbid from snowmelt runoff of ephemeral mountain streams, river channel changes, instream construction activities, and from washing of silts and clay-sized particles from the as yet unstabilized substrate of the reconstructed stream channels, particularly those channels in the upper Atigun River canyon (mile 163.6 to mile 165.6). Measurements of turbidity in the Atigun River

at mile 157.2 (the downstream limit of the project area) revealed turbidities of 580 NTU on 6 June, and 770 and 390 NTU on 7 June (unpublished data, Marvin Swink, Permits Coordinator, APSC). Levels of turbidity between 25 and 400 NTU did affect the use of Birch Creek in Interior Alaska by Arctic grayling (Townsend 1991). To what extent high levels of construction-induced levels of turbidity may have affected Arctic grayling was not determined in this study.

## CONCLUSIONS

The East Fork Atigun River is used mostly by subadult and juvenile Arctic grayling for rearing from early June through early September. Small numbers of round whitefish and Dolly Varden also use this portion of the Atigun River. The mainly late fall and winter construction timetable used during this project generally eliminated most adverse direct effects to fish (e.g., stream blockages, sedimentation) because fish were in downstream overwintering areas. Changes to fish habitat through alteration and elimination of stream channels, and elimination of some areas of riparian vegetation did occur. Consequently, changes in the use of these disturbed habitats by fish did occur. Whether the perceived changes in use of the East Fork Atigun River by fish, particularly that portion upstream of the Atigun River/Spike Camp Creek confluence, represents a short-term or long-term change can be assessed only by future sampling.

## RECOMMENDATIONS FOR FUTURE STUDY

Spring 1992 and future years should provide a more accurate determination of the timing of upstream migration of Arctic grayling because stream channels disturbed by construction activities in 1990-1991 should have stabilized, and instream construction activities that could affect the timing of the upstream migration will not be present. Sampling should be repeated from mid May to mid June to more accurately describe the upstream dispersal of fish from overwintering areas.

Sampling of the Sten Creek ponds should continue to assess the level of use of the ponds by fish as the ponds stabilize and as vegetation establishes around the margins of the ponds. Sampling at the tundra pond at mile 159.9 should be continued to determine the use of this area by Arctic grayling and other fish during the summer months. Examination of this area should continue to ensure that access for fish to the pond from the Atigun River is maintained across the pipeline workpad, and that sedimentation from

the tributary stream diverted around MS 111-2 does not fill this pond or block its outlet stream.

Sampling in the upper Atigun River from the Atigun River/Spike Camp Creek confluence to Check Valve 30 (and above) in late July or early August should continue for several years to assess the reoccupation of this area by fish. Assessments of pool development and sinuosity should be made during the sampling.

The Check Valve 29 area should be examined to determine if the Atigun River shifts its main channel back through this area and to what extent the area is used by fish. The area between Check Valve 29 and Trevor Creek (and lower Trevor Creek) should be examined at several periods during the summer to determine if fish tagged in the project area in 1990 and 1991, and not recovered in the project area, use this portion of the Atigun River drainage during parts of the summer.

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**Appendix 1.** Descriptions of secondary sampling areas and fish catches at these locations.

The Main Stem Atigun River downstream of the confluence of the east and west forks flows through braided channels for about 11 km before becoming a single-channel system. We electrofished several secondary channels east of the main channel near pipeline mile 153 on 26 June 1990. We caught 22 Arctic grayling that ranged from 110 to 200 mm FL, and 2 round whitefish, 305 and 339 mm FL.

Holden Creek is an east-side mountain tributary of the middle Atigun River, located near pipeline mile 145.8. Holden Creek varies from a broadly meandering, low-gradient stream with a sand and gravel substrate near its mouth, to a steep stairstep series of small pools formed by a boulder-laden substrate upstream of the Dalton Highway. The creek is channelized where it flows through an excavated gravel material site between the pipeline crossing and the Dalton Highway. The stream also has discontinuous flow through the material site at various times of the year. Holden Creek is a clearwater stream at low to moderate flows but becomes turbid at high flow. We electrofished Holden Creek from the pipeline crossing to a point about 100 m downstream of the outlet of Mackinaw Lake in late June 1990. In this segment of Holden Creek, we caught 33 Arctic grayling ranging from 104 to 315 mm FL, the majority of which were less than 200 mm FL. We also caught two round whitefish and one slimy sculpin.

Spring Creek is a small, low gradient stream that originates from seeps within an excavated material site (MS 113-2) on the alluvial fan of Roche Moutonnée Creek and from seeps at the base of mountain slopes east of the Dalton Highway. The creek upstream of the pipeline crossing is beaded and contains shallow pools generally less than 0.6 m deep and from 0.6 to 6.0 m wide with silt, sand, or gravel bottoms. Narrow, incised, sedge-lined channels 0.3 to 0.6 m deep connect these pools. Dense sedges also line most of the pools. Downstream of the pipeline crossing, the creek contains fewer riffles, and is slightly deeper and wider than in its upper reaches. We electrofished this creek from the pipeline crossing upstream to the confluence of its north and south forks, the lower 230 m of the north fork, and the lower 1,000 m of the south fork. Spring Creek contained small Arctic grayling in late June 1990. The 72 Arctic grayling we caught in Spring Creek consisted primarily of fish 60 to 90 mm and 100 to 170 mm FL. We caught only one fish greater than 190 mm FL in Spring Creek.

Roche Moutonnée Creek is an east-side tributary of the Atigun River, about 3 km south of Holden Creek near pipeline mile 147.5. This stream generally was more turbid and had a greater discharge than other east-side tributaries during the summer. The discharge in this stream produced conditions marginal for capturing fish with an electrofisher. In this reach, the stream was turbulent as it flowed over a substrate formed primarily by boulders. We electrofished this stream in mid July 1990 from the highway crossing upstream about 200 m to the old stream gauging station and caught one 99 mm FL Dolly Varden and six Arctic grayling from 121 to 197 mm FL.

Trevor Creek is an east-side tributary of the Atigun River near pipeline mile 154. Trevor Creek flows through an excavated material site about 1 km long downstream of the pipeline crossing. Upstream of the material site, the substrate is large boulders. Within the material site, pools are poorly developed and the substrate varies from large gravel and cobble in the upper portion, to gravel and sand at the lower end of the material site. At the lower end of the material site, there are a few shallow pools used by fish. Between the material site and the creek mouth, Trevor Creek has extensive well-developed pools and flows through an area vegetated with willows . We used angling to capture 23 Arctic grayling in this stream from the highway crossing to a point about 100 m downstream of the material site on 23 June and 6 August 1990. These 23 Arctic grayling ranged from 156 to 316 mm FL. We caught about one fourth of the fish in pools between the highway bridge and the upstream end of the material site. We caught about one fourth within the material site, mostly in its lowermost portion where it merges with pools formed in former channels of the Atigun River. The remaining half of the catch came from Trevor Creek downstream of the material site.

**Appendix 2.** 1991 breakup observations.

Water began flowing in the upper Atigun River valley in 1991 in late April. Freezing air temperatures at night served to retard snowmelt at this time and extended breakup over several weeks. By 29 April, water was flowing in the Atigun River within 1 km upstream and downstream of the Atigun River Bridge #1. Water also was flowing over the ice at the Atigun River Bridge #2, but this water was the result of tundra runoff and in-situ snow and ice melt within the river floodplain as the tributary streams were still frozen. A limited amount of water was flowing over the ice at the downstream ends of the outlets of Galbraith and Tea lakes, again the result of tundra runoff and not discharge from the lakes themselves, as significant portions of the outlet channels were frozen. Culverts within the outlet channel of Tea Lake remained frozen at the end of April.

By 7 May, Holden, Spring, Roche Moutonnée, Trevor, and Sten creeks were flowing over and through bottomfast ice in their channels. Limited stretches of flowing water, generally less than 100 m in length, were present in the East Fork Atigun River from its source to Check Valve 29. These small volumes of water were from spring seeps, from Dalton Highway runoff, and from runoff from some south-facing slopes. Galbraith Lake outlet was plugged by ice and snow near its mouth on 7 May. Spike Camp Creek began flowing on 8 May. The Tea Lake inlet stream began flowing on 8 May after its culvert under the access road to Pump Station 4 thawed, and allowed ponded runoff in portions of the upper watershed to drain. Between 8 and 13 May, ice in the outlets of Tea and Galbraith lakes thawed and water began flowing freely. On 13 May, the East Fork Atigun River was flowing in open channels and over ice from Spike Camp Creek to its confluence with the West Fork Atigun River. From 13 to 19 May, flow in the East Fork Atigun River, from its source to Spike Camp Creek, gradually increased as runoff increased, and as the bottom of the reconstructed stream channel became saturated. On 19 May, water was flowing in the upper Atigun River canyon from about mile 165 to the Spike Camp Creek/Atigun River confluence. On 22 May, water was flowing throughout the entire length of the Atigun River.

**Appendix 3.** Birds observed on the Sten Creek ponds, May and June 1991.

| | |
|---|---|
| Wandering tattler | (*Heteroscelus incanus*) |
| Semipalmated plover | (*Charadrius semipalmatus*) |
| Mew gulls | (*Larus canus*) |
| Harlequin ducks (1 pair) | (*Histrionicus histrionicus*) |
| Mallard ducks (2 males) | (*Anas platyrhynchos*) |

**Appendix 4.** Fish caught in 1990.

LEGEND

| | |
|---|---|
| Location: | Roche M Creek = Roche Moutonnée Creek |
| Sublocation: | mi xxx.x = pipeline miles from Pump Station 1<br>112 APL 3A = Alyeska Pipeline Access 112-3A<br>CV 29 = Check Valve 29 area<br>CV 30 = Check Valve 30 area<br>Spike Camp/Atgn = confluence of Spike Camp Creek and the East Fork Atigun River<br>Spike/Atigun = confluence of Spike Camp Creek and the East Fork Atigun River |
| Species: | AG = Arctic grayling<br>DV = Dolly Varden<br>RWF = Round whitefish<br>SSC = Slimy sculpin<br>LT = Lake Trout<br>BB = Burbot |
| Recapture: | T = recaptured; F = not a recaptured fish |
| Capture Method: | shock = electrofishing<br>angli = angling<br>fyke = fyke net |
| Length: | fork length in millimeters |

# 1990 Atigun Fish Data Summary

| Date Captured | Location | Sublocation | Species | Length | Tag Number | Recapture | Capture Method |
|---|---|---|---|---|---|---|---|
| 06/22/90 | STEN CREEK | BELOW POND | AG | 210 | 00576 | .F. | shock |
| 06/22/90 | STEN CREEK | BELOW POND | AG | 171 | | .F. | shock |
| 06/22/90 | STEN CREEK | BELOW POND | AG | 228 | 00577 | .F. | shock |
| 06/22/90 | STEN CREEK | BELOW POND | AG | 206 | 00579 | .F. | shock |
| 06/22/90 | STEN CREEK | BELOW POND | AG | 270 | 00580 | .F. | shock |
| 06/22/90 | STEN CREEK | BELOW POND | AG | 244 | 00581 | .F. | shock |
| 06/22/90 | STEN CREEK | BELOW POND | AG | 213 | 00582 | .F. | shock |
| 06/22/90 | STEN CREEK | BELOW POND | AG | 224 | 00583 | .F. | shock |
| 06/22/90 | STEN CREEK | BELOW POND | AG | 248 | 00584 | .F. | shock |
| 06/22/90 | STEN CREEK | BELOW POND | AG | 312 | 00585 | .F. | shock |
| 06/22/90 | ATIGUN RIVER | MI 162.1 | AG | 182 | | .F. | shock |
| 06/22/90 | ATIGUN RIVER | MI 162.1 | AG | 157 | | .F. | shock |
| 06/22/90 | ATIGUN RIVER | MI 162.1 | AG | 291 | 00586 | .F. | shock |
| 06/23/90 | STEN CREEK POND | | AG | 248 | 00587 | .F. | fyke |
| 06/23/90 | STEN CREEK POND | | AG | 256 | 00588 | .F. | fyke |
| 06/23/90 | STEN CREEK POND | | AG | 297 | 00589 | .F. | fyke |
| 06/23/90 | STEN CREEK POND | | AG | 157 | | .F. | fyke |
| 06/23/90 | STEN CREEK POND | | AG | 231 | 00590 | .F. | fyke |
| 06/23/90 | STEN CREEK POND | | AG | 206 | 00591 | .F. | fyke |
| 06/23/90 | STEN CREEK POND | | AG | 242 | 00592 | .F. | fyke |
| 06/23/90 | STEN CREEK POND | | RWF | 328 | 00593 | .F. | fyke |
| 06/23/90 | STEN CREEK POND | | AG | 235 | 00594 | .F. | fyke |
| 06/23/90 | STEN CREEK POND | | AG | 244 | 00595 | .F. | fyke |
| 06/23/90 | STEN CREEK POND | | AG | 203 | 00596 | .F. | fyke |
| 06/23/90 | STEN CREEK POND | | AG | 225 | 00597 | .F. | fyke |
| 06/23/90 | STEN CREEK POND | | AG | 277 | 00598 | .F. | fyke |
| 06/23/90 | STEN CREEK POND | | AG | 263 | 00599 | .F. | fyke |
| 06/23/90 | STEN CREEK POND | | AG | 276 | 00600 | .F. | fyke |
| 06/23/90 | STEN CREEK POND | | AG | 228 | 00601 | .F. | fyke |
| 06/23/90 | STEN CREEK POND | | AG | 145 | | .F. | fyke |
| 06/23/90 | STEN CREEK POND | | AG | 220 | 00602 | .F. | fyke |
| 06/23/90 | STEN CREEK POND | | AG | 235 | 00603 | .F. | fyke |

1990 Atigun Fish Data Summary

| Date Captured | Location | Sublocation | Species | Length | Tag Number | Recapture | Capture Method |
|---|---|---|---|---|---|---|---|
| 06/23/90 | STEN CREEK POND | | AG | 248 | 00584 | .T. | fyke |
| 06/23/90 | STEN CREEK POND | | AG | 252 | 00604 | .F. | fyke |
| 06/23/90 | STEN CREEK POND | | AG | 281 | 00605 | .F. | fyke |
| 06/23/90 | STEN CREEK POND | | AG | 248 | 00606 | .F. | fyke |
| 06/23/90 | STEN CREEK POND | | AG | 237 | 00607 | .F. | fyke |
| 06/23/90 | STEN CREEK POND | | AG | 233 | 00608 | .F. | fyke |
| 06/23/90 | STEN CREEK POND | | AG | 204 | 00609 | .F. | fyke |
| 06/23/90 | STEN CREEK POND | | AG | 197 | 00610 | .F. | fyke |
| 06/23/90 | STEN CREEK POND | | AG | 244 | 00611 | .F. | fyke |
| 06/23/90 | STEN CREEK POND | | AG | 228 | 00612 | .F. | fyke |
| 06/23/90 | STEN CREEK POND | | AG | 284 | 00613 | .F. | fyke |
| 06/23/90 | STEN CREEK POND | | AG | 230 | 00614 | .F. | fyke |
| 06/23/90 | STEN CREEK POND | | AG | 245 | 00615 | .F. | fyke |
| 06/23/90 | STEN CREEK POND | | AG | 208 | 00616 | .F. | fyke |
| 06/23/90 | STEN CREEK POND | | AG | 185 | | .F. | fyke |
| 06/23/90 | STEN CREEK POND | | AG | 247 | 00617 | .F. | fyke |
| 06/23/90 | STEN CREEK POND | | AG | 235 | 00618 | .F. | fyke |
| 06/23/90 | STEN CREEK POND | | AG | 257 | 00619 | .F. | fyke |
| 06/23/90 | STEN CREEK POND | | AG | 207 | 00620 | .F. | fyke |
| 06/23/90 | STEN CREEK POND | | AG | 268 | 00621 | .F. | fyke |
| 06/23/90 | STEN CREEK POND | | AG | 214 | 00622 | .F. | fyke |
| 06/23/90 | STEN CREEK POND | | AG | 242 | 00623 | .F. | fyke |
| 06/23/90 | STEN CREEK POND | | AG | 222 | 00624 | .F. | fyke |
| 06/23/90 | STEN CREEK POND | | AG | 132 | | .F. | fyke |
| 06/23/90 | STEN CREEK POND | | AG | 231 | 00625 | .F. | fyke |
| 06/23/90 | STEN CREEK POND | | AG | 240 | 00626 | .F. | fyke |
| 06/23/90 | STEN CREEK POND | | AG | 229 | 00627 | .F. | fyke |
| 06/23/90 | STEN CREEK POND | | AG | 237 | 00628 | .F. | fyke |
| 06/23/90 | STEN CREEK POND | | AG | 228 | 00629 | .F. | fyke |
| 06/23/90 | STEN CREEK POND | | AG | 210 | 00630 | .F. | fyke |
| 06/23/90 | STEN CREEK POND | | AG | 281 | 00631 | .F. | fyke |
| 06/23/90 | STEN CREEK POND | | AG | 279 | 00632 | .F. | fyke |

1990 Atigun Fish Data Summary

| Date Captured | Location | Sublocation | Species | Length | Tag Number | Recapture | Capture Method |
|---|---|---|---|---|---|---|---|
| 06/23/90 | STEN CREEK POND | | AG | 226 | 00633 | .F. | fyke |
| 06/23/90 | STEN CREEK POND | | AG | 193 | | .F. | fyke |
| 06/23/90 | STEN CREEK POND | | AG | 206 | 00634 | .F. | fyke |
| 06/23/90 | STEN CREEK POND | | AG | 172 | | .F. | fyke |
| 06/23/90 | TREVOR CREEK | BRIDGE | AG | 294 | 00635 | .F. | angli |
| 06/23/90 | TREVOR CREEK | BRIDGE | AG | 311 | 00636 | .F. | angli |
| 06/23/90 | TREVOR CREEK | PIPE CROSSING | AG | 186 | | .F. | angli |
| 06/23/90 | TREVOR CREEK | MID MS SITE | AG | 170 | | .F. | angli |
| 06/23/90 | TREVOR CREEK | BELOW MS SITE | AG | 266 | 00637 | .F. | angli |
| 06/23/90 | TREVOR CREEK | BELOW MS SITE | AG | 253 | 00638 | .F. | angli |
| 06/23/90 | TREVOR CREEK | BELOW MS SITE | AG | 272 | 00639 | .F. | angli |
| 06/24/90 | STEN CREEK POND | | AG | 252 | 00640 | .F. | fyke |
| 06/24/90 | STEN CREEK POND | | AG | 244 | 00641 | .F. | fyke |
| 06/24/90 | STEN CREEK POND | | AG | 260 | 00642 | .F. | fyke |
| 06/24/90 | STEN CREEK POND | | AG | 224 | 00643 | .F. | fyke |
| 06/24/90 | STEN CREEK POND | | AG | 241 | 00644 | .F. | fyke |
| 06/24/90 | STEN CREEK POND | | AG | 153 | | .F. | fyke |
| 06/24/90 | STEN CREEK POND | | RWF | 254 | 00645 | .F. | fyke |
| 06/24/90 | STEN CREEK POND | | AG | 228 | 00646 | .F. | fyke |
| 06/24/90 | STEN CREEK POND | | AG | 253 | 00647 | .F. | fyke |
| 06/24/90 | STEN CREEK POND | | AG | 222 | 00648 | .F. | fyke |
| 06/24/90 | STEN CREEK POND | | AG | 214 | 00649 | .F. | fyke |
| 06/24/90 | STEN CREEK POND | | AG | 190 | 00650 | .F. | fyke |
| 06/24/90 | STEN CREEK POND | | AG | 145 | | .F. | fyke |
| 06/24/90 | STEN CREEK POND | | AG | 175 | | .F. | fyke |
| 06/24/90 | ATIGUN RIVER | MI 160.8 | AG | 175 | | .F. | shock |
| 06/24/90 | ATIGUN RIVER | MI 160.8 | AG | 198 | 00651 | .F. | shock |
| 06/24/90 | ATIGUN RIVER | MI 160.8 | AG | 154 | | .F. | shock |
| 06/24/90 | ATIGUN RIVER | CV 29 | AG | 257 | 00652 | .F. | angli |
| 06/24/90 | ATIGUN RIVER | CV 29 | AG | 247 | 00653 | .F. | angli |
| 06/25/90 | HOLDEN CREEK | ABOVE PIPE | AG | 155 | | .F. | shock |
| 06/25/90 | HOLDEN CREEK | ABOVE PIPE | AG | 167 | | .F. | shock |

