

SOUTHEAST ALASKA POT SHRIMP FISHERY
MANAGEMENT PLAN, 2002



by
Southeast Region Management Staff

Regional Information Report¹ No. 1J02-35

Alaska Department of Fish and Game
Division of Commercial Fisheries
Southeast Region
Juneau, Alaska

September 2002

¹

The Regional Information Report Series was established in 1987 to provide an information access system for all unpublished divisional reports. These reports frequently serve diverse ad hoc informational purposes or archive basic uninterpreted data. To accommodate timely reporting of recently collected information, reports in this series undergo only limited internal review and may contain preliminary data; this information may be subsequently finalized and published in the formal literature. Consequently, these reports should not be cited without prior approval of the author or the Division of Commercial Fisheries.

TABLE OF CONTENTS

| | <u>Page</u> |
|--|-------------|
| LIST OF TABLES | 3 |
| LIST OF FIGURES | 3 |
| LIST OF APPENDICES | 3 |
| INTRODUCTION | 4 |
| 2000 BOARD OF FISHERY POT SHRIMP ACTIONS | 5 |
| MANAGEMENT APPROACH | 5 |
| POT SHRIMP TASK FORCE..... | 7 |
| MISCELLANEOUS ISSUES..... | 7 |
| Octopus Bycatch..... | 7 |
| Pot Shrimp Fishing Offshore..... | 8 |
| KETCHIKAN AREA FISHERIES | 8 |
| Introduction..... | 8 |
| District 1 | 9 |
| District 2..... | 10 |
| District 3..... | 10 |
| Section 3-A..... | 11 |
| Sections 3-B and 3-C | 11 |
| District 4..... | 12 |
| PETERSBURG-WRANGELL AREA FISHERIES | 12 |
| Introduction..... | 12 |
| District 5..... | 13 |
| District 6..... | 13 |
| District 7..... | 14 |
| District 8..... | 15 |
| District 9..... | 15 |
| District 10..... | 16 |
| SITKA AREA FISHERIES | 17 |
| Introduction..... | 17 |
| District 13 | 17 |
| Section 13-C | 17 |
| Sections 13-A and 13-B..... | 18 |
| JUNEAU/HAINES AREA FISHERIES..... | 19 |
| Introduction..... | 19 |
| District 11 | 19 |
| District 12 | 19 |
| District 14 | 20 |
| District 15 | 20 |
| District 16..... | 21 |
| POT SHRIMP RESEARCH | 21 |
| FISHERY CONTACTS | 23 |
| APPENDICES | 39 |

LIST OF TABLES

| | <u>Page</u> |
|--|-------------|
| Table 1. Total historical harvest (whole weight) of shrimp in the Southeast Alaska commercial pot shrimp fishery by District/Section..... | 24 |
| Table 2. Historical closure dates and days fished by District/Section for the Southeast Alaska commercial pot shrimp fishery, 1995/1996 through 2000/2001..... | 26 |
| Table 3. Guideline harvest levels for the 2002/2003 Southeast Alaska commercial pot shrimp fishery by District or Section. | 28 |
| Table 4. Number of sets fished and number of pots sampled by statistical area, year of survey and survey type. | 29 |
| Table 5. Preseason pot shrimp surveys District 3, 1997–2001..... | 30 |
| Table 6. Postseason pot shrimp surveys District 3, 1998–2001..... | 31 |
| Table 7. Preseason pot shrimp surveys District 7, 1996–2001..... | 32 |
| Table 8. Postseason pot shrimp surveys District 7, 2001..... | 33 |
| Table 9. Preseason pot shrimp surveys District 12, 2000..... | 33 |
| Table 10. Preseason pot shrimp surveys District 13, 1999–2001. | 34 |