1990 Atigun Fish Data Summary

| Date Captured | Location | Sublocation | Species | Length | Tag Number | Recapture | Capture Method |
|---|---|---|---|---|---|---|---|
| 06/25/90 | HOLDEN CREEK | ABOVE PIPE | AG | 191 | 00654 | .F. | shock |
| 06/25/90 | HOLDEN CREEK | ABOVE PIPE | AG | 221 | 00655 | .F. | shock |
| 06/25/90 | HOLDEN CREEK | ABOVE PIPE | AG | 104 | | .F. | shock |
| 06/25/90 | HOLDEN CREEK | ABOVE PIPE | AG | 155 | | .F. | shock |
| 06/25/90 | HOLDEN CREEK | ABOVE PIPE | AG | 126 | | .F. | shock |
| 06/25/90 | HOLDEN CREEK | ABOVE PIPE | AG | 114 | | .F. | shock |
| 06/25/90 | HOLDEN CREEK | LAKE OUTLET UP | AG | 285 | 00656 | .F. | shock |
| 06/25/90 | HOLDEN CREEK | LAKE OUTLET UP | AG | 180 | | .F. | shock |
| 06/25/90 | HOLDEN CREEK | LAKE OUTLET UP | AG | 179 | | .F. | shock |
| 06/25/90 | HOLDEN CREEK | LAKE OUTLET UP | RWF | 265 | 00657 | .F. | shock |
| 06/25/90 | HOLDEN CREEK | LAKE OUTLET UP | AG | 164 | | .F. | shock |
| 06/25/90 | HOLDEN CREEK | LAKE OUTLET UP | AG | 168 | | .F. | shock |
| 06/25/90 | HOLDEN CREEK | LAKE OUTLET UP | AG | 181 | | .F. | shock |
| 06/25/90 | HOLDEN CREEK | LAKE OUTLET UP | AG | 110 | | .F. | shock |
| 06/25/90 | HOLDEN CREEK | LAKE OUTLET UP | RWF | 91 | | .F. | shock |
| 06/25/90 | HOLDEN CREEK | LAKE OUTLET UP | AG | 113 | | .F. | shock |
| 06/25/90 | HOLDEN CREEK | LAKE OUTLET UP | AG | 112 | | .F. | shock |
| 06/25/90 | HOLDEN CREEK | LAKE OUTLET UP | AG | 169 | | .F. | shock |
| 06/25/90 | HOLDEN CREEK | LAKE OUTLET UP | AG | 185 | | .F. | shock |
| 06/25/90 | HOLDEN CREEK | LAKE OUTLET UP | AG | 197 | 00658 | .F. | shock |
| 06/25/90 | HOLDEN CREEK | LAKE OUTLET UP | AG | 156 | | .F. | shock |
| 06/25/90 | HOLDEN CREEK | LAKE OUTLET UP | AG | 164 | | .F. | shock |
| 06/25/90 | HOLDEN CREEK | LAKE OUTLET UP | AG | 294 | 00659 | .F. | shock |
| 06/25/90 | HOLDEN CREEK | LAKE OUTLET UP | AG | 173 | | .F. | shock |
| 06/25/90 | HOLDEN CREEK | LAKE OUTLET UP | AG | 171 | | .F. | shock |
| 06/25/90 | HOLDEN CREEK | LAKE OUTLET UP | AG | 181 | | .F. | shock |
| 06/25/90 | HOLDEN CREEK | LAKE OUTLET UP | AG | 253 | 00660 | .F. | shock |
| 06/25/90 | HOLDEN CREEK | LAKE OUTLET UP | AG | 241 | 00661 | .F. | shock |
| 06/25/90 | HOLDEN CREEK | LAKE OUTLET UP | AG | 224 | 00665 | .F. | shock |
| 06/25/90 | HOLDEN CREEK | LAKE OUTLET UP | AG | 315 | 00666 | .F. | shock |
| 06/25/90 | HOLDEN CREEK | LAKE OUTLET UP | AG | 195 | 00662 | .F. | shock |
| 06/25/90 | HOLDEN CREEK | LAKE OUTLET UP | AG | 198 | 00663 | .F. | shock |

1990 Atigun Fish Data Summary

| Date Captured | Location | Sublocation | Species | Length | Tag Number | Recapture | Capture Method |
|---|---|---|---|---|---|---|---|
| 06/25/90 | HOLDEN CREEK | LAKE OUTLET UP | AG | 226 | 00664 | .F. | shock |
| 06/25/90 | HOLDEN CREEK | LAKE OUTLET UP | SSC | 73 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 98 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 93 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 64 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 72 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 135 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 109 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 133 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 151 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 149 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 60 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 70 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 246 | 00667 | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 73 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 77 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 142 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 113 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 121 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 90 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 98 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 101 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 137 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 160 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 179 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 123 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 66 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 68 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 79 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 71 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 76 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 61 | | .F. | shock |

1990 Atigun Fish Data Summary

| Date Captured | Location | Sublocation | Species | Length | Tag Number | Recapture | Capture Method |
|---|---|---|---|---|---|---|---|
| 06/26/90 | SPRING CREEK | | AG | 68 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 68 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 113 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 77 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 63 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 61 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 153 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 114 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 61 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 108 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 160 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 112 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 107 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 105 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 123 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 66 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 65 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 168 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 84 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 138 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 66 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 62 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 69 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 73 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 66 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 58 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 187 | 00668 | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 165 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 147 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 63 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 72 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 67 | | .F. | shock |

1990 Atigun Fish Data Summary

| Date Captured | Location | Sublocation | Species | Length | Tag Number | Recapture | Capture Method |
|---|---|---|---|---|---|---|---|
| 06/26/90 | SPRING CREEK | | AG | 65 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 65 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 62 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 63 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 71 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 68 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 64 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 63 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 62 | | .F. | shock |
| 06/26/90 | SPRING CREEK | | AG | 60 | | .F. | shock |
| 06/26/90 | ATIGUN RIVER | 112 APL 3A | AG | 146 | | .F. | shock |
| 06/26/90 | ATIGUN RIVER | 112 APL 3A | AG | 145 | | .F. | shock |
| 06/26/90 | ATIGUN RIVER | 112 APL 3A | AG | 146 | | .F. | shock |
| 06/26/90 | ATIGUN RIVER | 112 APL 3A | AG | 151 | | .F. | shock |
| 06/26/90 | ATIGUN RIVER | 112 APL 3A | AG | 144 | | .F. | shock |
| 06/26/90 | ATIGUN RIVER | 112 APL 3A | AG | 139 | | .F. | shock |
| 06/26/90 | ATIGUN RIVER | 112 APL 3A | AG | 146 | | .F. | shock |
| 06/26/90 | ATIGUN RIVER | 112 APL 3A | AG | 156 | | .F. | shock |
| 06/26/90 | ATIGUN RIVER | 112 APL 3A | AG | 147 | | .F. | shock |
| 06/26/90 | ATIGUN RIVER | 112 APL 3A | AG | 110 | | .F. | shock |
| 06/26/90 | ATIGUN RIVER | 112 APL 3A | AG | 179 | | .F. | shock |
| 06/26/90 | ATIGUN RIVER | 112 APL 3A | AG | 135 | | .F. | shock |
| 06/26/90 | ATIGUN RIVER | 112 APL 3A | AG | 124 | | .F. | shock |
| 06/26/90 | ATIGUN RIVER | 112 APL 3A | AG | 146 | | .F. | shock |
| 06/26/90 | ATIGUN RIVER | 112 APL 3A | AG | 146 | | .F. | shock |
| 06/26/90 | ATIGUN RIVER | 112 APL 3A | AG | 145 | | .F. | shock |
| 06/26/90 | ATIGUN RIVER | 112 APL 3A | AG | 186 | | .F. | shock |
| 06/26/90 | ATIGUN RIVER | 112 APL 3A | AG | 193 | 00669 | .F. | shock |
| 06/26/90 | ATIGUN RIVER | 112 APL 3A | AG | 161 | | .F. | shock |
| 06/26/90 | ATIGUN RIVER | 112 APL 3A | AG | 161 | | .F. | shock |
| 06/26/90 | ATIGUN RIVER | 112 APL 3A | RWF | 339 | 00670 | .F. | shock |
| 06/26/90 | ATIGUN RIVER | 112 APL 3A | AG | 195 | 00671 | .F. | shock |

1990 Atigun Fish Data Summary

| Date Captured | Location | Sublocation | Species | Length | Tag Number | Recapture | Capture Method |
|---|---|---|---|---|---|---|---|
| 06/26/90 | ATIGUN RIVER | 112 APL 3A | AG | 200 | 00672 | .F. | shock |
| 06/26/90 | ATIGUN RIVER | 112 APL 3A | RWF | 305 | 00673 | .F. | shock |
| 06/27/90 | ATIGUN RIVER | CV 29 | AG | 139 | | .F. | shock |
| 06/27/90 | ATIGUN RIVER | CV 29 | AG | 145 | | .F. | shock |
| 06/27/90 | ATIGUN RIVER | CV 29 | AG | 146 | | .F. | shock |
| 06/27/90 | ATIGUN RIVER | CV 29 | AG | 175 | | .F. | shock |
| 06/27/90 | ATIGUN RIVER | CV 29 | AG | 171 | | .F. | shock |
| 06/27/90 | ATIGUN RIVER | CV 29 | AG | 284 | 00674 | .F. | shock |
| 06/28/90 | HOLDEN LAKE | | AG | 307 | 00675 | .F. | angli |
| 06/28/90 | HOLDEN LAKE | | AG | 323 | 00676 | .F. | angli |
| 07/18/90 | STEN CREEK POND | | AG | 251 | 00677 | .F. | fyke |
| 07/18/90 | STEN CREEK POND | | AG | 236 | 00678 | .F. | fyke |
| 07/18/90 | STEN CREEK POND | | AG | 263 | 00679 | .F. | fyke |
| 07/18/90 | STEN CREEK POND | | RWF | 335 | 00680 | .F. | fyke |
| 07/18/90 | STEN CREEK POND | | RWF | 333 | 00681 | .F. | fyke |
| 07/18/90 | STEN CREEK POND | | RWF | 332 | 00682 | .F. | fyke |
| 07/18/90 | STEN CREEK POND | | RWF | 329 | 00683 | .F. | fyke |
| 07/18/90 | ATIGUN RIVER | MI161.0-.3 WEST | AG | 168 | | .F. | shock |
| 07/18/90 | ATIGUN RIVER | MI161.0-.3 WEST | AG | 167 | | .F. | shock |
| 07/18/90 | ATIGUN RIVER | MI161.0-.3 WEST | AG | 187 | | .F. | shock |
| 07/18/90 | ATIGUN RIVER | MI161.0-.3 WEST | AG | 197 | 00684 | .F. | shock |
| 07/18/90 | ATIGUN RIVER | MI161.0-.3 WEST | AG | 214 | 00685 | .F. | shock |
| 07/18/90 | STEN CREEK POND | | AG | 0 | 00592 | .T. | fyke |
| 07/19/90 | STEN CREEK | ABOVE POND | AG | 315 | 00686 | .F. | shock |
| 07/19/90 | STEN CREEK | BELOW POND | AG | 218 | 00616 | .T. | shock |
| 07/19/90 | STEN CREEK | BELOW POND | AG | 266 | 00598 | .T. | shock |
| 07/19/90 | STEN CREEK | BELOW POND | AG | 256 | 00687 | .F. | shock |
| 07/19/90 | ROCHE M CREEK | ABOVE ROAD | AG | 140 | | .F. | shock |
| 07/19/90 | ROCHE M CREEK | ABOVE ROAD | AG | 121 | | .F. | shock |
| 07/19/90 | ROCHE M CREEK | ABOVE ROAD | AG | 197 | 00688 | .F. | shock |
| 07/19/90 | ROCHE M CREEK | ABOVE ROAD | AG | 174 | | .F. | shock |
| 07/19/90 | ROCHE M CREEK | ABOVE ROAD | AG | 153 | | .F. | shock |

1990 Atigun Fish Data Summary

| Date Captured | Location | Sublocation | Species | Length | Tag Number | Recapture | Capture Method |
|---|---|---|---|---|---|---|---|
| 07/19/90 | ROCHE M CREEK | ABOVE ROAD | AG | 178 | | .F. | shock |
| 07/19/90 | ROCHE M CREEK | ABOVE ROAD | DV | 99 | | .F. | shock |
| 07/19/90 | ATIGUN RIVER | CV 29 | AG | 191 | 00689 | .F. | shock |
| 07/19/90 | ATIGUN RIVER | CV 29 | AG | 237 | 00690 | .F. | shock |
| 07/19/90 | ATIGUN RIVER | CV 29 | AG | 191 | 00691 | .F. | shock |
| 07/19/90 | ATIGUN RIVER | CV 29 | AG | 183 | | .F. | shock |
| 07/19/90 | ATIGUN RIVER | CV 29 | AG | 163 | | .F. | shock |
| 07/19/90 | ATIGUN RIVER | CV 29 | AG | 172 | | .F. | shock |
| 07/19/90 | ATIGUN RIVER | CV 29 | AG | 178 | | .F. | shock |
| 07/19/90 | ATIGUN RIVER | CV 29 | AG | 166 | | .F. | shock |
| 07/19/90 | ATIGUN RIVER | CV 29 | AG | 163 | | .F. | shock |
| 07/19/90 | ATIGUN RIVER | CV 29 | AG | 177 | | .F. | shock |
| 07/19/90 | ATIGUN RIVER | CV 29 | AG | 210 | 00692 | .F. | shock |
| 07/19/90 | ATIGUN RIVER | CV 29 | AG | 223 | 00693 | .F. | shock |
| 07/19/90 | ATIGUN RIVER | CV 29 | AG | 227 | 00694 | .F. | shock |
| 07/19/90 | ATIGUN RIVER | CV 29 | AG | 171 | | .F. | shock |
| 07/19/90 | ATIGUN RIVER | CV 29 | AG | 169 | | .F. | shock |
| 07/19/90 | ATIGUN RIVER | CV 29 | AG | 173 | | .F. | shock |
| 07/19/90 | ATIGUN RIVER | CV 29 | AG | 192 | 00695 | .F. | shock |
| 07/19/90 | ATIGUN RIVER | CV 29 | AG | 203 | | .F. | shock |
| 07/19/90 | ATIGUN RIVER | CV 29 | AG | 160 | | .F. | shock |
| 07/19/90 | ATIGUN RIVER | CV 29 | AG | 184 | | .F. | shock |
| 07/19/90 | ATIGUN RIVER | CV 29 | AG | 240 | 00696 | .F. | shock |
| 07/19/90 | ATIGUN RIVER | CV 29 | AG | 183 | | .F. | shock |
| 07/19/90 | ATIGUN RIVER | CV 29 | AG | 202 | 00697 | .F. | shock |
| 07/19/90 | ATIGUN RIVER | CV 29 | AG | 157 | | .F. | shock |
| 07/19/90 | ATIGUN RIVER | CV 29 | AG | 295 | 00698 | .F. | shock |
| 07/19/90 | ATIGUN RIVER | CV 29 | AG | 201 | 00699 | .F. | shock |
| 07/19/90 | ATIGUN RIVER | CV 29 | AG | 199 | 00700 | .F. | shock |
| 07/19/90 | ATIGUN RIVER | CV 29 | AG | 216 | 00701 | .F. | shock |
| 07/19/90 | ATIGUN RIVER | CV 29 | AG | 217 | 00702 | .F. | shock |
| 07/19/90 | ATIGUN RIVER | CV 29 | AG | 247 | 00703 | .F. | shock |

1990 Atigun Fish Data Summary

| Date Captured | Location | Sublocation | Species | Length | Tag Number | Recapture | Capture Method |
|---|---|---|---|---|---|---|---|
| 07/19/90 | ATIGUN RIVER | CV 29 | AG | 241 | 00704 | .F. | shock |
| 07/19/90 | ATIGUN RIVER | CV 29 | AG | 179 | | .T. | shock |
| 08/03/90 | STEN CREEK | BELOW POND | AG | 202 | 00706 | .F. | shock |
| 08/03/90 | STEN CREEK | BELOW POND | AG | 240 | 00705 | .F. | shock |
| 08/03/90 | STEN CREEK | BELOW POND | RWF | 328 | 00707 | .F. | shock |
| 08/03/90 | STEN CREEK | BELOW POND | DV | 154 | | .F. | shock |
| 08/03/90 | STEN CREEK | BELOW POND | AG | 197 | 00708 | .F. | shock |
| 08/03/90 | STEN CREEK | BELOW POND | AG | 164 | | .F. | shock |
| 08/03/90 | STEN CREEK | BELOW POND | AG | 181 | | .F. | shock |
| 08/03/90 | STEN CREEK | ABOVE POND | AG | 302 | 00686 | .T. | shock |
| 08/03/90 | STEN CREEK | ABOVE POND | AG | 239 | 00611 | .T. | shock |
| 08/03/90 | SPIKE CAMP CR. | ABOVE BRIDGE | AG | 215 | 00709 | .F. | shock |
| 08/03/90 | SPIKE CAMP CR. | ABOVE BRIDGE | AG | 247 | 00710 | .F. | shock |
| 08/03/90 | SPIKE CAMP CR. | ABOVE BRIDGE | AG | 285 | 00711 | .F. | shock |
| 08/03/90 | SPIKE CAMP CR. | AT BRIDGE | AG | 283 | 00600 | .T. | shock |
| 08/03/90 | SPIKE CAMP CR. | AT BRIDGE | AG | 247 | 00712 | .F. | shock |
| 08/03/90 | ATIGUN RIVER | MI 163.1-.5 | AG | 216 | 00713 | .F. | shock |
| 08/03/90 | ATIGUN RIVER | MI 163.1-.5 | AG | 246 | 00714 | .F. | shock |
| 08/03/90 | ATIGUN RIVER | MI 163.1-.5 | AG | 163 | | .F. | shock |
| 08/03/90 | ATIGUN RIVER | MI 163.1-.5 | AG | 257 | 00615 | .T. | shock |
| 08/03/90 | ATIGUN RIVER | MI 163.1-.5 | AG | 277 | 00580 | .T. | shock |
| 08/03/90 | ATIGUN RIVER | MI 163.1-.5 | AG | 147 | | .F. | shock |
| 08/03/90 | ATIGUN RIVER | MI 163.1-.5 | AG | 221 | 00715 | .F. | shock |
| 08/03/90 | ATIGUN RIVER | MI 163.1-.5 | AG | 246 | 00716 | .F. | shock |
| 08/03/90 | ATIGUN RIVER | MI 163.1-.5 | AG | 188 | 00717 | .F. | shock |
| 08/03/90 | ATIGUN RIVER | MI 163.1-.5 | AG | 182 | | .F. | shock |
| 08/03/90 | ATIGUN RIVER | MI 163.1-.5 | AG | 234 | 00629 | .T. | shock |
| 08/03/90 | ATIGUN RIVER | MI 163.1-.5 | AG | 250 | 00718 | .F. | shock |
| 08/03/90 | ATIGUN RIVER | MI 163.1-.5 | AG | 214 | 00719 | .F. | shock |
| 08/03/90 | ATIGUN RIVER | MI 163.1-.5 | AG | 201 | 00720 | .F. | shock |
| 08/03/90 | ATIGUN RIVER | MI 163.1-.5 | AG | 198 | | .F. | shock |
| 08/03/90 | ATIGUN RIVER | MI 163.1-.5 | AG | 239 | 00624 | .T. | shock |

1990 Atigun Fish Data Summary

| Date Captured | Location | Sublocation | Species | Length | Tag Number | Recapture | Capture Method |
|---|---|---|---|---|---|---|---|
| 08/03/90 | ATIGUN RIVER | MI 163.1-.5 | AG | 242 | 00721 | .F. | shock |
| 08/03/90 | ATIGUN RIVER | MI 163.1-.5 | AG | 186 | | .F. | shock |
| 08/03/90 | ATIGUN RIVER | MI 163.1-.5 | AG | 246 | 00722 | .F. | shock |
| 08/03/90 | ATIGUN RIVER | MI 163.1-.5 | AG | 210 | 00723 | .F. | shock |
| 08/03/90 | ATIGUN RIVER | MI 163.1-.5 | AG | 251 | 00724 | .F. | shock |
| 08/03/90 | ATIGUN RIVER | MI 163.1-.5 | AG | 240 | 00725 | .F. | shock |
| 08/03/90 | ATIGUN RIVER | MI 163.1-.5 | AG | 227 | 00726 | .F. | shock |
| 08/03/90 | ATIGUN RIVER | MI 163.1-.5 | AG | 219 | 00727 | .F. | shock |
| 08/03/90 | ATIGUN RIVER | MI 163.1-.5 | DV | 228 | 00728 | .F. | shock |
| 08/04/90 | STEN CREEK POND | | RWF | 326 | 00707 | .T. | fyke |
| 08/04/90 | STEN CREEK POND | | RWF | 342 | 00729 | .F. | fyke |
| 08/04/90 | STEN CREEK POND | | RWF | 335 | 00730 | .F. | fyke |
| 08/04/90 | STEN CREEK POND | | AG | 200 | 00708 | .T. | fyke |
| 08/04/90 | STEN CREEK POND | | AG | 148 | | .F. | fyke |
| 08/04/90 | STEN CREEK POND | | AG | 224 | 00616 | .T. | fyke |
| 08/04/90 | STEN CREEK POND | | AG | 211 | 00579 | .T. | fyke |
| 08/04/90 | STEN CREEK POND | | AG | 206 | 00650 | .T. | fyke |
| 08/04/90 | STEN CREEK POND | | AG | 88 | | .F. | fyke |
| 08/04/90 | STEN CREEK POND | | AG | 201 | 00731 | .T. | fyke |
| 08/04/90 | STEN CREEK POND | | RWF | 289 | 00732 | .F. | fyke |
| 08/04/90 | STEN CREEK POND | | RWF | 349 | 00733 | .F. | fyke |
| 08/04/90 | STEN CREEK POND | | AG | 299 | 00686 | .T. | fyke |
| 08/04/90 | STEN CREEK POND | | AG | 225 | 00577 | .T. | fyke |
| 08/04/90 | STEN CREEK POND | | AG | 241 | 00734 | .F. | fyke |
| 08/04/90 | STEN CREEK POND | | AG | 183 | | .T. | fyke |
| 08/04/90 | STEN CREEK POND | | AG | 170 | | .T. | fyke |
| 08/04/90 | STEN CREEK POND | | AG | 127 | | .F. | fyke |
| 08/04/90 | STEN CREEK POND | | DV | 154 | | .T. | fyke |
| 08/04/90 | STEN CREEK POND | | DV | 156 | | .F. | fyke |
| 08/04/90 | ATIGUN RIVER | MI164.0 TO CV30 | AG | 258 | 00687 | .T. | shock |
| 08/04/90 | ATIGUN RIVER | MI164.0 TO CV30 | AG | 248 | 00745 | .F. | shock |
| 08/04/90 | ATIGUN RIVER | MI164.0 TO CV30 | AG | 238 | 00746 | .F. | shock |

1990 Atigun Fish Data Summary

| Date Captured | Location | Sublocation | Species | Length | Tag Number | Recapture | Capture Method |
|---|---|---|---|---|---|---|---|
| 08/04/90 | ATIGUN RIVER | MI164.0 TO CV30 | AG | 252 | 00747 | .F. | shock |
| 08/04/90 | ATIGUN RIVER | MI164.0 TO CV30 | AG | 254 | 00748 | .F. | shock |
| 08/04/90 | ATIGUN RIVER | MI164.0 TO CV30 | AG | 201 | 00749 | .F. | shock |
| 08/04/90 | ATIGUN RIVER | MI164.0 TO CV30 | AG | 318 | 00750 | .F. | shock |
| 08/04/90 | ATIGUN RIVER | MI164.0 TO CV30 | DV | 237 | 00801 | .F. | shock |
| 08/04/90 | ATIGUN RIVER | MI164.0 TO CV30 | DV | 229 | 00802 | .F. | shock |
| 08/04/90 | ATIGUN RIVER | MI164.0 TO CV30 | DV | 200 | 00803 | .F. | shock |
| 08/04/90 | ATIGUN RIVER | MI164.0 TO CV30 | DV | 185 | | .F. | shock |
| 08/04/90 | ATIGUN RIVER | MI164.0 TO CV30 | AG | 185 | | .F. | shock |
| 08/04/90 | ATIGUN RIVER | MI164.0 TO CV30 | AG | 204 | 00804 | .F. | shock |
| 08/04/90 | ATIGUN RIVER | MI164.0 TO CV30 | AG | 229 | 00805 | .F. | shock |
| 08/04/90 | ATIGUN RIVER | MI164.0 TO CV30 | AG | 220 | 00806 | .F. | shock |
| 08/04/90 | ATIGUN RIVER | MI164.0 TO CV30 | AG | 253 | 00807 | .F. | shock |
| 08/04/90 | ATIGUN RIVER | MI164.0 TO CV30 | AG | 250 | 00808 | .F. | shock |
| 08/04/90 | ATIGUN RIVER | MI164.0 TO CV30 | AG | 241 | 00809 | .F. | shock |
| 08/04/90 | ATIGUN RIVER | MI164.0 TO CV30 | RWF | 331 | 00810 | .F. | shock |
| 08/04/90 | ATIGUN RIVER | MI164.0 TO CV30 | DV | 186 | | .F. | shock |
| 08/04/90 | ATIGUN RIVER | MI164.0 TO CV30 | AG | 277 | 00605 | .T. | shock |
| 08/04/90 | ATIGUN RIVER | MI164.0 TO CV30 | AG | 238 | 00811 | .F. | shock |
| 08/04/90 | ATIGUN RIVER | MI164.0 TO CV30 | AG | 261 | 00812 | .F. | shock |
| 08/04/90 | ATIGUN RIVER | MI164.0 TO CV30 | AG | 189 | | .F. | shock |
| 08/04/90 | ATIGUN RIVER | MI164.0 TO CV30 | AG | 188 | | .T. | shock |
| 08/04/90 | SPIKE CAMP CR. | ABOVE BRIDGE | AG | 222 | 00813 | .F. | shock |
| 08/04/90 | SPIKE CAMP CR. | ABOVE BRIDGE | AG | 221 | 00814 | .F. | shock |
| 08/04/90 | SPIKE CAMP CR. | ABOVE BRIDGE | DV | 261 | 00815 | .F. | shock |
| 08/04/90 | SPIKE CAMP CR. | ABOVE BRIDGE | AG | 256 | 00816 | .F. | shock |
| 08/04/90 | SPIKE CAMP CR. | ABOVE BRIDGE | AG | 233 | 00817 | .F. | shock |
| 08/04/90 | SPIKE CAMP CR. | ABOVE BRIDGE | AG | 196 | 00818 | .F. | shock |
| 08/04/90 | SPIKE CAMP CR. | ABOVE BRIDGE | AG | 245 | 00819 | .F. | shock |
| 08/04/90 | SPIKE CAMP CR. | ABOVE BRIDGE | AG | 193 | 00820 | .F. | shock |
| 08/04/90 | SPIKE CAMP CR. | ABOVE BRIDGE | AG | 229 | 00821 | .F. | shock |
| 08/04/90 | SPIKE CAMP CR. | ABOVE BRIDGE | AG | 233 | 00822 | .F. | shock |

1990 Atigun Fish Data Summary

| Date Captured | Location | Sublocation | Species | Length | Tag Number | Recapture | Capture Method |
|---|---|---|---|---|---|---|---|
| 08/04/90 | SPIKE CAMP CR. | ABOVE BRIDGE | AG | 195 | 00823 | .F. | shock |
| 08/04/90 | ATIGUN RIVER | CV 29 | AG | 140 | | .F. | angli |
| 08/04/90 | ATIGUN RIVER | CV 29 | AG | 186 | | .F. | angli |
| 08/04/90 | ATIGUN RIVER | CV 29 | AG | 183 | | .F. | angli |
| 08/04/90 | ATIGUN RIVER | CV 29 | AG | 220 | 00824 | .F. | angli |
| 08/04/90 | ATIGUN RIVER | CV 29 | AG | 213 | 00825 | .F. | angli |
| 08/04/90 | ATIGUN RIVER | CV 29 | AG | 241 | 00826 | .F. | angli |
| 08/04/90 | ATIGUN RIVER | CV 29 | AG | 250 | 00827 | .F. | angli |
| 08/04/90 | ATIGUN RIVER | CV 29 | AG | 239 | 00828 | .F. | angli |
| 08/04/90 | ATIGUN RIVER | CV 29 | AG | 308 | 00829 | .F. | angli |
| 08/04/90 | ATIGUN RIVER | CV 29 | AG | 196 | 00830 | .F. | angli |
| 08/04/90 | ATIGUN RIVER | CV 29 | AG | 200 | 00831 | .F. | angli |
| 08/04/90 | ATIGUN RIVER | CV 29 | AG | 263 | 00832 | .F. | angli |
| 08/04/90 | ATIGUN RIVER | CV 29 | AG | 285 | 00833 | .F. | angli |
| 08/04/90 | ATIGUN RIVER | CV 29 | AG | 178 | | .F. | angli |
| 08/04/90 | ATIGUN RIVER | CV 29 | AG | 207 | 00834 | .F. | angli |
| 08/04/90 | ATIGUN RIVER | CV 29 | AG | 276 | 00835 | .F. | angli |
| 08/04/90 | ATIGUN RIVER | CV 29 | AG | 220 | 00836 | .F. | angli |
| 08/04/90 | ATIGUN RIVER | CV 29 | AG | 268 | 00837 | .F. | angli |
| 08/04/90 | ATIGUN RIVER | CV 29 | AG | 179 | | .F. | angli |
| 08/04/90 | ATIGUN RIVER | CV 29 | AG | 99 | | .F. | angli |
| 08/04/90 | ATIGUN RIVER | CV 29 | AG | 231 | 00838 | .F. | angli |
| 08/04/90 | ATIGUN RIVER | CV 29 | AG | 235 | 00840 | .F. | angli |
| 08/04/90 | ATIGUN RIVER | CV 29 | AG | 242 | 00839 | .F. | angli |
| 08/04/90 | ATIGUN RIVER | CV 29 | AG | 201 | 00841 | .F. | angli |
| 08/04/90 | ATIGUN RIVER | CV 29 | AG | 223 | 00842 | .F. | angli |
| 08/04/90 | ATIGUN RIVER | CV 29 | AG | 261 | 00843 | .F. | angli |
| 08/04/90 | ATIGUN RIVER | CV 29 | AG | 187 | | .F. | angli |
| 08/04/90 | ATIGUN RIVER | CV 29 | AG | 188 | | .F. | angli |
| 08/04/90 | ATIGUN RIVER | CV 29 | AG | 184 | | .F. | angli |
| 08/04/90 | ATIGUN RIVER | CV 29 | AG | 226 | 00844 | .F. | angli |
| 08/04/90 | ATIGUN RIVER | MI 163.6-164.0 | DV | 128 | | .F. | shock |

1990 Atigun Fish Data Summary

| Date Captured | Location | Sublocation | Species | Length | Tag Number | Recapture | Capture Method |
|---|---|---|---|---|---|---|---|
| 08/04/90 | ATIGUN RIVER | MI 163.6-164.0 | DV | 180 | | .F. | shock |
| 08/04/90 | ATIGUN RIVER | MI 163.6-164.0 | DV | 181 | | .F. | shock |
| 08/04/90 | ATIGUN RIVER | MI 163.6-164.0 | AG | 260 | 00588 | .T. | shock |
| 08/04/90 | ATIGUN RIVER | MI 163.6-164.0 | AG | 176 | | .F. | shock |
| 08/04/90 | ATIGUN RIVER | MI 163.6-164.0 | AG | 189 | | .F. | shock |
| 08/04/90 | ATIGUN RIVER | MI 163.6-164.0 | AG | 219 | 00735 | .F. | shock |
| 08/04/90 | ATIGUN RIVER | MI 163.6-164.0 | AG | 250 | 00736 | .F. | shock |
| 08/04/90 | ATIGUN RIVER | MI 163.6-164.0 | DV | 195 | 00737 | .F. | shock |
| 08/04/90 | ATIGUN RIVER | MI 163.6-164.0 | AG | 250 | 00590 | .T. | shock |
| 08/04/90 | ATIGUN RIVER | MI 163.6-164.0 | AG | 159 | | .F. | shock |
| 08/04/90 | ATIGUN RIVER | MI 163.6-164.0 | AG | 199 | 00738 | .F. | shock |
| 08/04/90 | ATIGUN RIVER | MI 163.6-164.0 | AG | 192 | 00739 | .F. | shock |
| 08/04/90 | ATIGUN RIVER | MI 163.6-164.0 | AG | 194 | 00740 | .F. | shock |
| 08/04/90 | ATIGUN RIVER | MI 163.6-164.0 | AG | 255 | 00741 | .F. | shock |
| 08/04/90 | ATIGUN RIVER | MI 163.6-164.0 | AG | 264 | 00742 | .F. | shock |
| 08/04/90 | ATIGUN RIVER | MI 163.6-164.0 | DV | 200 | 00743 | .F. | shock |
| 08/04/90 | ATIGUN RIVER | MI 163.6-164.0 | DV | 167 | | .F. | shock |
| 08/04/90 | ATIGUN RIVER | MI 163.6-164.0 | DV | 183 | | .F. | shock |
| 08/04/90 | ATIGUN RIVER | MI 163.6-164.0 | DV | 217 | 00744 | .F. | shock |
| 08/05/90 | STEN CREEK POND | | AG | 198 | 00630 | .T. | fyke |
| 08/05/90 | STEN CREEK POND | | AG | 237 | 00611 | .T. | fyke |
| 08/05/90 | STEN CREEK POND | | AG | 238 | 00614 | .T. | fyke |
| 08/05/90 | STEN CREEK POND | | AG | 176 | | .T. | fyke |
| 08/05/90 | STEN CREEK POND | | AG | 168 | | .T. | fyke |
| 08/05/90 | STEN CREEK POND | | AG | 204 | | .T. | fyke |
| 08/05/90 | STEN CREEK POND | | AG | 225 | 00845 | .F. | fyke |
| 08/05/90 | STEN CREEK POND | | AG | 234 | 00846 | .F. | fyke |
| 08/05/90 | STEN CREEK POND | | AG | 273 | 00847 | .F. | fyke |
| 08/05/90 | STEN CREEK POND | | AG | 221 | 00848 | .F. | fyke |
| 08/05/90 | STEN CREEK POND | | RWF | 355 | 00849 | .F. | fyke |
| 08/05/90 | STEN CREEK POND | | AG | 243 | 00607 | .T. | fyke |
| 08/05/90 | STEN CREEK POND | | AG | 146 | | .T. | fyke |

1990 Atigun Fish Data Summary

| Date Captured | Location | Sublocation | Species | Length | Tag Number | Recapture | Capture Method |
|---|---|---|---|---|---|---|---|
| 08/05/90 | STEN CREEK POND | | AG | 186 | | .F. | fyke |
| 08/05/90 | STEN CREEK POND | | AG | 128 | | .T. | fyke |
| 08/05/90 | STEN CREEK POND | | AG | 91 | | .F. | fyke |
| 08/05/90 | STEN CREEK POND | | AG | 89 | | .T. | fyke |
| 08/05/90 | STEN CREEK POND | | AG | 140 | | .F. | fyke |
| 08/05/90 | STEN CREEK POND | | AG | 214 | 00850 | .F. | fyke |
| 08/05/90 | STEN CREEK POND | | DV | 147 | | .F. | fyke |
| 08/05/90 | ATIGUN RIVER | CAMP TO STEN CR | AG | 220 | 00576 | .T. | shock |
| 08/05/90 | ATIGUN RIVER | CAMP TO STEN CR | AG | 243 | 00615 | .T. | shock |
| 08/05/90 | ATIGUN RIVER | CAMP TO STEN CR | RWF | 336 | 00681 | .T. | shock |
| 08/05/90 | ATIGUN RIVER | CAMP TO STEN CR | AG | 210 | 00713 | .T. | shock |
| 08/05/90 | ATIGUN RIVER | CAMP TO STEN CR | AG | 246 | 00705 | .T. | shock |
| 08/05/90 | ATIGUN RIVER | SPIKE CAMP/ATGN | AG | 298 | 00586 | .T. | shock |
| 08/05/90 | ATIGUN RIVER | SPIKE CAMP/ATGN | AG | 245 | 00714 | .T. | shock |
| 08/05/90 | ATIGUN RIVER | SPIKE CAMP/ATGN | AG | 227 | 00851 | .F. | shock |
| 08/05/90 | ATIGUN RIVER | SPIKE CAMP/ATGN | AG | 219 | 00852 | .F. | shock |
| 08/05/90 | ATIGUN RIVER | SPIKE CAMP/ATGN | AG | 279 | 00853 | .F. | shock |
| 08/05/90 | ATIGUN RIVER | SPIKE CAMP/ATGN | AG | 263 | 00854 | .F. | shock |
| 08/05/90 | ATIGUN RIVER | SPIKE CAMP/ATGN | AG | 204 | 00855 | .F. | shock |
| 08/05/90 | ATIGUN RIVER | SPIKE CAMP/ATGN | AG | 206 | 00856 | .F. | shock |
| 08/05/90 | ATIGUN RIVER | CV 29 | AG | 375 | 00857 | .F. | angli |
| 08/05/90 | ATIGUN RIVER | CV 29 | AG | 220 | 00824 | .T. | angli |
| 08/05/90 | ATIGUN RIVER | CV 29 | AG | 212 | 00858 | .F. | angli |
| 08/05/90 | ATIGUN RIVER | CV 29 | AG | 196 | 00859 | .F. | angli |
| 08/05/90 | ATIGUN RIVER | CV 29 | AG | 175 | | .F. | angli |
| 08/05/90 | ATIGUN RIVER | CV 29 | AG | 248 | 00860 | .F. | angli |
| 08/05/90 | ATIGUN RIVER | CV 29 | AG | 235 | 00861 | .F. | angli |
| 08/05/90 | ATIGUN RIVER | CV 29 | AG | 212 | 00862 | .F. | angli |
| 08/05/90 | ATIGUN RIVER | CV 29 | AG | 245 | | .F. | angli |
| 08/05/90 | ATIGUN RIVER | CV 29 | AG | 220 | 00863 | .F. | angli |
| 08/05/90 | ATIGUN RIVER | CV 29 | AG | 231 | 00864 | .F. | angli |
| 08/05/90 | ATIGUN RIVER | CV 29 | AG | 199 | 00865 | .F. | angli |

1990 Atigun Fish Data Summary

| Date Captured | Location | Sublocation | Species | Length | Tag Number | Recapture | Capture Method |
|---|---|---|---|---|---|---|---|
| 08/05/90 | ATIGUN RIVER | CV 29 | AG | 212 | 00866 | .F. | angli |
| 08/05/90 | ATIGUN RIVER | CV 29 | AG | 207 | 00867 | .F. | angli |
| 08/05/90 | ATIGUN RIVER | CV 29 | AG | 185 | | .F. | angli |
| 08/05/90 | ATIGUN RIVER | CV 29 | AG | 231 | 00868 | .F. | angli |
| 08/05/90 | ATIGUN RIVER | CV 29 | AG | 181 | | .F. | angli |
| 08/05/90 | ATIGUN RIVER | CV 29 | AG | 257 | 00869 | .F. | angli |
| 08/05/90 | ATIGUN RIVER | CV 29 | AG | 312 | 00870 | .F. | angli |
| 08/05/90 | ATIGUN RIVER | CV 29 | AG | 279 | 00871 | .F. | angli |
| 08/05/90 | ATIGUN RIVER | CV 29 | AG | 290 | 00872 | .F. | angli |
| 08/05/90 | ATIGUN RIVER | CV 29 | AG | 185 | | .F. | angli |
| 08/05/90 | ATIGUN RIVER | CV 29 | AG | 204 | 00873 | .F. | angli |
| 08/05/90 | ATIGUN RIVER | CV 29 | AG | 176 | | .F. | angli |
| 08/05/90 | ATIGUN RIVER | CV 29 | AG | 186 | | .F. | angli |
| 08/05/90 | ATIGUN RIVER | CV 29 | AG | 137 | | .F. | angli |
| 08/05/90 | ATIGUN RIVER | CV 29 | AG | 187 | | .F. | angli |
| 08/05/90 | ATIGUN RIVER | CV 29 | AG | 173 | | .F. | angli |
| 08/05/90 | ATIGUN RIVER | CV 29 | AG | 216 | 00874 | .F. | angli |
| 08/05/90 | ATIGUN RIVER | CV 29 | AG | 231 | 00875 | .F. | angli |
| 08/05/90 | ATIGUN RIVER | CV 29 | AG | 239 | 00876 | .F. | angli |
| 08/05/90 | ATIGUN RIVER | CV 29 | AG | 273 | 00877 | .F. | angli |
| 08/05/90 | ATIGUN RIVER | CV 29 | AG | 105 | | .F. | angli |
| 08/05/90 | ATIGUN RIVER | CV 29 | AG | 181 | | .F. | angli |
| 08/05/90 | ATIGUN RIVER | CV 29 | AG | 199 | 00878 | .F. | angli |
| 08/05/90 | ATIGUN RIVER | CV 29 | AG | 200 | 00879 | .F. | angli |
| 08/05/90 | ATIGUN RIVER | CV 29 | AG | 198 | 00880 | .F. | angli |
| 08/05/90 | ATIGUN RIVER | CV 29 | AG | 189 | | .F. | angli |
| 08/05/90 | ATIGUN RIVER | CV 29 | AG | 264 | 00881 | .F. | angli |
| 08/05/90 | ATIGUN RIVER | CV 29 | AG | 291 | 00882 | .F. | angli |
| 08/06/90 | STEN CREEK POND | | AG | 232 | 00612 | .T. | fyke |
| 08/06/90 | STEN CREEK POND | | AG | 215 | 00850 | .T. | fyke |
| 08/06/90 | STEN CREEK POND | | AG | 142 | | .T. | fyke |
| 08/06/90 | STEN CREEK POND | | AG | 175 | | .T. | fyke |

1990 Atigun Fish Data Summary

| Date Captured | Location | Sublocation | Species | Length | Tag Number | Recapture | Capture Method |
|---|---|---|---|---|---|---|---|
| 08/06/90 | STEN CREEK POND | | AG | 174 | | .F. | fyke |
| 08/06/90 | STEN CREEK POND | | AG | 172 | | .F. | fyke |
| 08/06/90 | STEN CREEK POND | | DV | 148 | | .F. | fyke |
| 08/06/90 | ATIGUN RIVER | MI 162.1 | AG | 243 | 00626 | .T. | shock |
| 08/06/90 | ATIGUN RIVER | MI 162.1 | AG | 284 | 00711 | .T. | shock |
| 08/06/90 | ATIGUN RIVER | MI 162.1 | AG | 329 | 00883 | .F. | shock |
| 08/06/90 | ATIGUN RIVER | MI 162.1 | AG | 304 | 00884 | .F. | shock |
| 08/06/90 | ATIGUN RIVER | MI 162.1 | AG | 247 | 00885 | .F. | shock |
| 08/06/90 | ATIGUN RIVER | MI 162.1 | AG | 241 | 00886 | .F. | shock |
| 08/06/90 | ATIGUN RIVER | MI 162.1 | AG | 177 | | .F. | shock |
| 08/06/90 | ATIGUN RIVER | MI 162.1 | AG | 213 | 00887 | .F. | shock |
| 08/06/90 | ATIGUN RIVER | MI 162.1 | AG | 202 | 00888 | .F. | shock |
| 08/06/90 | ATIGUN RIVER | MI 162.1 | AG | 156 | | .F. | shock |
| 08/06/90 | ATIGUN RIVER | MI 162.1 | AG | 136 | | .F. | shock |
| 08/06/90 | ATIGUN RIVER | MI 162.1 | AG | 99 | | .F. | shock |
| 08/06/90 | ATIGUN RIVER | MI 162.1 | DV | 145 | | .F. | shock |
| 08/06/90 | ATIGUN RIVER | MI 162.1 | DV | 157 | | .F. | shock |
| 08/06/90 | ATIGUN RIVER | MI 162.1 | DV | 148 | | .F. | shock |
| 08/06/90 | ATIGUN RIVER | MI 162.1 | RWF | 263 | 00889 | .F. | shock |
| 08/06/90 | ATIGUN RIVER | ATIGUN BRIDGE 1 | AG | 200 | 00890 | .F. | shock |
| 08/06/90 | ATIGUN RIVER | ABOVE BRIDGE 1 | AG | 242 | 00891 | .F. | shock |
| 08/06/90 | ATIGUN RIVER | ABOVE BRIDGE 1 | AG | 203 | 00892 | .F. | shock |
| 08/06/90 | ATIGUN RIVER | ABOVE BRIDGE 1 | AG | 235 | 00893 | .F. | shock |
| 08/06/90 | ATIGUN RIVER | ABOVE BRIDGE 1 | AG | 260 | 00894 | .F. | shock |
| 08/06/90 | ATIGUN RIVER | ABOVE BRIDGE 1 | AG | 249 | 00895 | .F. | shock |
| 08/06/90 | ATIGUN RIVER | ABOVE BRIDGE 1 | AG | 228 | 00896 | .F. | shock |
| 08/06/90 | ATIGUN RIVER | ABOVE BRIDGE 1 | AG | 272 | 00897 | .F. | shock |
| 08/06/90 | ATIGUN RIVER | ABOVE BRIDGE 1 | AG | 219 | 00898 | .F. | shock |
| 08/06/90 | ATIGUN RIVER | ABOVE BRIDGE 1 | AG | 251 | 00899 | .F. | shock |
| 08/06/90 | ATIGUN RIVER | ABOVE BRIDGE 1 | AG | 200 | 00900 | .F. | shock |
| 08/06/90 | ATIGUN RIVER | ABOVE BRIDGE 1 | AG | 203 | 00901 | .F. | shock |
| 08/06/90 | ATIGUN RIVER | MI 160.9 WEST | AG | 241 | 00902 | .F. | shock |