LIST OF FIGURES

| | <u>Page</u> |
|--|-------------|
| Figure 1. Southeast Alaska commercial fishing regulatory sections..... | 35 |
| Figure 2. Closed waters for pot shrimping in Registration Area A. | 36 |
| Figure 3. Section 3-C, 2000. Length frequency graphs depicting catch by mesh size and comparing catches pre- and post-commercial fishery for Statistical Areas 103-23 and 103-25. | 37 |
| Figure 4. Length frequency graphs depicting catch by mesh size for the 2000 preseason survey in Statistical Area 107-20 and comparing catches pre and post commercial fishery for Statistical Area 107-20. District 7, 2000 and 2001. | 38 |

LIST OF APPENDICES

| | <u>Page</u> |
|---|-------------|
| Appendix 1. Pot Shrimp catcher-processor reporting form for Southeast Alaska..... | 40 |

INTRODUCTION

The spot prawn *Pandalus platyceros* is the target species for most Southeast Alaska shrimp pot fisheries, with smaller quantities of coonstripe shrimp *Pandalus hypsinotus* also harvested. Both species are harvested from rocky habitats, with the greatest portion of the harvest taken in Districts 1, 3, and 7. Smaller but significant harvests also occur in Districts 2 and 6. More recently, harvests from Districts 8, 9, 10, 11, 12, 13, 14, and 15 are becoming more important.

Harvest records dating from 1962 indicate the pot shrimp fishery began with sporadic effort and low harvest through the mid-1970s when the pot shrimp fishery served as a supplemental source of income. Total Southeast harvest levels in the 1970s averaged 22,000 pounds per year. Through the mid-1980s most of the product was sold over the dock to private individuals, restaurants, or other markets without passing through the traditional system of processors established for other fisheries. Total Southeast harvest levels in the 1980s averaged 250,000 pounds per year. From 1990/1991 through 1994/1995 the character of the fishery underwent radical changes with the number of permits fished as high as 248 and average annual harvest increased to 711,000 pounds. In October 1994, the first floating processor entered the fishery. Pot fishing efficiency and the pace of the fishery greatly increased during this time. From 1995/1996 through the 1999/2000 season, with new GHRs implemented, the average annual harvest has been 875,000 whole pounds of shrimp.

In 1995 the Commercial Fisheries Entry Commission received petitions from more than 70 people from Wrangell, Ketchikan, Craig, and the Tenakee Springs Fish and Game Advisory Committee requesting limitations to the number of participants in the Southeast pot shrimp fishery. The commission obtained and analyzed data concerning the fishery and held numerous public hearings throughout Southeast Alaska and announced in early November 1995 that they had adopted a limited entry program. In October 1996 the commission adopted a point system for the fishery and by February of 1998 the commission began the process of issuing permits for the fishery.

A total of 315 permits were issued in the Southeast Alaska pot shrimp fishery in 2001. During the 2001/2002 season 181 permits were registered and of those 169 were fished.

The commercial pot shrimp fishery opens by regulation on October 1 each year. Management, since the 1995/1996 season, has been, and continues to be, focused on harvesting within guideline harvest ranges (GHR) that are established for each separate fishing area. There are nineteen distinct pot shrimp fishing areas in Southeast Alaska: Districts 1 and 2, Section 3-A, Section 3-B/C, Districts 4-11, Tenakee Inlet, the remainder of District 12, Sections 13-C and 13-A, B, and Districts 14-16. Each of these pot shrimp area fisheries are discussed separately in this management plan.

2000 BOARD OF FISHERY POT SHRIMP ACTIONS

During the January 2000 Alaska Board of Fisheries meeting in Juneau, the board adopted a number of new regulations for the Southeast pot shrimp fishery. These new regulations can be found in the 2002 – 2003 Commercial Shellfish Fishing Regulations booklet. The new regulations include:

5 AAC 31.136. CLOSED WATERS IN REGISTRATION AREA A (3), (4), and (5).

5 AAC 31.143. REPORTING REQUIREMENTS FOR SHRIMP CATCHER-PROCESSOR VESSELS IN REGISTRATION AREA A (b) and (c).

The new, comprehensive management plan that the board adopted can be found under:

5 AAC 31.145. SOUTHEASTERN ALASKA (REGISTRATION AREA A) POT SHRIMP MANAGEMENT PLAN (a) through (g).

At the BOF meeting there was a discussion on the need for shrimp pot tags (5 AAC 31.126). The board decided to keep the individual tags, however, they agreed with the department that a modification of the system could be tried in which new tags would not be required every year, but the tags issued in the 1999/2000 season could be used in future years. Since then the department has made provisions that lost tags could be replaced if a fisher fills out a lost gear, tag replacement form. Fishers must know the number on the lost tags and replacement tags can be purchased for \$1.00 per tag. Fishers should do their best to keep their tags protected in order to avoid lost tags. Pot shrimp fishers who purchase new shrimp pots must purchase new pot tags for those pots at \$1.00 per tag.

Southeast Alaska shrimp fishers are expected to familiarize themselves with all of the pot shrimp regulations prior to fishing.

MANAGEMENT APPROACH

Management is based upon closed seasons to prevent fishing on major stocks during the egg-hatch or growth and recruitment periods, minimum mesh size restrictions intended to only capture and retain the larger size segment of the stock, a standardization of two sizes of pots with a maximum number of pots per vessel, restricted daily deployment and hauling times (8:00 a.m. to 4:00 p.m.), and a guideline harvest range (GHR) for each fishing district. Regulations have also been adopted for permitting of shrimp floating processors and reporting requirements for shrimp catcher-processor vessels.

The major problem the department has faced in the last several years is the ability to accurately track catches from catcher-processors. The introduction of the catcher-processor vessel into the fishery is relatively new. During the early to mid-1990s catcher-processors made up less than 20% of the fishing fleet. In more recent years 50 to 60% of the fishing vessels in some districts are catcher-processors. The department, with the approval of the board, has established reporting requirements for the catcher-

processor. Those requirements can be found in **5 AAC 31.143. REPORTING REQUIREMENTS FOR SHRIMP CATCHER-PROCESSOR VESSELS IN REGISTRATION AREA A.**

A catcher processor vessel is a vessel that catches and processes their product on board [5 AAC 31.143.(d)]. Observers are not required on catcher processors. A catcher processor cannot buy or process shrimp from another fishing vessel or tender. The catcher processor owner or operator shall complete separate fish tickets every day that shrimp are caught and processed on board the vessel. The requirement that fish tickets be turned in seven days after completion will be waived for this fishery for this season. However, fish tickets must be submitted to a Fish and Game office within seven days of the closure of a District or Section with a unique GHR if a shrimp catcher-processor fished in the area.

Catcher-processors must call and report the information specified below between 8:00 a.m. and 4:30 p.m. to any Fish and Game area office once per week by 12:00 noon each Wednesday of every week they conduct fishing operations. For the 2002/2003 season, reporting requirements will start the week of October 7 in each District or Section with a unique GHR. Fishers are advised that it would be most efficient to contact the office responsible for each area: Ketchikan for Districts 1–4, Petersburg or Wrangell for Districts 5–10, Sitka for District 13, Juneau for District 11, 12, 14, and 16, and Haines for District 15.

The once a week reporting requirements allows fishers 2 ½ days at the start of each week to contact the local area office. For example, operators of catcher-processors fishing in District 10 will initially have to phone in information below sometime between Monday, October 7 and noon, Wednesday, October 9 and each subsequent week thereafter.

Fishers are advised that these reporting requirements are in effect until further notice and may change during the fishing season. Notice of any changes will be announced in subsequent news releases. Reporting requirements for districts not specifically addressed above will be in accordance with 5 AAC 31.143 (a) and (c) until further notice.

The information required will be:

- 1) callers name/permit holder name,
- 2) vessel name,
- 3) vessel ADF&G number,
- 4) fish ticket number of each fish ticket made since last call in,
- 5) date of landing on each fish ticket,
- 6) district and subdistrict on each fish ticket,
- 7) numbers of pot lifts on each fish ticket,
- 8) weight of spot shrimp and coon shrimp on each ticket – specify whole or tail weight,
- 9) cumulative pounds of whole shrimp on board by species, by subdistrict, since the last delivery, and
- 10) date of last delivery.