1990 Atigun Fish Data Summary

| Date Captured | Location | Sublocation | Species | Length | Tag Number | Recapture | Capture Method |
|---|---|---|---|---|---|---|---|
| 08/06/90 | ATIGUN RIVER | MI 160.9 WEST | AG | 275 | 00903 | .F. | shock |
| 08/06/90 | ATIGUN RIVER | MI 160.9 WEST | AG | 317 | 00904 | .F. | shock |
| 08/06/90 | TREVOR CREEK | BRIDGE TO PIPE | AG | 206 | 00905 | .F. | angli |
| 08/06/90 | TREVOR CREEK | BRIDGE TO PIPE | AG | 280 | 00906 | .F. | angli |
| 08/06/90 | TREVOR CREEK | BRIDGE TO PIPE | AG | 182 | | .F. | angli |
| 08/06/90 | TREVOR CREEK | BELOW MS SITE | AG | 263 | 00907 | .F. | angli |
| 08/06/90 | TREVOR CREEK | BELOW MS SITE | AG | 265 | 00908 | .F. | angli |
| 08/06/90 | TREVOR CREEK | BELOW MS SITE | AG | 276 | 00909 | .F. | angli |
| 08/06/90 | TREVOR CREEK | BELOW MS SITE | AG | 316 | 00910 | .F. | angli |
| 08/06/90 | TREVOR CREEK | BELOW MS SITE | AG | 181 | | .F. | angli |
| 08/06/90 | TREVOR CREEK | BELOW MS SITE | AG | 180 | | .F. | angli |
| 08/06/90 | TREVOR CREEK | BELOW MS SITE | AG | 156 | | .F. | angli |
| 08/06/90 | TREVOR CREEK | BELOW MS SITE | AG | 181 | | .F. | angli |
| 08/06/90 | TREVOR CREEK | BELOW MS SITE | AG | 200 | 00911 | .F. | angli |
| 08/06/90 | TREVOR CREEK | BELOW MS SITE | AG | 211 | 00912 | .F. | angli |
| 08/06/90 | TREVOR CREEK | BELOW MS SITE | AG | 234 | 00913 | .F. | angli |
| 08/06/90 | TREVOR CREEK | BELOW MS SITE | AG | 253 | 00914 | .F. | angli |
| 08/06/90 | TREVOR CREEK | BELOW MS SITE | AG | 255 | 00915 | .F. | angli |
| 08/28/90 | STEN CREEK POND | | AG | 115 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 155 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 135 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 163 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 185 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 113 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 104 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 141 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 99 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 111 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 107 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 186 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 114 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 97 | | .F. | fyke |

1990 Atigun Fish Data Summary

| Date Captured | Location | Sublocation | Species | Length | Tag Number | Recapture | Capture Method |
|---|---|---|---|---|---|---|---|
| 08/28/90 | STEN CREEK POND | | AG | 106 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 108 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 108 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 132 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 118 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 142 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 119 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 110 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 106 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 101 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 99 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 112 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 115 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 114 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 171 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 115 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 157 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 117 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 105 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 104 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 147 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 132 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 96 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 112 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 104 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 98 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | RWF | 160 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 183 | | .T. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 159 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 117 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 103 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 120 | | .F. | fyke |

1990 Atigun Fish Data Summary

| Date Captured | Location | Sublocation | Species | Length | Tag Number | Recapture | Capture Method |
|---|---|---|---|---|---|---|---|
| 08/28/90 | STEN CREEK POND | | AG | 112 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 105 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 141 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 111 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 106 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 136 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | DV | 131 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | DV | 171 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 111 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 115 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 148 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 109 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 100 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 97 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 151 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 103 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 182 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 152 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 158 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 113 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 112 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 111 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 116 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 114 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 111 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 107 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 102 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 104 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 94 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | DV | 150 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | DV | 177 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | DV | 185 | | .F. | fyke |

1990 Atigun Fish Data Summary

| Date Captured | Location | Sublocation | Species | Length | Tag Number | Recapture | Capture Method |
|---|---|---|---|---|---|---|---|
| 08/28/90 | STEN CREEK POND | | AG | 178 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 156 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 145 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 167 | | .T. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 103 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 106 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 143 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 116 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 157 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 142 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 100 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 116 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 105 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 140 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 112 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 110 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 98 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 110 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 104 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 114 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 105 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 112 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 106 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 96 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 189 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 141 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | DV | 188 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 225 | 00916 | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 147 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 113 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 110 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 107 | | .F. | fyke |

1990 Atigun Fish Data Summary

| Date Captured | Location | Sublocation | Species | Length | Tag Number | Recapture | Capture Method |
|---|---|---|---|---|---|---|---|
| 08/28/90 | STEN CREEK POND | | AG | 110 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 113 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 112 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 110 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 102 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 143 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 115 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 157 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 105 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 103 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 114 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 111 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 106 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 104 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 102 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 105 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 111 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | AG | 102 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | DV | 149 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | DV | 132 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | DV | 132 | | .F. | fyke |
| 08/28/90 | STEN CREEK POND | | DV | 170 | | .F. | fyke |
| 08/28/90 | ATIGUN RIVER | SPIKE/ATIGUN | AG | 301 | 00586 | .T. | shock |
| 08/28/90 | ATIGUN RIVER | SPIKE/ATIGUN | AG | 236 | 00817 | .T. | shock |
| 08/28/90 | ATIGUN RIVER | SPIKE/ATIGUN | AG | 234 | 00805 | .T. | shock |
| 08/28/90 | ATIGUN RIVER | SPIKE/ATIGUN | AG | 181 | | .T. | shock |
| 08/28/90 | ATIGUN RIVER | SPIKE/ATIGUN | AG | 145 | | .F. | shock |
| 08/28/90 | ATIGUN RIVER | SPIKE/ATIGUN | AG | 146 | | .F. | shock |
| 08/28/90 | ATIGUN RIVER | SPIKE/ATIGUN | AG | 148 | | .F. | shock |
| 08/28/90 | ATIGUN RIVER | SPIKE/ATIGUN | AG | 106 | | .F. | shock |
| 08/28/90 | ATIGUN RIVER | SPIKE/ATIGUN | AG | 182 | | .F. | shock |
| 08/28/90 | ATIGUN RIVER | SPIKE/ATIGUN | AG | 203 | 00917 | .F. | shock |

1990 Atigun Fish Data Summary

| Date Captured | Location | Sublocation | Species | Length | Tag Number | Recapture | Capture Method |
|---|---|---|---|---|---|---|---|
| 08/28/90 | ATIGUN RIVER | SPIKE/ATIGUN | AG | 229 | 00918 | .F. | shock |
| 08/28/90 | ATIGUN RIVER | SPIKE/ATIGUN | AG | 236 | 00919 | .F. | shock |
| 08/28/90 | ATIGUN RIVER | SPIKE/ATIGUN | AG | 220 | | .F. | shock |
| 08/28/90 | ATIGUN RIVER | SPIKE TO 163.0 | AG | 208 | 00720 | .T. | shock |
| 08/28/90 | ATIGUN RIVER | SPIKE TO 163.0 | AG | 158 | | .F. | shock |
| 08/28/90 | ATIGUN RIVER | SPIKE TO 163.0 | AG | 157 | | .F. | shock |
| 08/28/90 | ATIGUN RIVER | SPIKE TO 163.0 | AG | 194 | 00920 | .F. | shock |
| 08/28/90 | ATIGUN RIVER | SPIKE TO 163.0 | AG | 125 | | .F. | shock |
| 08/28/90 | ATIGUN RIVER | SPIKE TO 163.0 | AG | 141 | | .F. | shock |
| 08/28/90 | ATIGUN RIVER | SPIKE TO 163.0 | AG | 132 | | .F. | shock |
| 08/28/90 | ATIGUN RIVER | SPIKE TO 163.0 | AG | 186 | | .F. | shock |
| 08/28/90 | ATIGUN RIVER | SPIKE TO 163.0 | AG | 165 | | .F. | shock |
| 08/28/90 | ATIGUN RIVER | SPIKE TO 163.0 | AG | 180 | | .F. | shock |
| 08/28/90 | ATIGUN RIVER | 163.1 | AG | 146 | | .F. | shock |
| 08/28/90 | ATIGUN RIVER | 163.1 | AG | 168 | | .F. | shock |
| 08/28/90 | ATIGUN RIVER | 163.1 | AG | 177 | | .F. | shock |
| 08/28/90 | ATIGUN RIVER | 163.1 | AG | 183 | | .T. | shock |
| 08/28/90 | ATIGUN RIVER | 163.1 | AG | 131 | | .F. | shock |
| 08/28/90 | ATIGUN RIVER | 163.1 | AG | 181 | | .F. | shock |
| 08/28/90 | ATIGUN RIVER | 163.1 | AG | 109 | | .F. | shock |
| 08/28/90 | ATIGUN RIVER | 163.1 | AG | 157 | | .F. | shock |
| 08/28/90 | ATIGUN RIVER | 163.1 | AG | 170 | | .F. | shock |
| 08/28/90 | ATIGUN RIVER | 163.1 | AG | 151 | | .F. | shock |
| 08/28/90 | ATIGUN RIVER | 163.1 | AG | 202 | 00921 | .F. | shock |
| 08/28/90 | ATIGUN RIVER | 163.1 | AG | 217 | 00922 | .F. | shock |
| 08/28/90 | ATIGUN RIVER | 163.1 | DV | 165 | | .F. | shock |
| 08/28/90 | ATIGUN RIVER | 163.1 | DV | 152 | | .F. | shock |
| 08/28/90 | ATIGUN RIVER | 163.1 | DV | 163 | | .F. | shock |
| 08/28/90 | ATIGUN RIVER | 163.2 | AG | 168 | | .T. | shock |
| 08/28/90 | ATIGUN RIVER | 163.2 | AG | 162 | | .F. | shock |
| 08/28/90 | ATIGUN RIVER | 163.2 | DV | 174 | | .T. | shock |
| 08/28/90 | ATIGUN RIVER | 163.2 | AG | 120 | | .F. | shock |

1990 Atigun Fish Data Summary

| Date Captured | Location | Sublocation | Species | Length | Tag Number | Recapture | Capture Method |
|---|---|---|---|---|---|---|---|
| 08/28/90 | ATIGUN RIVER | 163.2 | AG | 189 | | .T. | shock |
| 08/28/90 | ATIGUN RIVER | 163.2 | AG | 100 | | .F. | shock |
| 08/28/90 | ATIGUN RIVER | 163.2 | AG | 105 | | .F. | shock |
| 08/28/90 | ATIGUN RIVER | 163.2 | AG | 248 | 00923 | .F. | shock |
| 08/29/90 | STEN CREEK POND | | AG | 235 | 00611 | .T. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 284 | 00632 | .T. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 213 | 00731 | .T. | fyke |
| 08/29/90 | STEN CREEK POND | | RWF | 154 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 155 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 112 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 208 | 00924 | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 256 | 00925 | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 115 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 103 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 102 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 112 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 181 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 182 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 191 | 00926 | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 201 | 00927 | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 203 | 00928 | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 221 | 00929 | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 114 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 207 | 00708 | .T. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 137 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 192 | 00930 | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 214 | 00931 | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 154 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 116 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 100 | | .F. | fyke |

1990 Atigun Fish Data Summary

| Date Captured | Location | Sublocation | Species | Length | Tag Number | Recapture | Capture Method |
|---|---|---|---|---|---|---|---|
| 08/29/90 | STEN CREEK POND | | AG | 156 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 147 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 188 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 231 | 00932 | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 101 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 94 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 278 | 00933 | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 246 | 00607 | .T. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 152 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 106 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 101 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 173 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 150 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 107 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 101 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 101 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 142 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 196 | 00934 | .T. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 187 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 206 | 00935 | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 187 | | .T. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 212 | 00579 | .T. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 247 | 00603 | .T. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 100 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 111 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 94 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 99 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 141 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 110 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 186 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 151 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 187 | | .F. | fyke |

1990 Atigun Fish Data Summary

| Date Captured | Location | Sublocation | Species | Length | Tag Number | Recapture | Capture Method |
|---|---|---|---|---|---|---|---|
| 08/29/90 | STEN CREEK POND | | AG | 193 | 00936 | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 192 | 00937 | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 213 | 00938 | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 207 | 00939 | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 230 | 00620 | .T. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 209 | 00706 | .T. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 181 | | .T. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 146 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 175 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 136 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 138 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 86 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 112 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 111 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 109 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 147 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 101 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 174 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 161 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 169 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 117 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 105 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 97 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 111 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 178 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 186 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 187 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 201 | 00940 | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 234 | 00941 | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | DV | 172 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 267 | 00642 | .T. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 244 | 00614 | .T. | fyke |

1990 Atigun Fish Data Summary

| Date Captured | Location | Sublocation | Species | Length | Tag Number | Recapture | Capture Method |
|---|---|---|---|---|---|---|---|
| 08/29/90 | STEN CREEK POND | | AG | 232 | 00845 | .T. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 94 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 104 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 99 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 104 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 110 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 115 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 99 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 157 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 101 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 141 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 189 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 162 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 161 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 180 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 182 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 201 | 00942 | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 207 | 00943 | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | DV | 169 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 96 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 113 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 171 | | .T. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 117 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 106 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 176 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | DV | 147 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 171 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 177 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 118 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 106 | | .F. | fyke |
| 08/29/90 | STEN CREEK POND | | AG | 209 | 00944 | .F. | fyke |
| 08/29/90 | ATIGUN RIVER | MI 163.7 | DV | 150 | | .F. | shock |

1990 Atigun Fish Data Summary

| Date Captured | Location | Sublocation | Species | Length | Tag Number | Recapture | Capture Method |
|---|---|---|---|---|---|---|---|
| 08/29/90 | ATIGUN RIVER | MI 163.7 | AG | 234 | 00945 | .F. | shock |
| 08/29/90 | ATIGUN RIVER | MI 163.7 | AG | 177 | | .F. | shock |
| 08/29/90 | ATIGUN RIVER | MI 163.5 | AG | 107 | | .F. | shock |
| 08/29/90 | ATIGUN RIVER | MI 163.5 | AG | 124 | | .F. | shock |
| 08/29/90 | ATIGUN RIVER | MI 164.1 | DV | 153 | | .F. | shock |
| 08/29/90 | ATIGUN RIVER | CV 29 | AG | 195 | 00946 | .F. | angli |
| 08/29/90 | ATIGUN RIVER | CV 29 | AG | 196 | 00947 | .F. | angli |
| 08/29/90 | ATIGUN RIVER | CV 29 | AG | 196 | 00948 | .F. | angli |
| 08/29/90 | ATIGUN RIVER | CV 29 | AG | 240 | 00949 | .F. | angli |
| 08/29/90 | ATIGUN RIVER | CV 29 | AG | 159 | | .F. | angli |
| 08/30/90 | STEN CREEK POND | | AG | 224 | 00577 | .T. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 211 | 00939 | .T. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 208 | 00706 | .T. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 193 | 00937 | .T. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 217 | 00579 | .T. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 232 | 00950 | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 185 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 194 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 141 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 153 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 106 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 100 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 110 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 107 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 107 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 107 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 107 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 111 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 111 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 173 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 177 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 189 | | .F. | fyke |

1990 Atigun Fish Data Summary

| Date Captured | Location | Sublocation | Species | Length | Tag Number | Recapture | Capture Method |
|---|---|---|---|---|---|---|---|
| 08/30/90 | STEN CREEK POND | | AG | 178 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 146 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 159 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 108 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 115 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 113 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 116 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 116 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 98 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 109 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 94 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 109 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 113 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 111 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 129 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 98 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 112 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | DV | 132 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 114 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 102 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 105 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 103 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 103 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 94 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 105 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 105 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 108 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 107 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 112 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 98 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 155 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 113 | | .F. | fyke |

1990 Atigun Fish Data Summary

| Date Captured | Location | Sublocation | Species | Length | Tag Number | Recapture | Capture Method |
|---|---|---|---|---|---|---|---|
| 08/30/90 | STEN CREEK POND | | AG | 158 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 110 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 107 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 96 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 128 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 104 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 110 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 112 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 111 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 147 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 111 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 146 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 101 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 113 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 117 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 106 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 99 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 206 | 00951 | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 111 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 118 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 106 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 104 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 105 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 94 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 172 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 134 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 153 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 154 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 106 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 111 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 109 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 111 | | .F. | fyke |

1990 Atigun Fish Data Summary

| Date Captured | Location | Sublocation | Species | Length | Tag Number | Recapture | Capture Method |
|---|---|---|---|---|---|---|---|
| 08/30/90 | STEN CREEK POND | | DV | 163 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 112 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 108 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 107 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 100 | | .F. | fyke |
| 08/30/90 | STEN CREEK POND | | AG | 111 | | .F. | fyke |
| 08/31/90 | STEN CREEK POND | | AG | 213 | 00650 | .T. | fyke |
| 08/31/90 | STEN CREEK POND | | AG | 206 | 00951 | .T. | fyke |
| 08/31/90 | STEN CREEK POND | | AG | 206 | 00938 | .T. | fyke |
| 08/31/90 | STEN CREEK POND | | AG | 268 | 00679 | .T. | fyke |
| 08/31/90 | STEN CREEK POND | | AG | 224 | 00577 | .T. | fyke |
| 08/31/90 | STEN CREEK POND | | AG | 225 | 00952 | .F. | fyke |
| 08/31/90 | STEN CREEK POND | | AG | 219 | 00953 | .F. | fyke |
| 08/31/90 | STEN CREEK POND | | AG | 193 | 00954 | .F. | fyke |
| 08/31/90 | STEN CREEK POND | | AG | 175 | | .F. | fyke |
| 08/31/90 | STEN CREEK POND | | AG | 176 | | .F. | fyke |
| 08/31/90 | STEN CREEK POND | | AG | 156 | | .F. | fyke |
| 08/31/90 | STEN CREEK POND | | AG | 187 | | .F. | fyke |
| 08/31/90 | STEN CREEK POND | | AG | 146 | | .F. | fyke |
| 08/31/90 | STEN CREEK POND | | AG | 152 | | .F. | fyke |
| 08/31/90 | STEN CREEK POND | | AG | 127 | | .F. | fyke |
| 08/31/90 | STEN CREEK POND | | AG | 107 | | .F. | fyke |
| 08/31/90 | STEN CREEK POND | | AG | 110 | | .F. | fyke |
| 08/31/90 | STEN CREEK POND | | AG | 114 | | .F. | fyke |
| 08/31/90 | STEN CREEK POND | | AG | 108 | | .F. | fyke |
| 08/31/90 | STEN CREEK POND | | AG | 106 | | .F. | fyke |
| 08/31/90 | STEN CREEK POND | | AG | 107 | | .F. | fyke |
| 08/31/90 | STEN CREEK POND | | AG | 111 | | .F. | fyke |
| 08/31/90 | STEN CREEK POND | | AG | 109 | | .F. | fyke |
| 08/31/90 | STEN CREEK POND | | AG | 100 | | .F. | fyke |
| 08/31/90 | STEN CREEK POND | | AG | 189 | | .F. | fyke |
| 08/31/90 | STEN CREEK POND | | AG | 153 | | .F. | fyke |