Once catcher-processors have stopped fishing in a District or a Section with a specific GHR they are required to call and report the above information prior to beginning to fish in a new District or a Section with a specific GHR. The department will make available to each catcher-processor reporting forms that should be used to help facilitate inseason reporting requirements.

The department will issue weekly news releases, usually on Thursday afternoons, which will update fishers on the progression of the fishery, district by district. A news release will list the GHR for districts

and the harvest to date for the individual district. In addition to the weekly summary news releases the department will issue other news releases as required to announce fishery closures or other information.

POT SHRIMP TASK FORCE

The Alaska Department of Fish and Game held the second Shrimp Task Force meeting in Ketchikan on January 15, 2002. There was very limited attendance from the industry side. Five fishers, one processor, and one industry representative attended the meeting. Due to the low attendance the department felt it would not be possible to implement any major changes for the 2002/2003 season. At this time the necessity for future Task Force meetings is still being discussed.

The main topics discussed were an overview of the 2001/2002 season, the inseason sampling program and its uses and results, the possibility of splitting larger districts into smaller sections, and Board of Fish proposals for the 2003 winter meeting.

A full copy of the completed Task Force minutes can be obtained at Fish and Game offices in Southeast Alaska.

MISCELLANEOUS ISSUES

Octopus Bycatch

Marine invertebrates, including octopus, may be taken only under the authority of a permit issued by the commissioner or the commissioner's designee [5 AAC 38.062]. Fishers are advised that this applies to octopus they wish to retain for their own use [5 AAC 02.021].

The department will issue permits under authority of 5 AAC 38.062 to allow retention of octopus captured as bycatch in commercial pot shrimp fisheries. Permits are available at area offices throughout Southeast Alaska. Permit stipulations include a maximum octopus bycatch limit of 5% whole weight of total shrimp onboard a vessel, dates for which the permits are valid, and other stipulations.

Fishers are advised that by issuing these permits the Alaska Department of Fish and Game is not committing to doing so in the future. Should the level of interest and subsequent harvests exceed levels considered potentially detrimental to the resource, the department may consider invoking the High Impact Emerging Fisheries regulation [5 AAC 39.210] and close the fishery until such time as an interim management plan can be developed and presented to the Alaska Board of Fisheries.

The department is interested in obtaining as much biological information as possible from octopus retained in the commercial pot shrimp fishery. Other than weight of individual octopus harvested in the fishery the department would like to obtain species composition, sex, and harvest distribution data. Fishers are advised that department staff may ask to sample octopus on an opportunistic basis during on-the-grounds sampling trips.

Pot Shrimp Fishing Offshore

The department has received several requests to initiate pot shrimp fisheries offshore (outside State waters, three miles or greater from shore). In various public meetings and individual telephone calls department staff agreed to consider these requests. After further investigation it has become apparent that offshore commercial pot shrimp fisheries can be accommodated under existing regulations and guideline harvest levels. Given the absence of a Federal Fishery Management Plan for commercial pot shrimp fisheries in Federal waters the State has management jurisdiction for this fishery [Magnusen Stevens Act SEC 306.104-297 (3)]. As these offshore waters are part of Registration Area A, Southeast Alaska, they are subject to limited entry. Fishers who wish to fish in these areas must have a Southeast Alaska commercial pot shrimp fishery card.

Offshore waters are included in Districts 4, 13, and 16 the boundary lines of which are described in 5 AAC 31.105 (d), (m), and (p). The offshore area includes the Exclusive Economic Zone (EEZ) of the United States. The EEZ extends to a distance of 200 nautical miles offshore of the defined fish districts (President Proclamation 5030). Fishers who wish to fish in outside waters may do so only if those districts are open. Shrimp harvested in these areas will be part of existing guideline harvest levels for those districts.

KETCHIKAN AREA FISHERIES

Introduction

The Ketchikan fishery management area encompasses Districts 1, 2, 3, and 4. The shrimp fishery is managed for spot prawns since there is a very limited harvest of coonstripe shrimp. Only District 3 is divided into smaller management areas with a separate GHR for Section 3-A and a combined GHR for Sections 3-B and 3-C. Section 3-A is the largest producer of spot prawns in the region followed by District 1. District 2 is the fourth largest district in Southeast Alaska. Shrimp harvests in District 4 are very limited.

District 1

District 1 includes all waters east and north of a line from the southernmost tip of Caamano Point to 54°40' N. latitude, 131°45' W. longitude, and north of a line from 54°40' N. latitude, 131°45' W. longitude, 54°42.48' W. longitude, 130°36.92' W. longitude. The major shrimp fishing areas include Behm Canal, George and Carroll inlets, Boca de Quadra, and Portland Canal.

Prior to the 1983/1984 season the District 1 fishery was restricted by Board of Fisheries action to a September 1 through April 30 season. This was an allocation for fishers who traditionally used District 1 as a supplemental income source during the fall and winter months. The closure during the summer provided an important biological benefit of allowing stock recruitment to occur through molting and growth process.

From the 1986/1987 season through the 1994/1995 season District 1 was open only from October 1 through February 28, which was established for a combination of egg-hatch closure, growth, and allocation for a fall/winter fishery.

Beginning in the late 1980s and early 1990s the character of the fishery underwent radical changes with much larger effort levels and harvests going from less than 50,000 pounds of whole shrimp per season to over 150,000 pounds. Also the introduction of floating processors and catcher-processors in this and other districts greatly accelerated the growth of the fishery.

A GHR was imposed on the district starting with the 1995/1996 season. The GHR was set using the baseline harvest from the 1990/1991 through the 1994/1995 seasons. The District 1 GHR was set at 145,000 pounds. That was raised to 164,000 whole pounds of shrimp when the department revised the tail weight to whole weight ratio from 1.64 to 2.0.

Since the start of the GHR the length of the District 1 season has been reduced from approximately 150 days prior to the GHR to as few as 37 days in 1996/1997. The average seasonal harvest and effort levels have been 163,000 pounds of whole shrimp and 47 boats since the 1995/1996 season.

For the 2002/2003 season the district will be managed for a GHR of 164,000 whole pounds of shrimp. The department anticipates that the pace of the fishery will be similar to the past three or four seasons when the fishery averaged approximately 65 days. The department continues to be concerned about local depletion especially in areas close to larger towns where there can be more gear than in more remote areas. During the 1999/2000 season portions of Behm Canal and George and Carroll Inlets were closed due to declining catch-per-unit-of-effort and size of the shrimp. The department will pay close attention to these areas in the future and may take management actions if concerns for these local stocks persist.

The Alaska Board of Fisheries during the 2000 meeting closed the following waters to commercial shrimp fishing in District 1 (Figure 2):

The waters east of a line from Indian Point at 55°36.85' N. latitude, 131°42.02' W. longitude, to the northeasternmost tip of Betton Island at 55°31.95' N. latitude, 131°46.37' W. longitude, to the southeastern most tip of Betton Island at 55°29.90' N. latitude, 131°48.18' W. longitude, to Survey Point at 55°28.07' N. latitude, 131°49.87' W. longitude.

District 2

District 2 includes all waters south of a line running from the easternmost tip of Narrow Point to the northernmost tip of Lemesurier Point, waters west of a line running from Caamano Point to 54°40' N. latitude, 131°45' W. longitude, and waters east of a line running from Point Marsh Light to 54°40' N. latitude, 132°17.50' W. longitude. The major shrimp fishing areas include Moira Sound, Cholmondeley Sound, and Kasaan Bay.

Prior to the 1983/1984 season the District 2 fishery was restricted by Board of Fisheries action to a September 1 through April 30 season. This was an allocation for fishers who traditionally used District 1 as a supplemental income source during the fall and winter months. The closure during the summer provided an important biological benefit of allowing stock recruitment to occur through the molting and growth process.