1990 Atigun Fish Data Summary

| Date Captured | Location | Sublocation | Species | Length | Tag Number | Recapture | Capture Method |
|---|---|---|---|---|---|---|---|
| 08/31/90 | STEN CREEK POND | | AG | 132 | | .F. | fyke |
| 08/31/90 | STEN CREEK POND | | AG | 109 | | .F. | fyke |
| 08/31/90 | STEN CREEK POND | | AG | 105 | | .F. | fyke |
| 08/31/90 | STEN CREEK POND | | AG | 108 | | .F. | fyke |
| 08/31/90 | STEN CREEK POND | | AG | 113 | | .F. | fyke |
| 08/31/90 | STEN CREEK POND | | AG | 103 | | .F. | fyke |
| 08/31/90 | STEN CREEK POND | | AG | 113 | | .F. | fyke |
| 08/31/90 | STEN CREEK POND | | AG | 105 | | .F. | fyke |
| 08/31/90 | STEN CREEK POND | | AG | 99 | | .F. | fyke |
| 08/31/90 | STEN CREEK POND | | AG | 110 | | .F. | fyke |
| 08/31/90 | STEN CREEK POND | | AG | 98 | | .F. | fyke |
| 08/31/90 | STEN CREEK POND | | AG | 96 | | .F. | fyke |
| 08/31/90 | STEN CREEK POND | | AG | 115 | | .F. | fyke |
| 09/14/90 | STEN CREEK POND | | AG | 103 | | .F. | fyke |
| 09/14/90 | STEN CREEK POND | | AG | 150 | | .F. | fyke |
| 09/15/90 | STEN CREEK POND | | AG | 103 | | .T. | fyke |
| 09/15/90 | STEN CREEK POND | | AG | 150 | | .T. | fyke |

# 1990 Atigun Fish Data Summary

| Date Captured | Location | Sublocation | Species | Length | Tag Number | Recapture | Capture Method |
|---|---|---|---|---|---|---|---|
| 08/28/90 | GALBRAITH LAKE | | SSC | 70 | | .F. | fyke |
| 08/28/90 | GALBRAITH LAKE | | SSC | 53 | | .F. | fyke |
| 08/28/90 | GALBRAITH LAKE | | RWF | 300 | | .F. | fyke |
| 08/28/90 | GALBRAITH LAKE | | RWF | 260 | | .F. | fyke |
| 08/28/90 | GALBRAITH LAKE | | AG | 248 | | .F. | fyke |
| 08/28/90 | GALBRAITH LAKE | | LT | 630 | | .F. | fyke |
| 08/28/90 | GALBRAITH LAKE | | LT | 630 | | .F. | fyke |
| 08/28/90 | GALBRAITH LAKE | | BB | 620 | | .F. | fyke |
| 08/28/90 | GALBRAITH LAKE | | BB | 850 | | .F. | fyke |
| 08/29/90 | GALBRAITH LAKE | | RWF | 405 | | .F. | fyke |
| 08/29/90 | GALBRAITH LAKE | | RWF | 310 | | .F. | fyke |
| 08/29/90 | GALBRAITH LAKE | | RWF | 340 | | .F. | fyke |
| 08/29/90 | GALBRAITH LAKE | | RWF | 266 | | .F. | fyke |
| 08/29/90 | GALBRAITH LAKE | | SSC | 97 | | .F. | fyke |
| 08/29/90 | GALBRAITH LAKE | | SSC | 75 | | .F. | fyke |
| 08/29/90 | GALBRAITH LAKE | | SSC | 67 | | .F. | fyke |
| 08/29/90 | GALBRAITH LAKE | | SSC | 55 | | .F. | fyke |
| 08/29/90 | GALBRAITH LAKE | | SSC | 67 | | .F. | fyke |
| 08/29/90 | GALBRAITH LAKE | | SSC | 70 | | .F. | fyke |
| 08/29/90 | GALBRAITH LAKE | | AG | 318 | | .F. | fyke |
| 08/29/90 | GALBRAITH LAKE | | RWF | 55 | | .F. | fyke |
| 08/29/90 | GALBRAITH LAKE | | SSC | 68 | | .F. | fyke |
| 08/29/90 | GALBRAITH LAKE | | SSC | 59 | | .F. | fyke |
| 08/29/90 | GALBRAITH LAKE | | SSC | 73 | | .F. | fyke |
| 08/29/90 | GALBRAITH LAKE | | SSC | 61 | | .F. | fyke |
| 08/29/90 | GALBRAITH LAKE | | SSC | 75 | | .F. | fyke |
| 08/29/90 | GALBRAITH LAKE | | SSC | 49 | | .F. | fyke |
| 08/29/90 | GALBRAITH LAKE | | SSC | 45 | | .F. | fyke |
| 08/29/90 | GALBRAITH LAKE | | RWF | 60 | | .F. | fyke |
| 08/29/90 | GALBRAITH LAKE | | RWF | 65 | | .F. | fyke |
| 08/29/90 | GALBRAITH LAKE | | SSC | 63 | | .F. | fyke |
| 08/29/90 | GALBRAITH LAKE | | SSC | 73 | | .F. | fyke |

1990 Atigun Fish Data Summary

| Date Captured | Location | Sublocation | Species | Length | Tag Number | Recapture | Capture Method |
|---|---|---|---|---|---|---|---|
| 08/29/90 | GALBRAITH LAKE | | SSC | 58 | | .F. | fyke |
| 08/29/90 | GALBRAITH LAKE | | SSC | 57 | | .F. | fyke |
| 08/29/90 | GALBRAITH LAKE | | SSC | 44 | | .F. | fyke |
| 08/29/90 | GALBRAITH LAKE | | SSC | 66 | | .F. | fyke |
| 08/29/90 | GALBRAITH LAKE | | SSC | 49 | | .F. | fyke |
| 08/29/90 | GALBRAITH LAKE | | SSC | 60 | | .F. | fyke |
| 08/29/90 | GALBRAITH LAKE | | RWF | 64 | | .F. | fyke |
| 08/29/90 | GALBRAITH LAKE | | SSC | 68 | | .F. | fyke |
| 08/29/90 | GALBRAITH LAKE | | SSC | 74 | | .F. | fyke |
| 08/29/90 | GALBRAITH LAKE | | RWF | 54 | | .F. | fyke |
| 08/29/90 | GALBRAITH LAKE | | SSC | 45 | | .F. | fyke |
| 08/29/90 | GALBRAITH LAKE | | SSC | 62 | | .F. | fyke |
| 08/29/90 | GALBRAITH LAKE | | RWF | 56 | | .F. | fyke |
| 08/29/90 | GALBRAITH LAKE | | SSC | 45 | | .F. | fyke |
| 08/29/90 | GALBRAITH LAKE | | SSC | 67 | | .F. | fyke |
| 08/29/90 | GALBRAITH LAKE | | RWF | 50 | | .F. | fyke |
| 08/29/90 | GALBRAITH LAKE | | AG | 59 | | .F. | fyke |
| 08/30/90 | GALBRAITH LAKE | | RWF | 303 | | .F. | fyke |
| 08/30/90 | GALBRAITH LAKE | | RWF | 227 | | .F. | fyke |
| 08/30/90 | GALBRAITH LAKE | | RWF | 218 | | .F. | fyke |
| 08/30/90 | GALBRAITH LAKE | | RWF | 284 | | .F. | fyke |
| 08/30/90 | GALBRAITH LAKE | | RWF | 188 | | .F. | fyke |
| 08/30/90 | GALBRAITH LAKE | | AG | 119 | | .F. | fyke |
| 08/30/90 | GALBRAITH LAKE | | BB | 800 | | .F. | fyke |
| 08/30/90 | GALBRAITH LAKE | | SSC | 52 | | .F. | fyke |
| 08/30/90 | GALBRAITH LAKE | | SSC | 71 | | .F. | fyke |
| 08/30/90 | GALBRAITH LAKE | | SSC | 68 | | .F. | fyke |
| 08/30/90 | GALBRAITH LAKE | | SSC | 44 | | .F. | fyke |
| 08/30/90 | GALBRAITH LAKE | | AG | 95 | | .F. | fyke |
| 08/30/90 | GALBRAITH LAKE | | RWF | 329 | | .F. | fyke |
| 08/30/90 | GALBRAITH LAKE | | RWF | 308 | | .F. | fyke |
| 08/30/90 | GALBRAITH LAKE | | RWF | 131 | | .F. | fyke |

1990 Atigun Fish Data Summary

| Date Captured | Location | Sublocation | Species | Length | Tag Number | Recapture | Capture Method |
|---|---|---|---|---|---|---|---|
| 08/30/90 | GALBRAITH LAKE | | RWF | 56 | | .F. | fyke |
| 08/30/90 | GALBRAITH LAKE | | RWF | 68 | | .F. | fyke |
| 08/30/90 | GALBRAITH LAKE | | RWF | 53 | | .F. | fyke |
| 09/12/90 | GALBRAITH LAKE | | RWF | 291 | | .F. | fyke |
| 09/12/90 | GALBRAITH LAKE | | RWF | 243 | | .F. | fyke |
| 09/12/90 | GALBRAITH LAKE | | RWF | 192 | | .F. | fyke |
| 09/12/90 | GALBRAITH LAKE | | RWF | 137 | | .F. | fyke |
| 09/12/90 | GALBRAITH LAKE | | DV | 112 | | .F. | fyke |
| 09/12/90 | GALBRAITH LAKE | | DV | 75 | | .F. | fyke |
| 09/12/90 | GALBRAITH LAKE | | BB | 603 | | .F. | fyke |
| 09/12/90 | GALBRAITH LAKE | | RWF | 248 | | .F. | fyke |
| 09/12/90 | GALBRAITH LAKE | | AG | 370 | | .F. | fyke |
| 09/12/90 | GALBRAITH LAKE | | RWF | 113 | | .F. | fyke |
| 09/12/90 | GALBRAITH LAKE | | SSC | 65 | | .F. | fyke |
| 09/12/90 | GALBRAITH LAKE | | SSC | 71 | | .F. | fyke |
| 09/12/90 | GALBRAITH LAKE | | SSC | 65 | | .F. | fyke |
| 09/12/90 | GALBRAITH LAKE | | SSC | 68 | | .F. | fyke |
| 09/12/90 | GALBRAITH LAKE | | SSC | 58 | | .F. | fyke |
| 09/12/90 | GALBRAITH LAKE | | SSC | 102 | | .F. | fyke |
| 09/12/90 | GALBRAITH LAKE | | SSC | 37 | | .F. | fyke |
| 09/12/90 | GALBRAITH LAKE | | SSC | 40 | | .F. | fyke |
| 09/12/90 | GALBRAITH LAKE | | SSC | 43 | | .F. | fyke |
| 09/12/90 | GALBRAITH LAKE | | SSC | 42 | | .F. | fyke |
| 09/12/90 | GALBRAITH LAKE | | RWF | 58 | | .F. | fyke |
| 09/12/90 | GALBRAITH LAKE | | AG | 62 | | .F. | fyke |
| 09/12/90 | GALBRAITH LAKE | | AG | 58 | | .F. | fyke |
| 09/12/90 | GALBRAITH LAKE | | RWF | 200 | | .F. | fyke |
| 09/12/90 | GALBRAITH LAKE | | RWF | 166 | | .F. | fyke |
| 09/12/90 | GALBRAITH LAKE | | RWF | 350 | | .F. | fyke |
| 09/12/90 | GALBRAITH LAKE | | RWF | 252 | | .F. | fyke |
| 09/12/90 | GALBRAITH LAKE | | RWF | 265 | | .F. | fyke |
| 09/12/90 | GALBRAITH LAKE | | RWF | 68 | | .F. | fyke |

1990 Atigun Fish Data Summary

| Date Captured | Location | Sublocation | Species | Length | Tag Number | Recapture | Capture Method |
|---|---|---|---|---|---|---|---|
| 09/12/90 | GALBRAITH LAKE | | RWF | 58 | | .F. | fyke |
| 09/12/90 | GALBRAITH LAKE | | RWF | 115 | | .F. | fyke |
| 09/13/90 | GALBRAITH LAKE | | BB | 620 | | .F. | fyke |
| 09/13/90 | GALBRAITH LAKE | | RWF | 362 | | .F. | fyke |
| 09/13/90 | GALBRAITH LAKE | | RWF | 305 | | .F. | fyke |
| 09/13/90 | GALBRAITH LAKE | | RWF | 106 | | .F. | fyke |
| 09/13/90 | GALBRAITH LAKE | | RWF | 213 | | .F. | fyke |
| 09/13/90 | GALBRAITH LAKE | | AG | 275 | | .F. | fyke |
| 09/13/90 | GALBRAITH LAKE | | SSC | 76 | | .F. | fyke |
| 09/13/90 | GALBRAITH LAKE | | SSC | 59 | | .F. | fyke |
| 09/13/90 | GALBRAITH LAKE | | SSC | 71 | | .F. | fyke |
| 09/13/90 | GALBRAITH LAKE | | SSC | 61 | | .F. | fyke |
| 09/13/90 | GALBRAITH LAKE | | SSC | 70 | | .F. | fyke |
| 09/13/90 | GALBRAITH LAKE | | SSC | 68 | | .F. | fyke |
| 09/13/90 | GALBRAITH LAKE | | DV | 95 | | .F. | fyke |
| 09/13/90 | GALBRAITH LAKE | | RWF | 50 | | .F. | fyke |
| 09/13/90 | GALBRAITH LAKE | | RWF | 70 | | .F. | fyke |
| 09/13/90 | GALBRAITH LAKE | | RWF | 50 | | .F. | fyke |
| 09/13/90 | GALBRAITH LAKE | | RWF | 217 | | .F. | fyke |
| 09/13/90 | GALBRAITH LAKE | | SSC | 72 | | .F. | fyke |
| 09/13/90 | GALBRAITH LAKE | | SSC | 73 | | .F. | fyke |
| 09/13/90 | GALBRAITH LAKE | | SSC | 80 | | .F. | fyke |
| 09/13/90 | GALBRAITH LAKE | | SSC | 90 | | .F. | fyke |
| 09/13/90 | GALBRAITH LAKE | | SSC | 57 | | .F. | fyke |
| 09/13/90 | GALBRAITH LAKE | | SSC | 60 | | .F. | fyke |
| 09/13/90 | GALBRAITH LAKE | | SSC | 48 | | .F. | fyke |
| 09/13/90 | GALBRAITH LAKE | | SSC | 78 | | .F. | fyke |
| 09/13/90 | GALBRAITH LAKE | | AG | 72 | | .F. | fyke |
| 09/14/90 | GALBRAITH LAKE | | AG | 342 | | .F. | fyke |
| 09/14/90 | GALBRAITH LAKE | | RWF | 203 | | .F. | fyke |
| 09/14/90 | GALBRAITH LAKE | | AG | 230 | | .F. | fyke |
| 09/14/90 | GALBRAITH LAKE | | RWF | 250 | | .F. | fyke |

1990 Atigun Fish Data Summary

| Date Captured | Location | Sublocation | Species | Length | Tag Number | Recapture | Capture Method |
|---|---|---|---|---|---|---|---|
| 09/14/90 | GALBRAITH LAKE | | AG | 183 | | .F. | fyke |
| 09/14/90 | GALBRAITH LAKE | | RWF | 238 | | .F. | fyke |
| 09/14/90 | GALBRAITH LAKE | | AG | 235 | | .F. | fyke |
| 09/14/90 | GALBRAITH LAKE | | AG | 193 | | .F. | fyke |
| 09/14/90 | GALBRAITH LAKE | | RWF | 342 | | .F. | fyke |
| 09/14/90 | GALBRAITH LAKE | | BB | 725 | | .F. | fyke |
| 09/14/90 | GALBRAITH LAKE | | BB | 610 | | .F. | fyke |
| 09/14/90 | GALBRAITH LAKE | | BB | 465 | | .F. | fyke |
| 09/14/90 | GALBRAITH LAKE | | AG | 299 | | .F. | fyke |
| 09/14/90 | GALBRAITH LAKE | | AG | 250 | | .F. | fyke |
| 09/14/90 | GALBRAITH LAKE | | AG | 185 | | .F. | fyke |
| 09/14/90 | GALBRAITH LAKE | | AG | 160 | | .F. | fyke |
| 09/14/90 | GALBRAITH LAKE | | DV | 186 | | .F. | fyke |
| 09/14/90 | GALBRAITH LAKE | | AG | 212 | | .F. | fyke |
| 09/14/90 | GALBRAITH LAKE | | SSC | 61 | | .F. | fyke |
| 09/14/90 | GALBRAITH LAKE | | SSC | 40 | | .F. | fyke |
| 09/14/90 | GALBRAITH LAKE | | AG | 275 | | .F. | fyke |
| 09/14/90 | GALBRAITH LAKE | | AG | 276 | | .F. | fyke |
| 09/14/90 | GALBRAITH LAKE | | RWF | 238 | | .F. | fyke |
| 09/14/90 | GALBRAITH LAKE | | RWF | 61 | | .F. | fyke |
| 09/14/90 | GALBRAITH LAKE | | RWF | 58 | | .F. | fyke |
| 09/14/90 | GALBRAITH LAKE | | RWF | 55 | | .F. | fyke |
| 09/14/90 | GALBRAITH LAKE | | RWF | 50 | | .F. | fyke |
| 09/14/90 | GALBRAITH LAKE | | RWF | 63 | | .F. | fyke |
| 09/14/90 | GALBRAITH LAKE | | SSC | 62 | | .F. | fyke |
| 09/14/90 | GALBRAITH LAKE | | SSC | 81 | | .F. | fyke |
| 09/14/90 | GALBRAITH LAKE | | SSC | 80 | | .F. | fyke |
| 09/14/90 | GALBRAITH LAKE | | SSC | 64 | | .F. | fyke |
| 09/14/90 | GALBRAITH LAKE | | SSC | 70 | | .F. | fyke |
| 09/14/90 | GALBRAITH LAKE | | SSC | 56 | | .F. | fyke |
| 09/14/90 | GALBRAITH LAKE | | SSC | 41 | | .F. | fyke |
| 09/14/90 | GALBRAITH LAKE | | SSC | 61 | | .F. | fyke |

1990 Atigun Fish Data Summary

| Date Captured | Location | Sublocation | Species | Length | Tag Number | Recapture | Capture Method |
|---|---|---|---|---|---|---|---|
| 09/14/90 | GALBRAITH LAKE | | SSC | 75 | | .F. | fyke |
| 09/14/90 | GALBRAITH LAKE | | SSC | 84 | | .F. | fyke |
| 09/14/90 | GALBRAITH LAKE | | SSC | 67 | | .F. | fyke |
| 09/14/90 | GALBRAITH LAKE | | SSC | 43 | | .F. | fyke |
| 09/14/90 | GALBRAITH LAKE | | SSC | 65 | | .F. | fyke |
| 09/14/90 | GALBRAITH LAKE | | SSC | 100 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | AG | 250 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | AG | 212 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | AG | 205 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | DV | 223 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | AG | 238 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | AG | 188 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | RWF | 155 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | AG | 229 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | SSC | 95 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | SSC | 54 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | SSC | 68 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | SSC | 76 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | SSC | 65 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | SSC | 60 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | SSC | 60 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | SSC | 80 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | RWF | 57 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | AG | 189 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | AG | 230 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | RWF | 249 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | RWF | 218 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | RWF | 205 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | RWF | 231 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | AG | 280 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | AG | 239 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | RWF | 245 | | .F. | fyke |

1990 Atigun Fish Data Summary

| Date Captured | Location | Sublocation | Species | Length | Tag Number | Recapture | Capture Method |
|---|---|---|---|---|---|---|---|
| 09/15/90 | GALBRAITH LAKE | | RWF | 65 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | RWF | 145 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | RWF | 50 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | RWF | 107 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | DV | 105 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | AG | 70 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | SSC | 75 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | SSC | 60 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | SSC | 80 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | SSC | 45 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | SSC | 81 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | SSC | 60 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | SSC | 63 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | SSC | 75 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | SSC | 80 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | SSC | 50 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | SSC | 85 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | SSC | 82 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | SSC | 92 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | SSC | 81 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | SSC | 70 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | SSC | 78 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | SSC | 60 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | SSC | 83 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | SSC | 84 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | SSC | 87 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | SSC | 70 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | SSC | 63 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | SSC | 60 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | SSC | 70 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | SSC | 78 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | SSC | 70 | | .F. | fyke |

1990 Atigun Fish Data Summary

| Date Captured | Location | Sublocation | Species | Length | Tag Number | Recapture | Capture Method |
|---|---|---|---|---|---|---|---|
| 09/15/90 | GALBRAITH LAKE | | SSC | 63 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | SSC | 62 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | AG | 251 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | RWF | 220 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | DV | 253 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | SSC | 71 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | SSC | 92 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | SSC | 121 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | DV | 83 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | RWF | 65 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | RWF | 53 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | RWF | 58 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | RWF | 50 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | RWF | 55 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | AG | 191 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | DV | 116 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | RWF | 150 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | AG | 223 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | AG | 225 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | DV | 228 | | .F. | fyke |
| 09/15/90 | GALBRAITH LAKE | | AG | 138 | | .F. | fyke |
| 08/30/90 | TEA LAKE | | AG | 160 | | .F. | fyke |
| 08/30/90 | TEA LAKE | | BB | 455 | | .F. | fyke |
| 08/30/90 | TEA LAKE | | BB | 440 | | .F. | fyke |
| 08/30/90 | TEA LAKE | | SSC | 76 | | .F. | fyke |
| 08/30/90 | TEA LAKE | | SSC | 71 | | .F. | fyke |
| 08/30/90 | TEA LAKE | | SSC | 85 | | .F. | fyke |
| 08/30/90 | TEA LAKE | | SSC | 46 | | .F. | fyke |
| 08/30/90 | TEA LAKE | | SSC | 44 | | .F. | fyke |
| 08/30/90 | TEA LAKE | | SSC | 49 | | .F. | fyke |
| 08/30/90 | TEA LAKE | | AG | 160 | | .F. | fyke |
| 08/30/90 | TEA LAKE | | AG | 104 | | .F. | fyke |

1990 Atigun Fish Data Summary

| Date Captured | Location | Sublocation | Species | Length | Tag Number | Recapture | Capture Method |
|---|---|---|---|---|---|---|---|
| 08/30/90 | TEA LAKE | | AG | 215 | | .F. | fyke |
| 08/30/90 | TEA LAKE | | AG | 191 | | .F. | fyke |
| 08/30/90 | TEA LAKE | | AG | 174 | | .F. | fyke |
| 08/30/90 | TEA LAKE | | AG | 179 | | .F. | fyke |
| 08/30/90 | TEA LAKE | | AG | 56 | | .F. | fyke |
| 08/30/90 | TEA LAKE | | BB | 61 | | .F. | fyke |
| 09/12/90 | TEA LAKE | | AG | 125 | | .F. | fyke |
| 09/12/90 | TEA LAKE | | AG | 66 | | .F. | fyke |
| 09/12/90 | TEA LAKE | | BB | 360 | | .F. | fyke |
| 09/12/90 | TEA LAKE | | BB | 473 | | .F. | fyke |
| 09/12/90 | TEA LAKE | | BB | 305 | | .F. | fyke |
| 09/12/90 | TEA LAKE | | SSC | 75 | | .F. | fyke |
| 09/12/90 | TEA LAKE | | SSC | 52 | | .F. | fyke |
| 09/12/90 | TEA LAKE | | AG | 135 | | .F. | fyke |
| 09/12/90 | TEA LAKE | | AG | 90 | | .F. | fyke |
| 09/12/90 | TEA LAKE | | AG | 91 | | .F. | fyke |
| 09/12/90 | TEA LAKE | | AG | 214 | | .F. | fyke |
| 09/12/90 | TEA LAKE | | AG | 88 | | .F. | fyke |
| 09/12/90 | TEA LAKE | | AG | 95 | | .F. | fyke |
| 09/12/90 | TEA LAKE | | AG | 106 | | .F. | fyke |
| 09/12/90 | TEA LAKE | | AG | 190 | | .F. | fyke |
| 09/12/90 | TEA LAKE | | AG | 135 | | .F. | fyke |
| 09/12/90 | TEA LAKE | | AG | 54 | | .F. | fyke |
| 09/12/90 | TEA LAKE | | AG | 98 | | .F. | fyke |
| 09/12/90 | TEA LAKE | | AG | 118 | | .F. | fyke |
| 09/12/90 | TEA LAKE | | SSC | 50 | | .F. | fyke |
| 09/13/90 | TEA LAKE | | RWF | 127 | | .F. | fyke |
| 09/13/90 | TEA LAKE | | RWF | 73 | | .F. | fyke |
| 09/13/90 | TEA LAKE | | BB | 290 | | .F. | fyke |
| 09/13/90 | TEA LAKE | | BB | 150 | | .F. | fyke |
| 09/13/90 | TEA LAKE | | AG | 110 | | .F. | fyke |
| 09/13/90 | TEA LAKE | | AG | 108 | | .F. | fyke |

1990 Atigun Fish Data Summary

| Date Captured | Location | Sublocation | Species | Length | Tag Number | Recapture | Capture Method |
|---|---|---|---|---|---|---|---|
| 09/13/90 | TEA LAKE | | AG | 104 | | .F. | fyke |
| 09/13/90 | TEA LAKE | | SSC | 79 | | .F. | fyke |
| 09/14/90 | TEA LAKE | | RWF | 100 | | .F. | fyke |
| 09/14/90 | TEA LAKE | | AG | 157 | | .F. | fyke |
| 09/14/90 | TEA LAKE | | BB | 305 | | .F. | fyke |
| 09/14/90 | TEA LAKE | | AG | 147 | | .F. | fyke |
| 09/14/90 | TEA LAKE | | SSC | 82 | | .F. | fyke |
| 09/14/90 | TEA LAKE | | AG | 105 | | .F. | fyke |
| 09/14/90 | TEA LAKE | | AG | 88 | | .F. | fyke |
| 09/14/90 | TEA LAKE | | AG | 110 | | .F. | fyke |
| 09/14/90 | TEA LAKE | | AG | 56 | | .F. | fyke |
| 09/14/90 | TEA LAKE | | AG | 55 | | .F. | fyke |
| 09/14/90 | TEA LAKE | | AG | 58 | | .F. | fyke |
| 09/14/90 | TEA LAKE | | AG | 110 | | .F. | fyke |
| 09/14/90 | TEA LAKE | | BB | 65 | | .F. | fyke |
| 09/15/90 | TEA LAKE | | SSC | 89 | | .F. | fyke |
| 09/15/90 | TEA LAKE | | SSC | 84 | | .F. | fyke |
| 09/15/90 | TEA LAKE | | SSC | 78 | | .F. | fyke |
| 09/15/90 | TEA LAKE | | SSC | 84 | | .F. | fyke |
| 09/15/90 | TEA LAKE | | SSC | 85 | | .F. | fyke |
| 09/15/90 | TEA LAKE | | SSC | 85 | | .F. | fyke |
| 09/15/90 | TEA LAKE | | SSC | 83 | | .F. | fyke |
| 09/15/90 | TEA LAKE | | SSC | 60 | | .F. | fyke |
| 09/15/90 | TEA LAKE | | BB | 255 | | .F. | fyke |
| 09/15/90 | TEA LAKE | | AG | 147 | | .F. | fyke |
| 09/15/90 | TEA LAKE | | AG | 90 | | .F. | fyke |
| 09/15/90 | TEA LAKE | | AG | 95 | | .F. | fyke |
| 09/15/90 | TEA LAKE | | AG | 160 | | .F. | fyke |
| 09/15/90 | TEA LAKE | | AG | 157 | | .F. | fyke |
| 09/15/90 | TEA LAKE | | AG | 101 | | .F. | fyke |
| 09/15/90 | TEA LAKE | | AG | 100 | | .F. | fyke |
| 09/15/90 | TEA LAKE | | AG | 95 | | .F. | fyke |

1990 Atigun Fish Data Summary

| Date Captured | Location | Sublocation | Species | Length | Tag Number | Recapture | Capture Method |
|---|---|---|---|---|---|---|---|
| 09/15/90 | TEA LAKE | | AG | 63 | | .F. | fyke |
| 09/15/90 | TEA LAKE | | AG | 158 | | .F. | fyke |
| 09/15/90 | TEA LAKE | | BB | 75 | | .F. | fyke |
| 09/15/90 | TEA LAKE | | BB | 76 | | .F. | fyke |
| 08/28/90 | TEA LAKE | | AG | 231 | | .F. | fyke |
| 08/28/90 | TEA LAKE | | BB | 350 | | .F. | fyke |
| 08/28/90 | TEA LAKE | | SSC | 57 | | .F. | fyke |
| 08/28/90 | TEA LAKE | | SSC | 68 | | .F. | fyke |
| 08/29/90 | TEA LAKE | | AG | 245 | | .F. | fyke |
| 08/29/90 | TEA LAKE | | BB | 290 | | .F. | fyke |
| 08/29/90 | TEA LAKE | | BB | 410 | | .F. | fyke |

**Appendix 5.** Fish caught in 1991.

LEGEND

| | |
|---|---|
| Sublocation: | mi xxx.x = pipeline miles from Pump Station 1<br>CV 29 = Check Valve 29 area<br>CV 30 = Check Valve 30 area<br>Spike Camp/Atgn = confluence of Spike Camp Creek and the East Fork Atigun River |
| Species: | AG = Arctic grayling<br>DV = Dolly Varden<br>RWF = Round whitefish<br>SSC = Slimy sculpin<br>LT = Lake Trout<br>BB = Burbot |
| Recapture: | T = recaptured; F = not a recaptured fish |
| Capture Method: | shock = electrofishing<br>angle = angling<br>fyke = fyke net<br>seine = seine net |
| Length: | fork length in millimeters |

1991 Atigun Fish Data Summary

| Date Captured | Location | Sublocation | Species | Length | Tag Number | Recapture | Capture Method |
|---|---|---|---|---|---|---|---|
| 05/16/91 | TEA LAKE | OUTLET | AG | 261 | | .F. | FYKE |
| 05/16/91 | TEA LAKE | OUTLET | AG | 214 | | .F. | FYKE |
| 05/16/91 | TEA LAKE | OUTLET | SSC | 79 | | .F. | FYKE |
| 05/16/91 | TEA LAKE | OUTLET | SSC | 81 | | .F. | FYKE |
| 05/16/91 | TEA LAKE | OUTLET | SSC | 84 | | .F. | FYKE |
| 05/16/91 | TEA LAKE | OUTLET | SSC | 81 | | .F. | FYKE |
| 05/16/91 | TEA LAKE | OUTLET | SSC | 81 | | .F. | FYKE |
| 05/16/91 | TEA LAKE | OUTLET | SSC | 79 | | .F. | FYKE |
| 05/16/91 | TEA LAKE | OUTLET | SSC | 62 | | .F. | FYKE |
| 05/16/91 | TEA LAKE | INLET | RWF | 305 | | .F. | FYKE |
| 05/16/91 | TEA LAKE | INLET | AG | 290 | | .F. | FYKE |
| 05/16/91 | TEA LAKE | INLET | AG | 344 | | .F. | FYKE |
| 05/16/91 | TEA LAKE | INLET | AG | 175 | | .F. | FYKE |
| 05/16/91 | TEA LAKE | INLET | AG | 237 | | .F. | FYKE |
| 05/16/91 | TEA LAKE | INLET | AG | 285 | | .F. | FYKE |
| 05/16/91 | TEA LAKE | INLET | AG | 303 | | .F. | FYKE |
| 05/16/91 | TEA LAKE | INLET | AG | 297 | | .F. | FYKE |
| 05/16/91 | TEA LAKE | INLET | AG | 327 | | .F. | FYKE |
| 05/16/91 | TEA LAKE | INLET | AG | 225 | | .F. | FYKE |
| 05/16/91 | TEA LAKE | INLET | AG | 210 | | .F. | FYKE |
| 05/16/91 | TEA LAKE | INLET | AG | 222 | | .F. | FYKE |
| 05/16/91 | TEA LAKE | INLET | AG | 181 | | .F. | FYKE |
| 05/16/91 | TEA LAKE | INLET | BB | 87 | | .F. | FYKE |
| 05/17/91 | TEA LAKE | OUTLET | SSC | 79 | | .F. | FYKE |
| 05/17/91 | TEA LAKE | INLET | AG | 367 | | .F. | FYKE |
| 05/17/91 | TEA LAKE | INLET | AG | 363 | | .F. | FYKE |
| 05/17/91 | TEA LAKE | INLET | AG | 227 | | .F. | FYKE |
| 05/17/91 | TEA LAKE | INLET | AG | 154 | | .F. | FYKE |
| 05/17/91 | TEA LAKE | INLET | AG | 310 | | .F. | FYKE |
| 05/17/91 | TEA LAKE | INLET | AG | 295 | | .F. | FYKE |
| 05/17/91 | TEA LAKE | INLET | AG | 325 | | .F. | FYKE |
| 05/17/91 | TEA LAKE | INLET | AG | 199 | | .F. | FYKE |

1991 Atigun Fish Data Summary

| Date Captured | Location | Sublocation | Species | Length | Tag Number | Recapture | Capture Method |
|---|---|---|---|---|---|---|---|
| 05/17/91 | TEA LAKE | INLET | AG | 197 | | .F. | FYKE |
| 05/17/91 | TEA LAKE | INLET | AG | 190 | | .F. | FYKE |
| 05/17/91 | TEA LAKE | INLET | BB | 74 | | .F. | FYKE |
| 05/17/91 | SPRING CREEK | | AG | 307 | | .F. | SEINE |
| 05/17/91 | SPRING CREEK | | AG | 267 | | .F. | SEINE |
| 05/17/91 | SPRING CREEK | | AG | 336 | | .F. | SEINE |
| 05/17/91 | SPRING CREEK | | AG | 263 | 00588 | .T. | SEINE |
| 05/17/91 | SPRING CREEK | | AG | 267 | 00907 | .T. | SEINE |
| 05/17/91 | SPRING CREEK | | AG | 315 | | .F. | SEINE |
| 05/17/91 | SPRING CREEK | | AG | 237 | | .F. | SEINE |
| 05/17/91 | SPRING CREEK | | AG | 260 | | .F. | SEINE |
| 05/17/91 | SPRING CREEK | | AG | 310 | | .F. | SEINE |
| 05/17/91 | SPRING CREEK | | AG | 258 | | .F. | SEINE |
| 05/17/91 | SPRING CREEK | | AG | 291 | | .F. | SEINE |
| 05/18/91 | TEA LAKE | OUTLET | AG | 105 | | .F. | FYKE |
| 05/18/91 | TEA LAKE | OUTLET | SSC | 87 | | .F. | FYKE |
| 05/18/91 | TEA LAKE | OUTLET | SSC | 92 | | .F. | FYKE |
| 05/18/91 | TEA LAKE | OUTLET | SSC | 97 | | .F. | FYKE |
| 05/18/91 | TEA LAKE | OUTLET | SSC | 91 | | .F. | FYKE |
| 05/18/91 | TEA LAKE | OUTLET | SSC | 80 | | .F. | FYKE |
| 05/18/91 | TEA LAKE | OUTLET | SSC | 55 | | .F. | FYKE |
| 05/18/91 | TEA LAKE | INLET | AG | 251 | | .F. | FYKE |
| 05/18/91 | TEA LAKE | INLET | AG | 271 | | .F. | FYKE |
| 05/18/91 | TEA LAKE | INLET | AG | 141 | | .F. | FYKE |
| 05/18/91 | TEA LAKE | INLET | AG | 143 | | .F. | FYKE |
| 05/19/91 | TEA LAKE | OUTLET | AG | 366 | | .F. | FYKE |
| 05/19/91 | TEA LAKE | OUTLET | AG | 252 | | .F. | FYKE |
| 05/19/91 | TEA LAKE | OUTLET | BB | 180 | | .F. | FYKE |
| 05/19/91 | TEA LAKE | OUTLET | SSC | 80 | | .F. | FYKE |
| 05/19/91 | TEA LAKE | OUTLET | SSC | 82 | | .F. | FYKE |
| 05/19/91 | TEA LAKE | OUTLET | SSC | 83 | | .F. | FYKE |
| 05/19/91 | TEA LAKE | OUTLET | SSC | 84 | | .F. | FYKE |

1991 Atigun Fish Data Summary

| Date Captured | Location | Sublocation | Species | Length | Tag Number | Recapture | Capture Method |
|---|---|---|---|---|---|---|---|
| 05/19/91 | TEA LAKE | INLET | AG | 324 | | .F. | FYKE |
| 05/19/91 | TEA LAKE | INLET | AG | 342 | | .F. | FYKE |
| 05/19/91 | TEA LAKE | INLET | AG | 296 | | .F. | FYKE |
| 05/19/91 | TEA LAKE | INLET | AG | 289 | | .F. | FYKE |
| 05/19/91 | TEA LAKE | INLET | AG | 267 | | .F. | FYKE |
| 05/19/91 | TEA LAKE | INLET | AG | 173 | | .F. | FYKE |
| 05/20/91 | SPRING CREEK | | AG | 290 | | .F. | SEINE |
| 05/20/91 | SPRING CREEK | | AG | 331 | | .F. | SEINE |
| 05/20/91 | SPRING CREEK | | AG | 256 | 00667 | .T. | SEINE |
| 05/20/91 | SPRING CREEK | | AG | 283 | | .F. | SEINE |
| 05/23/91 | SPRING CREEK | | AG | 256 | 00667 | .T. | SEINE |
| 05/30/91 | SPRING CREEK | | AG | 316 | 00636 | .T. | SEINE |
| 05/30/91 | SPRING CREEK | | AG | 266 | 00869 | .T. | SEINE |
| 05/30/91 | SPRING CREEK | | AG | 257 | | .F. | SEINE |
| 05/30/91 | SPRING CREEK | | AG | 260 | | .F. | SEINE |
| 05/30/91 | SPRING CREEK | | AG | 264 | | .F. | SEINE |
| 05/30/91 | SPRING CREEK | | AG | 263 | | .F. | SEINE |
| 06/05/91 | SPRING CREEK | | AG | 256 | 00667 | .F. | SEINE |
| 06/20/91 | STEN CREEK POND | LOWER | AG | 226 | 00955 | .F. | FYKE |
| 06/20/91 | STEN CREEK POND | LOWER | RWF | 334 | 00683 | .T. | FYKE |
| 06/20/91 | STEN CREEK POND | LOWER | AG | 228 | 00956 | .F. | FYKE |
| 06/20/91 | STEN CREEK POND | LOWER | AG | 227 | 00957 | .F. | FYKE |
| 06/21/91 | STEN CREEK POND | LOWER | AG | 261 | 00640 | .T. | FYKE |
| 06/21/91 | STEN CREEK POND | LOWER | AG | 217 | 00958 | .F. | FYKE |
| 06/21/91 | STEN CREEK POND | LOWER | AG | 212 | 00879 | .T. | FYKE |
| 06/21/91 | STEN CREEK POND | LOWER | AG | 203 | 00959 | .F. | FYKE |
| 06/21/91 | STEN CREEK POND | LOWER | AG | 238 | 00960 | .F. | FYKE |
| 06/22/91 | STEN CREEK POND | LOWER | RWF | 337 | 00680 | .T. | FYKE |
| 06/22/91 | STEN CREEK POND | LOWER | AG | 241 | 00648 | .T. | FYKE |
| 06/22/91 | STEN CREEK POND | LOWER | AG | 249 | 00961 | .F. | FYKE |
| 06/22/91 | STEN CREEK POND | LOWER | AG | 248 | 00962 | .F. | FYKE |
| 06/22/91 | STEN CREEK POND | LOWER | AG | 212 | 00963 | .F. | FYKE |

1991 Atigun Fish Data Summary

| Date Captured | Location | Sublocation | Species | Length | Tag Number | Recapture | Capture Method |
|---|---|---|---|---|---|---|---|
| 06/22/91 | STEN CREEK POND | LOWER | AG | 251 | 00964 | .F. | FYKE |
| 06/22/91 | STEN CREEK POND | LOWER | AG | 197 | 00965 | .T. | FYKE |
| 06/22/91 | STEN CREEK POND | LOWER | AG | 248 | 00966 | .T. | FYKE |
| 06/22/91 | STEN CREEK POND | LOWER | AG | 195 | 00967 | .F. | FYKE |
| 06/22/91 | STEN CREEK POND | LOWER | AG | 234 | 00968 | .T. | FYKE |
| 06/22/91 | STEN CREEK POND | LOWER | AG | 213 | 00969 | .F. | FYKE |
| 06/22/91 | STEN CREEK POND | LOWER | AG | 229 | 00970 | .F. | FYKE |
| 06/22/91 | STEN CREEK POND | LOWER | AG | 230 | 00972 | .F. | FYKE |
| 06/22/91 | STEN CREEK POND | LOWER | AG | 187 | | .F. | FYKE |
| 06/22/91 | STEN CREEK POND | LOWER | AG | 189 | | .F. | FYKE |
| 06/22/91 | STEN CREEK POND | LOWER | AG | 191 | 00973 | .F. | FYKE |
| 06/22/91 | STEN CREEK POND | LOWER | AG | 252 | 00974 | .F. | FYKE |
| 06/23/91 | STEN CREEK POND | LOWER | AG | 268 | 00679 | .T. | FYKE |
| 06/23/91 | STEN CREEK POND | LOWER | AG | 256 | 00724 | .T. | FYKE |
| 06/23/91 | STEN CREEK POND | LOWER | AG | 282 | 00631 | .T. | FYKE |
| 06/23/91 | STEN CREEK POND | LOWER | AG | 240 | 00616 | .T. | FYKE |
| 06/23/91 | STEN CREEK POND | LOWER | AG | 275 | 00975 | .T. | FYKE |
| 06/23/91 | STEN CREEK POND | LOWER | AG | 233 | 00976 | .T. | FYKE |
| 06/23/91 | STEN CREEK POND | LOWER | AG | 189 | | .T. | FYKE |
| 06/23/91 | STEN CREEK POND | LOWER | AG | 278 | 00977 | .F. | FYKE |
| 06/23/91 | STEN CREEK POND | LOWER | AG | 241 | 00978 | .F. | FYKE |
| 06/23/91 | STEN CREEK POND | LOWER | AG | 192 | 00979 | .T. | FYKE |
| 06/23/91 | STEN CREEK POND | LOWER | AG | 248 | 00980 | .F. | FYKE |
| 06/23/91 | STEN CREEK POND | LOWER | AG | 218 | 00981 | .F. | FYKE |
| 06/23/91 | STEN CREEK POND | LOWER | AG | 237 | 00982 | .F. | FYKE |
| 06/23/91 | STEN CREEK POND | LOWER | AG | 230 | 00983 | .F. | FYKE |
| 06/23/91 | STEN CREEK POND | LOWER | AG | 230 | 00984 | .F. | FYKE |
| 06/24/91 | STEN CREEK POND | LOWER | AG | 239 | 00648 | .T. | FYKE |
| 06/24/91 | STEN CREEK POND | LOWER | AG | 224 | 00953 | .T. | FYKE |
| 06/24/91 | STEN CREEK POND | LOWER | AG | 259 | 00592 | .T. | FYKE |
| 06/24/91 | STEN CREEK POND | LOWER | AG | 257 | 00736 | .T. | FYKE |
| 06/24/91 | STEN CREEK POND | LOWER | AG | 229 | 00985 | .F. | FYKE |