From the 1986/1987 season through the 1994/1995 season District 2 was open only from October 1 through February 28, which was established for a combination of egg-hatch closure, growth, and allocation for a fall/winter fishery.

Beginning in the late 1980s and early 1990s the character of the fishery underwent radical changes with much larger effort levels, and harvests going from less than 30,000 pounds of whole shrimp per season to over 80,000 pounds. Also the introduction of floating processors and catcher-processors in this and other districts greatly accelerated the growth of the fishery.

A GHR was imposed on the district starting with the 1995/1996 season. The GHR was set using the baseline harvest from the 1990/1991 through the 1994/1995 seasons. The District 2 GHR was set at 65,000 pounds. That was raised to 86,000 whole pounds of shrimp when the department revised the tail weight to whole weight ratio from 1.64 to 2.0.

Since the start of the GHR the length of the District 2 season has been reduced from approximately 150 days prior to the GHR to as few as 22 days in 1997/1998. The average seasonal harvest and effort levels have been 88,000 pounds of whole shrimp and 26 boats since the 1995/1996 season.

For the 2002/2003 season the district will be managed for a GHR of 86,000 whole pounds of shrimp. The department anticipates the pace of the fishery will be similar to the past three or four seasons when the fishery averaged 28 days. The district was opened for 28 days during the 2001/2002 season.

During the 2000 meeting the BOF closed the following waters to commercial shrimp fishing in District 2:

The waters of Twelve-mile Arm west of a line from Prince of Wales Island at 55°29.07' N. latitude, 132°37.60' W. longitude, to the northeasternmost tip of Loy Island at 55°29.07' N. latitude, 132°36.70' W. longitude, to the easternmost tip of Cat Island at 55°27.80' N. latitude, 132°39.08' W. longitude, to Prince of Wales Island at 55°27.80' N. latitude, 132°40.93' W. longitude, including the waters nearest Hollis Anchorage.

District 3

District 3 is divided into three sections. Section 3-A is managed for a separate GHR of 264,000 whole pounds, and Sections 3-B and 3-C are managed for a combined GHR of 50,000 whole pounds.

Prior to the 1983/1984 season the District 3 fishery was restricted by Board of Fisheries action to a September 1 through April 30 season. This was an allocation for fishers who traditionally used District 1 as a supplemental income source during the fall and winter months. The closure during the summer provided an important biological benefit of allowing stock recruitment to occur through the molting and growth process.

From the 1986/1987 season through the 1994/1995 season District 3 was open only from October 1 through February 28, which was established for a combination of egg-hatch closure, growth, and allocation for a fall/winter fishery.

Beginning in the late 1980s and early 1990s the character of the fishery underwent radical changes with much larger effort levels, and harvests going from approximately 40,000 pounds of whole shrimp per season to well over 200,000 pounds. Also the introduction of floating processors and catcher-processors in this and other districts greatly accelerated the growth of the fishery. Approximately 75 percent of the harvest came from the Section 3-A area (Cordova Bay).

A GHR was imposed on the district starting with the 1995/1996 season. The GHR was set using the baseline harvest from the 1990/1991 through the 1994/1995 seasons. The total District 3 GHR was set at 200,000 pounds.

During the 2000 Board of Fisheries meeting the board gave Section 3-A a separate GHR of 264,000 whole pounds and gave a combined GHR of 50,000 whole pounds for Sections 3-B and 3-C.

Section 3-A

Section 3-A includes those waters south of 55°15' N. latitude, excluding waters of Meares Passage.

Since the start of the GHR the length of the District 3 season has been reduced from approximately 150 days prior to the GHR to as few as 9 days in 1997/1998. Average seasonal harvest and effort levels have been approximately 250,000 pounds of whole shrimp and 52 boats since the 1995/1996 season.