1991 Atigun Fish Data Summary

| Date Captured | Location | Sublocation | Species | Length | Tag Number | Recapture | Capture Method |
|---|---|---|---|---|---|---|---|
| 06/24/91 | STEN CREEK POND | LOWER | AG | 294 | 00986 | .F. | FYKE |
| 06/24/91 | STEN CREEK POND | LOWER | AG | 227 | 00987 | .F. | FYKE |
| 06/24/91 | STEN CREEK POND | LOWER | AG | 265 | 00988 | .T. | FYKE |
| 06/24/91 | STEN CREEK POND | LOWER | AG | 267 | 00989 | .F. | FYKE |
| 06/24/91 | STEN CREEK POND | LOWER | AG | 278 | 00990 | .T. | FYKE |
| 06/24/91 | STEN CREEK POND | LOWER | AG | 233 | 00991 | .F. | FYKE |
| 06/24/91 | MILE 160 POND | | AG | 210 | 00992 | .F. | ANGLE |
| 06/24/91 | MILE 160 POND | | AG | 222 | 00993 | .F. | ANGLE |
| 06/24/91 | MILE 160 POND | | AG | 148 | | .F. | ANGLE |
| 06/24/91 | MILE 160 POND | | AG | 217 | | .F. | ANGLE |
| 06/25/91 | STEN CREEK POND | LOWER | RWF | 348 | 00994 | .F. | FYKE |
| 06/25/91 | STEN CREEK POND | LOWER | AG | 230 | 00996 | .F. | FYKE |
| 06/25/91 | STEN CREEK POND | LOWER | AG | 188 | | .T. | FYKE |
| 06/25/91 | STEN CREEK POND | LOWER | AG | 191 | 00997 | .F. | FYKE |
| 06/27/91 | STEN CREEK POND | LOWER | RWF | 335 | 00810 | .T. | FYKE |
| 06/27/91 | STEN CREEK POND | LOWER | AG | 256 | 00592 | .T. | FYKE |
| 06/27/91 | STEN CREEK POND | LOWER | AG | 261 | 00998 | .T. | FYKE |
| 06/27/91 | STEN CREEK POND | LOWER | AG | 265 | 00640 | .T. | FYKE |
| 07/27/91 | ATIGUN RIVER | SPIKE CAMP/ATGN | AG | 216 | 00999 | .F. | SHOCK |
| 07/27/91 | ATIGUN RIVER | SPIKE CAMP/ATGN | AG | 199 | 01000 | .F. | SHOCK |
| 07/27/91 | ATIGUN RIVER | SPIKE CAMP/ATGN | AG | 200 | 02501 | .F. | SHOCK |
| 07/27/91 | ATIGUN RIVER | MI 163.1-.5 | DV | 158 | | .F. | SHOCK |
| 07/27/91 | ATIGUN RIVER | MI 163.1-.5 | DV | 178 | | .F. | SHOCK |
| 07/27/91 | ATIGUN RIVER | MI 163.1-.5 | AG | 185 | | .F. | SHOCK |
| 07/27/91 | ATIGUN RIVER | MI 163.1-.5 | RWF | 340 | 02502 | .F. | SHOCK |
| 07/27/91 | ATIGUN RIVER | MI 163.1-.5 | AG | 195 | 02503 | .F. | SHOCK |
| 07/27/91 | ATIGUN RIVER | MI 163.1-.5 | AG | 233 | 00970 | .T. | SHOCK |
| 07/27/91 | ATIGUN RIVER | MI 163.1-.5 | AG | 223 | 00984 | .T. | SHOCK |
| 07/27/91 | ATIGUN RIVER | MI 163.1-.5 | AG | 280 | 02504 | .F. | SHOCK |
| 07/27/91 | ATIGUN RIVER | MI 163.1-.5 | AG | 257 | 02505 | .F. | SHOCK |
| 07/27/91 | ATIGUN RIVER | MI 163.1-.5 | AG | 238 | 02506 | .F. | SHOCK |
| 07/27/91 | ATIGUN RIVER | MI 163.6-164.0 | AG | 187 | | .T. | SHOCK |

1991 Atigun Fish Data Summary

| Date Captured | Location | Sublocation | Species | Length | Tag Number | Recapture | Capture Method |
|---|---|---|---|---|---|---|---|
| 07/27/91 | ATIGUN RIVER | MI 163.6-164.0 | AG | 185 | | .F. | SHOCK |
| 07/27/91 | ATIGUN RIVER | MI 163.6-164.0 | AG | 268 | 02507 | .F. | SHOCK |
| 07/27/91 | ATIGUN RIVER | MI 163.6-164.0 | AG | 198 | 02508 | .F. | SHOCK |
| 07/27/91 | ATIGUN RIVER | MI164.0 TO CV30 | AG | 199 | 02984 | .T. | SHOCK |
| 07/28/91 | STEN CREEK POND | UPPER | AG | 194 | 02509 | .F. | FYKE |
| 07/28/91 | STEN CREEK POND | UPPER | AG | 178 | | .F. | FYKE |
| 07/28/91 | STEN CREEK POND | MIDDLE | AG | 200 | 02510 | .F. | FYKE |
| 07/28/91 | STEN CREEK POND | MIDDLE | AG | 187 | | .F. | FYKE |
| 07/28/91 | STEN CREEK POND | MIDDLE | AG | 203 | 02511 | .F. | FYKE |
| 07/28/91 | STEN CREEK POND | MIDDLE | AG | 200 | 02513 | .F. | FYKE |
| 07/28/91 | STEN CREEK POND | MIDDLE | AG | 169 | | .F. | FYKE |
| 07/28/91 | STEN CREEK POND | LOWER | AG | 194 | 02517 | .F. | FYKE |
| 07/28/91 | STEN CREEK POND | LOWER | AG | 188 | | .F. | FYKE |
| 07/29/91 | STEN CREEK POND | LOWER | AG | 221 | 02519 | .F. | FYKE |
| 07/29/91 | STEN CREEK POND | LOWER | AG | 224 | 02520 | .F. | FYKE |
| 07/29/91 | STEN CREEK POND | MIDDLE | AG | 0 | 02511 | .T. | FYKE |
| 07/29/91 | STEN CREEK POND | MIDDLE | AG | 201 | 02513 | .T. | FYKE |
| 07/29/91 | STEN CREEK POND | MIDDLE | AG | 198 | 02521 | .F. | FYKE |
| 07/29/91 | STEN CREEK POND | MIDDLE | AG | 240 | 02976 | .F. | FYKE |
| 07/29/91 | STEN CREEK POND | MIDDLE | AG | 207 | 02977 | .F. | FYKE |
| 07/29/91 | STEN CREEK POND | LOWER | AG | 206 | 02510 | .T. | FYKE |
| 07/29/91 | STEN CREEK POND | LOWER | AG | 190 | 02978 | .T. | FYKE |
| 07/29/91 | STEN CREEK POND | LOWER | AG | 173 | | .F. | FYKE |
| 07/29/91 | STEN CREEK POND | LOWER | AG | 138 | | .F. | FYKE |
| 07/29/91 | STEN CREEK POND | LOWER | AG | 195 | 02979 | .F. | FYKE |
| 07/29/91 | STEN CREEK POND | LOWER | AG | 132 | | .F. | FYKE |
| 07/29/91 | STEN CREEK POND | LOWER | AG | 211 | 02981 | .F. | FYKE |
| 07/29/91 | SPIKE CAMP CR. | BELOW BRIDGE | AG | 227 | 02985 | .F. | SHOCK |
| 07/29/91 | SPIKE CAMP CR. | BELOW BRIDGE | DV | 177 | | .F. | SHOCK |
| 07/29/91 | SPIKE CAMP CR. | AT BRIDGE | AG | 240 | 02988 | .F. | SHOCK |
| 07/29/91 | SPIKE CAMP CR. | AT BRIDGE | AG | 220 | 02989 | .F. | SHOCK |
| 07/29/91 | SPIKE CAMP CR. | AT BRIDGE | AG | 227 | 02990 | .F. | SHOCK |

1991 Atigun Fish Data Summary

| Date Captured | Location | Sublocation | Species | Length | Tag Number | Recapture | Capture Method |
|---|---|---|---|---|---|---|---|
| 07/29/91 | SPIKE CAMP CR. | AT BRIDGE | AG | 207 | 02991 | .F. | SHOCK |
| 07/29/91 | SPIKE CAMP CR. | AT BRIDGE | AG | 222 | 00922 | .T. | SHOCK |
| 07/29/91 | SPIKE CAMP CR. | AT BRIDGE | AG | 231 | 00576 | .T. | SHOCK |
| 07/29/91 | SPIKE CAMP CR. | ABOVE BRIDGE | AG | 186 | | .F. | SHOCK |
| 07/29/91 | SPIKE CAMP CR. | ABOVE BRIDGE | AG | 198 | 02992 | .F. | SHOCK |
| 07/29/91 | STEN CREEK | ABOVE ALL PONDS | AG | 251 | 02993 | .F. | SHOCK |
| 07/29/91 | STEN CREEK | ABOVE ALL PONDS | AG | 276 | 02994 | .F. | SHOCK |
| 07/29/91 | MILE 160 POND | | AG | 225 | 00901 | .T. | ANGLE |
| 07/29/91 | MILE 160 POND | | AG | 140 | | .F. | ANGLE |
| 07/29/91 | MILE 160 POND | | AG | 198 | 02995 | .F. | ANGLE |
| 07/29/91 | MILE 160 POND | | AG | 196 | 02997 | .F. | ANGLE |
| 07/29/91 | MILE 160 POND | | AG | 154 | | .F. | ANGLE |
| 07/29/91 | MILE 160 POND | | AG | 243 | 02998 | .F. | ANGLE |
| 07/29/91 | MILE 160 POND | | AG | 140 | | .F. | ANGLE |
| 07/29/91 | MILE 160 POND | | AG | 200 | 02999 | .F. | ANGLE |
| 07/29/91 | MILE 160 POND | | AG | 138 | | .F. | ANGLE |
| 07/29/91 | MILE 160 POND | | AG | 132 | | .F. | ANGLE |
| 07/29/91 | MILE 160 POND | | AG | 205 | 03000 | .F. | ANGLE |
| 07/30/91 | MILE 160 POND | | AG | 214 | 02964 | .F. | ANGLE |
| 07/30/91 | GALBRAITH LAKE | INLET | AG | 318 | 02963 | .F. | ANGLE |
| 07/30/91 | STEN CREEK POND | UPPER | AG | 192 | 02509 | .T. | FYKE |
| 07/30/91 | STEN CREEK POND | MIDDLE | AG | 232 | 02951 | .F. | FYKE |
| 07/30/91 | STEN CREEK POND | MIDDLE | AG | 200 | 02521 | .T. | FYKE |
| 07/30/91 | STEN CREEK POND | MIDDLE | AG | 202 | 02952 | .F. | FYKE |
| 07/30/91 | STEN CREEK POND | LOWER | AG | 129 | | .T. | FYKE |
| 07/30/91 | STEN CREEK POND | LOWER | AG | 148 | | .F. | FYKE |
| 07/30/91 | STEN CREEK POND | LOWER | AG | 177 | | .F. | FYKE |
| 07/30/91 | STEN CREEK POND | LOWER | AG | 225 | 00958 | .T. | FYKE |
| 07/30/91 | STEN CREEK POND | LOWER | AG | 212 | 02955 | .F. | FYKE |
| 07/30/91 | STEN CREEK POND | LOWER | RWF | 222 | 02954 | .F. | FYKE |
| 07/30/91 | STEN CREEK POND | LOWER | AG | 0 | 02517 | .T. | FYKE |
| 07/30/91 | STEN CREEK POND | LOWER | RWF | 268 | 02956 | .F. | FYKE |

1991 Atigun Fish Data Summary

| Date Captured | Location | Sublocation | Species | Length | Tag Number | Recapture | Capture Method |
|---|---|---|---|---|---|---|---|
| 07/30/91 | STEN CREEK POND | LOWER | RWF | 275 | 00889 | .T. | FYKE |
| 07/30/91 | STEN CREEK POND | LOWER | AG | 254 | 00736 | .T. | FYKE |
| 07/30/91 | STEN CREEK POND | LOWER | AG | 277 | 02994 | .T. | FYKE |
| 07/30/91 | STEN CREEK POND | LOWER | AG | 165 | | .T. | FYKE |
| 07/30/91 | STEN CREEK POND | LOWER | AG | 158 | | .F. | FYKE |
| 07/30/91 | STEN CREEK POND | LOWER | AG | 199 | 02957 | .F. | FYKE |
| 07/30/91 | STEN CREEK POND | LOWER | AG | 171 | | .F. | FYKE |
| 07/30/91 | STEN CREEK POND | LOWER | AG | 178 | | .F. | FYKE |
| 07/30/91 | STEN CREEK POND | LOWER | AG | 278 | 02961 | .F. | FYKE |
| 08/27/91 | STEN CREEK POND | LOWER | AG | 215 | 02966 | .F. | FYKE |
| 08/27/91 | STEN CREEK POND | LOWER | AG | 200 | 02967 | .F. | FYKE |
| 08/27/91 | STEN CREEK POND | LOWER | AG | 220 | 02969 | .F. | FYKE |
| 08/27/91 | STEN CREEK POND | LOWER | AG | 160 | | .F. | FYKE |
| 08/27/91 | STEN CREEK POND | LOWER | AG | 245 | 02970 | .F. | FYKE |
| 08/27/91 | STEN CREEK POND | LOWER | AG | 180 | | .F. | FYKE |
| 08/27/91 | STEN CREEK POND | LOWER | AG | 172 | | .F. | FYKE |
| 08/27/91 | STEN CREEK POND | LOWER | AG | 243 | 00970 | .T. | FYKE |
| 08/27/91 | STEN CREEK POND | LOWER | AG | 190 | 02971 | .F. | FYKE |
| 08/27/91 | STEN CREEK POND | LOWER | AG | 202 | 02972 | .F. | FYKE |
| 08/27/91 | STEN CREEK POND | LOWER | AG | 184 | | .F. | FYKE |
| 08/27/91 | STEN CREEK POND | LOWER | AG | 196 | 02973 | .F. | FYKE |
| 08/27/91 | STEN CREEK POND | LOWER | AG | 153 | | .F. | FYKE |
| 08/27/91 | STEN CREEK POND | LOWER | AG | 89 | | .F. | FYKE |
| 08/27/91 | TEA LAKE | OUTLET | AG | 224 | 02974 | .F. | FYKE |
| 08/28/91 | GALBRAITH LAKE | OUTLET | AG | 110 | | .F. | FYKE |
| 08/28/91 | GALBRAITH LAKE | OUTLET | AG | 251 | 02730 | .F. | FYKE |
| 08/28/91 | GALBRAITH LAKE | OUTLET | AG | 258 | 02731 | .F. | FYKE |
| 08/28/91 | GALBRAITH LAKE | OUTLET | RWF | 67 | | .F. | FYKE |
| 08/28/91 | GALBRAITH LAKE | OUTLET | RWF | 44 | | .F. | FYKE |
| 08/28/91 | GALBRAITH LAKE | OUTLET | AG | 327 | 02734 | .F. | FYKE |
| 08/28/91 | GALBRAITH LAKE | OUTLET | AG | 214 | 02735 | .F. | FYKE |
| 08/28/91 | GALBRAITH LAKE | OUTLET | AG | 174 | | .F. | FYKE |

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| Date Captured | Location | Sublocation | Species | Length | Tag Number | Recapture | Capture Method |
|---|---|---|---|---|---|---|---|
| 08/28/91 | GALBRAITH LAKE | OUTLET | AG | 223 | 02738 | .F. | FYKE |
| 08/28/91 | GALBRAITH LAKE | OUTLET | RWF | 55 | | .F. | FYKE |
| 08/28/91 | GALBRAITH LAKE | OUTLET | RWF | 58 | | .F. | FYKE |
| 08/28/91 | GALBRAITH LAKE | OUTLET | RWF | 52 | | .F. | FYKE |
| 08/28/91 | GALBRAITH LAKE | OUTLET | RWF | 53 | | .F. | FYKE |
| 08/28/91 | GALBRAITH LAKE | OUTLET | RWF | 59 | | .F. | FYKE |
| 08/28/91 | GALBRAITH LAKE | OUTLET | LT | 574 | 02731 | .F. | FYKE |
| 08/28/91 | GALBRAITH LAKE | OUTLET | BB | 620 | 02733 | .F. | FYKE |
| 08/28/91 | STEN CREEK POND | LOWER | AG | 84 | | .F. | FYKE |
| 08/28/91 | STEN CREEK POND | LOWER | AG | 217 | 00973 | .T. | FYKE |
| 08/28/91 | STEN CREEK POND | LOWER | AG | 0 | 02957 | .T. | FYKE |
| 08/28/91 | STEN CREEK POND | LOWER | AG | 270 | 02975 | .F. | FYKE |
| 08/28/91 | STEN CREEK POND | LOWER | AG | 233 | 02727 | .F. | FYKE |
| 08/28/91 | STEN CREEK POND | LOWER | AG | 182 | | .T. | FYKE |
| 08/28/91 | STEN CREEK POND | LOWER | AG | 152 | | .T. | FYKE |
| 08/28/91 | STEN CREEK POND | LOWER | AG | 255 | 02728 | .F. | FYKE |
| 08/28/91 | STEN CREEK POND | LOWER | AG | 155 | | .F. | FYKE |
| 08/28/91 | STEN CREEK POND | LOWER | AG | 70 | | .F. | FYKE |
| 08/28/91 | STEN CREEK POND | LOWER | AG | 137 | | .F. | FYKE |
| 08/28/91 | STEN CREEK POND | LOWER | AG | 90 | | .F. | FYKE |
| 08/28/91 | STEN CREEK POND | LOWER | AG | 105 | | .F. | FYKE |
| 08/28/91 | STEN CREEK POND | LOWER | AG | 202 | 02729 | .T. | FYKE |
| 08/28/91 | STEN CREEK POND | LOWER | AG | 178 | | .F. | FYKE |
| 08/28/91 | STEN CREEK POND | LOWER | AG | 169 | | .F. | FYKE |
| 08/28/91 | STEN CREEK POND | LOWER | AG | 153 | | .F. | FYKE |
| 08/28/91 | STEN CREEK POND | LOWER | AG | 88 | | .F. | FYKE |
| 08/28/91 | STEN CREEK POND | LOWER | AG | 88 | | .F. | FYKE |
| 08/29/91 | STEN CREEK POND | LOWER | AG | 176 | | .F. | FYKE |
| 08/29/91 | STEN CREEK POND | LOWER | AG | 147 | | .F. | FYKE |
| 08/29/91 | STEN CREEK POND | LOWER | AG | 185 | | .T. | FYKE |
| 08/29/91 | STEN CREEK POND | LOWER | AG | 251 | 02739 | .F. | FYKE |
| 08/29/91 | STEN CREEK POND | LOWER | AG | 267 | 00679 | .T. | FYKE |

1991 Atigun Fish Data Summary

| Date Captured | Location | Sublocation | Species | Length | Tag Number | Recapture | Capture Method |
|---|---|---|---|---|---|---|---|
| 08/29/91 | STEN CREEK POND | LOWER | AG | 179 | | .F. | FYKE |
| 08/29/91 | STEN CREEK POND | LOWER | AG | 236 | 02740 | .F. | FYKE |
| 08/29/91 | STEN CREEK POND | LOWER | AG | 212 | 02741 | .T. | FYKE |
| 08/29/91 | STEN CREEK POND | LOWER | AG | 263 | 02742 | .T. | FYKE |
| 08/29/91 | STEN CREEK POND | LOWER | AG | 213 | 02743 | .F. | FYKE |
| 08/29/91 | STEN CREEK POND | LOWER | AG | 184 | | .F. | FYKE |
| 08/29/91 | STEN CREEK POND | LOWER | AG | 151 | | .F. | FYKE |
| 08/29/91 | STEN CREEK POND | LOWER | AG | 211 | 00973 | .T. | FYKE |
| 08/29/91 | STEN CREEK POND | LOWER | AG | 145 | | .F. | FYKE |
| 08/29/91 | STEN CREEK POND | LOWER | AG | 132 | | .F. | FYKE |
| 08/29/91 | STEN CREEK POND | LOWER | AG | 149 | | .F. | FYKE |
| 08/29/91 | STEN CREEK POND | LOWER | AG | 168 | | .F. | FYKE |
| 08/29/91 | STEN CREEK POND | LOWER | AG | 108 | | .F. | FYKE |
| 08/29/91 | STEN CREEK POND | LOWER | AG | 157 | | .F. | FYKE |
| 08/29/91 | STEN CREEK POND | LOWER | AG | 78 | | .F. | FYKE |
| 08/29/91 | STEN CREEK POND | LOWER | AG | 198 | 02744 | .F. | FYKE |
| 08/29/91 | STEN CREEK POND | LOWER | AG | 182 | | .F. | FYKE |
| 08/29/91 | STEN CREEK POND | LOWER | AG | 214 | 02745 | .F. | FYKE |
| 08/29/91 | STEN CREEK POND | LOWER | AG | 200 | 02746 | .F. | FYKE |
| 08/29/91 | STEN CREEK POND | LOWER | AG | 141 | | .F. | FYKE |
| 08/29/91 | STEN CREEK POND | LOWER | AG | 104 | | .F. | FYKE |
| 08/29/91 | STEN CREEK POND | LOWER | AG | 100 | | .F. | FYKE |
| 08/29/91 | STEN CREEK POND | LOWER | AG | 102 | | .F. | FYKE |
| 08/29/91 | STEN CREEK POND | LOWER | AG | 143 | | .F. | FYKE |
| 08/29/91 | STEN CREEK POND | LOWER | AG | 94 | | .F. | FYKE |
| 08/29/91 | STEN CREEK POND | LOWER | AG | 104 | | .F. | FYKE |
| 08/29/91 | STEN CREEK POND | LOWER | AG | 101 | | .F. | FYKE |
| 08/29/91 | STEN CREEK POND | LOWER | AG | 98 | | .F. | FYKE |
| 08/29/91 | STEN CREEK POND | LOWER | AG | 157 | | .F. | FYKE |
| 08/29/91 | STEN CREEK POND | LOWER | AG | 149 | | .F. | FYKE |
| 08/29/91 | STEN CREEK POND | LOWER | AG | 89 | | .F. | FYKE |
| 08/29/91 | STEN CREEK POND | LOWER | AG | 115 | | .F. | FYKE |

1991 Atigun Fish Data Summary

| Date Captured | Location | Sublocation | Species | Length | Tag Number | Recapture | Capture Method |
|---|---|---|---|---|---|---|---|
| 08/29/91 | STEN CREEK POND | LOWER | AG | 160 | | .F. | FYKE |
| 08/29/91 | STEN CREEK POND | LOWER | AG | 156 | | .F. | FYKE |
| 08/29/91 | STEN CREEK POND | LOWER | AG | 158 | | .F. | FYKE |
| 08/29/91 | STEN CREEK POND | LOWER | AG | 100 | | .F. | FYKE |
| 08/29/91 | STEN CREEK POND | LOWER | AG | 116 | | .F. | FYKE |
| 08/29/91 | STEN CREEK POND | LOWER | AG | 146 | | .F. | FYKE |
| 08/29/91 | STEN CREEK POND | LOWER | AG | 112 | | .F. | FYKE |
| 08/29/91 | STEN CREEK POND | LOWER | AG | 101 | | .F. | FYKE |
| 08/29/91 | STEN CREEK POND | LOWER | AG | 95 | | .F. | FYKE |
| 08/29/91 | STEN CREEK POND | LOWER | AG | 107 | | .F. | FYKE |
| 08/29/91 | STEN CREEK POND | LOWER | AG | 109 | | .F. | FYKE |
| 08/29/91 | STEN CREEK POND | LOWER | AG | 102 | | .F. | FYKE |
| 08/29/91 | STEN CREEK POND | LOWER | AG | 97 | | .F. | FYKE |
| 08/29/91 | STEN CREEK POND | LOWER | AG | 84 | | .F. | FYKE |
| 08/29/91 | STEN CREEK POND | LOWER | DV | 162 | | .F. | FYKE |
| 08/29/91 | STEN CREEK POND | MIDDLE | AG | 209 | 02747 | .F. | FYKE |
| 08/29/91 | STEN CREEK POND | MIDDLE | AG | 213 | 02748 | .F. | FYKE |
| 08/29/91 | STEN CREEK POND | MIDDLE | AG | 203 | 02749 | .F. | FYKE |
| 08/29/91 | STEN CREEK POND | MIDDLE | AG | 231 | 02951 | .T. | FYKE |
| 08/29/91 | STEN CREEK POND | MIDDLE | AG | 240 | 02750 | .T. | FYKE |
| 08/29/91 | STEN CREEK POND | MIDDLE | AG | 178 | | .F. | FYKE |
| 08/29/91 | STEN CREEK POND | UPPER | AG | 206 | 02701 | .F. | FYKE |
| 08/29/91 | STEN CREEK POND | UPPER | AG | 195 | 02702 | .F. | FYKE |
| 08/29/91 | STEN CREEK POND | UPPER | AG | 207 | 02703 | .F. | FYKE |
| 08/29/91 | STEN CREEK POND | UPPER | AG | 163 | | .F. | FYKE |
| 08/29/91 | STEN CREEK POND | UPPER | AG | 192 | 02704 | .F. | FYKE |
| 08/29/91 | GALBRAITH LAKE | OUTLET | AG | 238 | 02706 | .F. | FYKE |
| 08/29/91 | GALBRAITH LAKE | OUTLET | AG | 214 | 02707 | .F. | FYKE |
| 08/29/91 | GALBRAITH LAKE | OUTLET | AG | 248 | 02708 | .F. | FYKE |
| 08/29/91 | GALBRAITH LAKE | OUTLET | AG | 106 | | .F. | FYKE |
| 08/29/91 | GALBRAITH LAKE | OUTLET | LT | 597 | 02705 | .F. | FYKE |
| 08/30/91 | STEN CREEK POND | LOWER | AG | 191 | 02709 | .F. | FYKE |

1991 Atigun Fish Data Summary

| Date Captured | Location | Sublocation | Species | Length | Tag Number | Recapture | Capture Method |
|---|---|---|---|---|---|---|---|
| 08/30/91 | STEN CREEK POND | LOWER | AG | 111 | | .F. | FYKE |
| 08/30/91 | STEN CREEK POND | LOWER | AG | 90 | | .F. | FYKE |
| 08/30/91 | STEN CREEK POND | LOWER | AG | 144 | | .F. | FYKE |
| 08/30/91 | STEN CREEK POND | LOWER | AG | 102 | | .F. | FYKE |
| 08/30/91 | STEN CREEK POND | LOWER | AG | 108 | | .F. | FYKE |
| 08/30/91 | STEN CREEK POND | LOWER | AG | 133 | | .F. | FYKE |
| 08/30/91 | STEN CREEK POND | LOWER | AG | 167 | | .F. | FYKE |
| 08/30/91 | STEN CREEK POND | LOWER | AG | 105 | | .F. | FYKE |
| 08/30/91 | STEN CREEK POND | LOWER | AG | 138 | | .F. | FYKE |
| 08/30/91 | STEN CREEK POND | LOWER | AG | 107 | | .F. | FYKE |
| 08/30/91 | STEN CREEK POND | LOWER | AG | 125 | | .F. | FYKE |
| 08/30/91 | STEN CREEK POND | LOWER | AG | 147 | | .F. | FYKE |
| 08/30/91 | STEN CREEK POND | LOWER | AG | 101 | | .F. | FYKE |
| 08/30/91 | STEN CREEK POND | LOWER | AG | 88 | | .F. | FYKE |
| 08/30/91 | STEN CREEK POND | LOWER | AG | 97 | | .F. | FYKE |
| 08/30/91 | STEN CREEK POND | LOWER | AG | 206 | 02710 | .F. | FYKE |
| 08/30/91 | STEN CREEK POND | LOWER | AG | 100 | | .F. | FYKE |
| 08/30/91 | STEN CREEK POND | LOWER | AG | 143 | | .F. | FYKE |
| 08/30/91 | STEN CREEK POND | LOWER | AG | 151 | | .F. | FYKE |
| 08/30/91 | STEN CREEK POND | LOWER | AG | 99 | | .F. | FYKE |
| 08/30/91 | STEN CREEK POND | LOWER | AG | 103 | | .F. | FYKE |
| 08/30/91 | STEN CREEK POND | LOWER | AG | 105 | | .F. | FYKE |
| 08/30/91 | STEN CREEK POND | LOWER | AG | 98 | | .F. | FYKE |
| 08/30/91 | STEN CREEK POND | LOWER | AG | 152 | | .F. | FYKE |
| 08/30/91 | STEN CREEK POND | LOWER | AG | 91 | | .F. | FYKE |
| 08/30/91 | STEN CREEK POND | LOWER | AG | 122 | | .F. | FYKE |
| 08/30/91 | STEN CREEK POND | LOWER | DV | 170 | | .F. | FYKE |
| 08/30/91 | STEN CREEK POND | LOWER | AG | 180 | | .F. | FYKE |
| 08/30/91 | GALBRAITH LAKE | OUTLET | RWF | 270 | 02711 | .F. | FYKE |
| 08/30/91 | GALBRAITH LAKE | OUTLET | RWF | 54 | | .F. | FYKE |
| 08/30/91 | GALBRAITH LAKE | OUTLET | RWF | 50 | | .F. | FYKE |
| 08/30/91 | GALBRAITH LAKE | OUTLET | RWF | 50 | | .F. | FYKE |

1991 Atigun Fish Data Summary

| Date Captured | Location | Sublocation | Species | Length | Tag Number | Recapture | Capture Method |
|---|---|---|---|---|---|---|---|
| 08/30/91 | GALBRAITH LAKE | OUTLET | RWF | 50 | | .F. | FYKE |
| 08/30/91 | GALBRAITH LAKE | OUTLET | RWF | 50 | | .F. | FYKE |
| 08/30/91 | GALBRAITH LAKE | OUTLET | RWF | 52 | | .F. | FYKE |
| 08/30/91 | GALBRAITH LAKE | OUTLET | RWF | 54 | | .F. | FYKE |
| 08/30/91 | GALBRAITH LAKE | OUTLET | RWF | 56 | | .F. | FYKE |
| 08/30/91 | GALBRAITH LAKE | OUTLET | RWF | 64 | | .F. | FYKE |
| 08/30/91 | GALBRAITH LAKE | OUTLET | RWF | 103 | | .F. | FYKE |
| 08/30/91 | GALBRAITH LAKE | OUTLET | RWF | 101 | | .F. | FYKE |
| 08/30/91 | GALBRAITH LAKE | OUTLET | RWF | 204 | 02712 | .F. | FYKE |
| 08/30/91 | GALBRAITH LAKE | OUTLET | RWF | 195 | 02713 | .F. | FYKE |
| 08/30/91 | GALBRAITH LAKE | OUTLET | AG | 165 | | .F. | FYKE |
| 09/04/91 | GALBRAITH LAKE | OUTLET | RWF | 289 | 02714 | .F. | FYKE |
| 09/04/91 | GALBRAITH LAKE | OUTLET | RWF | 166 | | .F. | FYKE |
| 09/04/91 | GALBRAITH LAKE | OUTLET | RWF | 331 | 02715 | .F. | FYKE |
| 09/04/91 | GALBRAITH LAKE | OUTLET | AG | 72 | | .F. | FYKE |
| 09/04/91 | GALBRAITH LAKE | OUTLET | AG | 143 | | .F. | FYKE |
| 09/04/91 | GALBRAITH LAKE | OUTLET | RWF | 378 | 02717 | .F. | FYKE |
| 09/04/91 | GALBRAITH LAKE | OUTLET | RWF | 215 | 02718 | .F. | FYKE |
| 09/04/91 | GALBRAITH LAKE | OUTLET | RWF | 61 | | .F. | FYKE |
| 09/04/91 | GALBRAITH LAKE | OUTLET | RWF | 116 | | .F. | FYKE |
| 09/04/91 | GALBRAITH LAKE | OUTLET | BB | 730 | 02719 | .F. | FYKE |
| 09/04/91 | GALBRAITH LAKE | OUTLET | AG | 276 | 02720 | .F. | FYKE |
| 09/04/91 | GALBRAITH LAKE | OUTLET | RWF | 232 | 02721 | .F. | FYKE |
| 09/04/91 | GALBRAITH LAKE | OUTLET | RWF | 242 | 02722 | .F. | FYKE |
| 09/04/91 | GALBRAITH LAKE | OUTLET | RWF | 271 | 02723 | .F. | FYKE |
| 09/04/91 | GALBRAITH LAKE | OUTLET | AG | 112 | | .F. | FYKE |
| 09/04/91 | GALBRAITH LAKE | OUTLET | RWF | 170 | | .F. | FYKE |
| 09/04/91 | GALBRAITH LAKE | OUTLET | AG | 270 | 02724 | .F. | FYKE |
| 09/04/91 | GALBRAITH LAKE | OUTLET | RWF | 194 | 02725 | .F. | FYKE |
| 09/04/91 | GALBRAITH LAKE | OUTLET | AG | 372 | 02726 | .F. | FYKE |
| 09/04/91 | TEA LAKE | OUTLET | AG | 61 | | .F. | FYKE |
| 09/04/91 | TEA LAKE | OUTLET | AG | 148 | | .F. | FYKE |

1991 Atigun Fish Data Summary

| Date Captured | Location | Sublocation | Species | Length | Tag Number | Recapture | Capture Method |
|---|---|---|---|---|---|---|---|
| 09/05/91 | GALBRAITH LAKE | OUTLET | RWF | 188 | | .F. | FYKE |
| 09/05/91 | GALBRAITH LAKE | OUTLET | RWF | 244 | 02722 | .T. | FYKE |
| 09/05/91 | GALBRAITH LAKE | OUTLET | RWF | 217 | 02677 | .F. | FYKE |
| 09/05/91 | GALBRAITH LAKE | OUTLET | RWF | 201 | 02679 | .F. | FYKE |
| 09/05/91 | GALBRAITH LAKE | OUTLET | RWF | 174 | | .F. | FYKE |
| 09/05/91 | GALBRAITH LAKE | OUTLET | RWF | 178 | | .F. | FYKE |
| 09/05/91 | GALBRAITH LAKE | OUTLET | RWF | 182 | | .F. | FYKE |
| 09/05/91 | GALBRAITH LAKE | OUTLET | AG | 109 | | .F. | FYKE |
| 09/05/91 | GALBRAITH LAKE | OUTLET | RWF | 208 | 02681 | .F. | FYKE |
| 09/05/91 | GALBRAITH LAKE | OUTLET | RWF | 229 | 02682 | .F. | FYKE |
| 09/05/91 | GALBRAITH LAKE | OUTLET | RWF | 209 | 02683 | .F. | FYKE |
| 09/05/91 | GALBRAITH LAKE | OUTLET | RWF | 202 | 02684 | .F. | FYKE |
| 09/05/91 | GALBRAITH LAKE | OUTLET | AG | 158 | | .F. | FYKE |
| 09/05/91 | GALBRAITH LAKE | OUTLET | AG | 82 | | .F. | FYKE |
| 09/05/91 | GALBRAITH LAKE | OUTLET | RWF | 186 | | .F. | FYKE |
| 09/05/91 | GALBRAITH LAKE | OUTLET | RWF | 293 | 02685 | .F. | FYKE |
| 09/05/91 | GALBRAITH LAKE | OUTLET | RWF | 147 | | .F. | FYKE |
| 09/05/91 | GALBRAITH LAKE | OUTLET | RWF | 111 | | .F. | FYKE |
| 09/05/91 | GALBRAITH LAKE | OUTLET | RWF | 220 | 02686 | .F. | FYKE |
| 09/05/91 | GALBRAITH LAKE | OUTLET | RWF | 187 | | .F. | FYKE |
| 09/05/91 | GALBRAITH LAKE | OUTLET | AG | 296 | 02688 | .F. | FYKE |
| 09/05/91 | GALBRAITH LAKE | OUTLET | RWF | 217 | 02689 | .F. | FYKE |
| 09/05/91 | GALBRAITH LAKE | OUTLET | AG | 253 | 02690 | .F. | FYKE |
| 09/05/91 | GALBRAITH LAKE | OUTLET | RWF | 57 | | .F. | FYKE |
| 09/05/91 | GALBRAITH LAKE | OUTLET | RWF | 62 | | .F. | FYKE |
| 09/05/91 | GALBRAITH LAKE | OUTLET | RWF | 165 | | .F. | FYKE |
| 09/05/91 | GALBRAITH LAKE | OUTLET | RWF | 134 | | .F. | FYKE |
| 09/05/91 | GALBRAITH LAKE | OUTLET | RWF | 173 | | .F. | FYKE |
| 09/05/91 | GALBRAITH LAKE | OUTLET | RWF | 236 | 02692 | .F. | FYKE |
| 09/05/91 | GALBRAITH LAKE | OUTLET | RWF | 61 | | .F. | FYKE |
| 09/05/91 | GALBRAITH LAKE | OUTLET | RWF | 187 | | .F. | FYKE |
| 09/05/91 | GALBRAITH LAKE | OUTLET | RWF | 60 | | .F. | FYKE |

1991 Atigun Fish Data Summary

| Date Captured | Location | Sublocation | Species | Length | Tag Number | Recapture | Capture Method |
|---|---|---|---|---|---|---|---|
| 09/05/91 | GALBRAITH LAKE | OUTLET | RWF | 177 | | .F. | FYKE |
| 09/05/91 | GALBRAITH LAKE | OUTLET | AG | 357 | 02693 | .F. | FYKE |
| 09/05/91 | GALBRAITH LAKE | OUTLET | RWF | 300 | 02694 | .F. | FYKE |
| 09/05/91 | GALBRAITH LAKE | OUTLET | RWF | 231 | 02695 | .F. | FYKE |
| 09/05/91 | GALBRAITH LAKE | OUTLET | RWF | 172 | | .F. | FYKE |
| 09/05/91 | GALBRAITH LAKE | OUTLET | RWF | 174 | | .F. | FYKE |
| 09/05/91 | GALBRAITH LAKE | OUTLET | RWF | 67 | | .F. | FYKE |
| 09/05/91 | GALBRAITH LAKE | OUTLET | RWF | 219 | 02696 | .F. | FYKE |
| 09/05/91 | GALBRAITH LAKE | OUTLET | RWF | 212 | 02697 | .F. | FYKE |
| 09/05/91 | GALBRAITH LAKE | OUTLET | RWF | 263 | 02698 | .F. | FYKE |
| 09/05/91 | GALBRAITH LAKE | OUTLET | RWF | 195 | 02699 | .F. | FYKE |
| 09/05/91 | GALBRAITH LAKE | OUTLET | LT | 590 | 02700 | .F. | FYKE |
| 09/05/91 | GALBRAITH LAKE | OUTLET | RWF | 188 | | .F. | FYKE |
| 09/05/91 | GALBRAITH LAKE | OUTLET | RWF | 220 | 02651 | .F. | FYKE |
| 09/05/91 | GALBRAITH LAKE | OUTLET | RWF | 191 | 02652 | .F. | FYKE |
| 09/05/91 | GALBRAITH LAKE | OUTLET | RWF | 199 | 02653 | .F. | FYKE |
| 09/05/91 | GALBRAITH LAKE | OUTLET | RWF | 215 | 02655 | .F. | FYKE |
| 09/05/91 | GALBRAITH LAKE | OUTLET | RWF | 326 | 02656 | .F. | FYKE |
| 09/05/91 | GALBRAITH LAKE | OUTLET | RWF | 347 | 02658 | .F. | FYKE |
| 09/05/91 | GALBRAITH LAKE | OUTLET | RWF | 206 | 02659 | .F. | FYKE |
| 09/05/91 | GALBRAITH LAKE | OUTLET | RWF | 165 | | .F. | FYKE |
| 09/05/91 | GALBRAITH LAKE | OUTLET | RWF | 64 | | .F. | FYKE |
| 09/05/91 | GALBRAITH LAKE | OUTLET | RWF | 59 | | .F. | FYKE |
| 09/05/91 | GALBRAITH LAKE | OUTLET | RWF | 133 | | .F. | FYKE |
| 09/05/91 | GALBRAITH LAKE | OUTLET | RWF | 186 | | .F. | FYKE |
| 09/05/91 | GALBRAITH LAKE | OUTLET | AGF | 200 | 02660 | .F. | FYKE |
| 09/05/91 | GALBRAITH LAKE | OUTLET | AG | 290 | | .F. | FYKE |
| 09/05/91 | GALBRAITH LAKE | OUTLET | RWF | 91 | | .F. | FYKE |
| 09/05/91 | GALBRAITH LAKE | OUTLET | RWF | 102 | | .F. | FYKE |
| 09/05/91 | GALBRAITH LAKE | OUTLET | RWF | 175 | | .F. | FYKE |
| 09/05/91 | GALBRAITH LAKE | OUTLET | RWF | 247 | 02661 | .F. | FYKE |
| 09/05/91 | GALBRAITH LAKE | OUTLET | RWF | 303 | 02662 | .F. | FYKE |

1991 Atigun Fish Data Summary

| Date Captured | Location | Sublocation | Species | Length | Tag Number | Recapture | Capture Method |
|---|---|---|---|---|---|---|---|
| 09/05/91 | GALBRAITH LAKE | OUTLET | RWF | 207 | 02663 | .F. | FYKE |
| 09/05/91 | TEA LAKE | OUTLET | BB | 212 | | .F. | FYKE |
| 09/05/91 | TEA LAKE | OUTLET | AG | 147 | | .F. | FYKE |
| 09/05/91 | TEA LAKE | OUTLET | AG | 95 | | .F. | FYKE |
| 09/05/91 | TEA LAKE | OUTLET | AG | 88 | | .F. | FYKE |
| 09/06/91 | GALBRAITH LAKE | OUTLET | AG | 255 | | .F. | FYKE |
| 09/06/91 | GALBRAITH LAKE | OUTLET | AG | 220 | | .F. | FYKE |
| 09/06/91 | TEA LAKE | OUTLET | AG | 152 | | .F. | FYKE |
| 09/07/91 | GALBRAITH LAKE | OUTLET | AG | 268 | | .F. | FYKE |
| 09/07/91 | GALBRAITH LAKE | OUTLET | AG | 347 | | .F. | FYKE |
| 09/07/91 | GALBRAITH LAKE | OUTLET | AG | 284 | | .F. | FYKE |
| 09/07/91 | GALBRAITH LAKE | OUTLET | AG | 280 | | .F. | FYKE |
| 09/07/91 | GALBRAITH LAKE | OUTLET | AG | 352 | | .F. | FYKE |
| 09/07/91 | GALBRAITH LAKE | OUTLET | AG | 287 | | .F. | FYKE |
| 09/07/91 | GALBRAITH LAKE | OUTLET | AG | 250 | | .F. | FYKE |
| 09/07/91 | GALBRAITH LAKE | OUTLET | AG | 102 | | .F. | FYKE |
| 09/07/91 | TEA LAKE | OUTLET | AG | 188 | | .F. | FYKE |
| 09/07/91 | TEA LAKE | OUTLET | AG | 172 | | .F. | FYKE |
| 09/08/91 | GALBRAITH LAKE | OUTLET | AG | 0 | | .T. | FYKE |
| 09/11/91 | GALBRAITH LAKE | OUTLET | AG | 0 | 00957 | .T. | FYKE |
| 09/12/91 | GALBRAITH LAKE | OUTLET | AG | 0 | 00852 | .T. | FYKE |