For the 2002/2003 season Section 3-A will be managed for a GHR of 264,000 pounds of whole shrimp. Due to the rapidity of the fishery, the department will be on the grounds by October 9 to gather catch and effort levels. It is possible that an announcement of the closure of Section 3-A may be made while the State's vessel is still on the grounds. Shrimp fishers can contact the State's vessel on VHF Channel 16 or channel 10. Catcher-processors may contact the vessel with that week's reporting requirements if the vessel is still on the grounds. Department staff will also be collecting shrimp samples during this time. The Section 3-A fishery lasted 28 days during the 2001/2002 season, however, the department anticipates the pace of the fishery may be similar to the past three or four seasons when the fishery averaged approximately 16 days.

Sections 3-B and 3-C

Sections 3-B and 3-C include those waters north of 55°15' N. latitude and south of Aneskett Point located at 56°08.83' N. latitude and east of a line from Point Arboleda to the northernmost tip of Point San

Roque to the southernmost tip of Cape Ulitka to the northeasternmost tip of Cape Lynch to the southwest entrance point of Halibut Harbor located on Kosciusko Island.

Prior to the 2000/2001 season Sections 3-B and 3-C were managed in conjunction with 3-A. During the 2000 Board of Fisheries meeting a separate GHR of 50,000 whole pounds of shrimp was established for 3-B and 3-C. The GHR is for both sections. The department will manage the sections as one area and not attempt to split the GHR evenly between the two areas.

For the 2002/2003 season the two sections will be managed to harvest 50,000 whole pounds of shrimp. During the 2000/2001 season the Sections were open for 15 days, during the 2001/2002 season the Sections were open for 46 days. While it is not possible to judge the amount of time the Sections will be open, it is possible that the GHR level will be taken in a relatively short amount of time and fishers should keep in contact with department personnel in order to know when the sections will close.

District 4

District 4 includes those waters north of Cape Muzon, west of District 3, and south of a line from Helm Point on Coronation Island to Cape Lynch, including offshore waters. The offshore area of District 4 includes the waters of the EEZ.

The District 4 fishery has only had small, sporadic effort over the years. The GHL for the district is 20,000 whole pounds. Since the introduction of individual district GHLs, the District 4 GHL has been reached in only two of those years. The average annual harvest in the district since the 1995/1996 has been 13,000 whole pounds. The department will continue to manage the district for a 20,000 whole pound GHL.

PETERSBURG-WRANGELL AREA FISHERIES

Introduction

The Petersburg-Wrangell fishery management area encompasses Districts 5, 6, 7, 8, 9-B, and 10. District 9 is managed with a single GHL and encompasses waters within both the Petersburg (Section 9-B) and the Sitka (Section 9-A) management areas. With significant harvests occurring in both management areas, responsibility for managing the District 9 fishery has been shared between the Petersburg and Sitka area offices. The District 9 fishery will be managed out of the Petersburg office during the 2002/2003 season. District 7 is the third largest spot shrimp producer in the region, District 6 is the fifth and District 10 is the seventh largest producer. Districts 8 and 9 produce smaller amounts of spot shrimp and the harvest of spot shrimp in District 5 is usually limited. District 8 has small but at times significant

landings of coonstripe shrimp. District 7 is usually the largest producer of coonstripe shrimp in the region. Usually about 20–30% of the District 7 harvest is comprised of coonstripe shrimp.

District 5

District 5 includes the waters of Sumner Strait west of Point Baker. Fishing primarily takes place in the bays along the Kuiu Island shoreline. Prior to statehood and through the 1981/1982 season there were no season or quota restrictions in District 5. During the 1982/1983 season the fishery had the first egg hatch closure occurring in May and June. An egg hatch closure occurred in March and April during the 1984/1985 season. Closures occurred on March 13 during the 1995/1996 season and on December 27 in the 1996/1997 season. During the 1997/1998 season the fishery was open for 12 months with no egg hatch closure. For the 1998/1999 season the fishery was opened from October 1 through February 28 with a summer season from May 1 through August 31. Starting with the 1999/2000 season the fishery has had a winter season from October 1 through February 28 and the summer season was shortened to May 15 through July 31.

The first GHR was established in the district starting with the 1995/1996 season. Districts such as District 5 where no strong fishery had developed were assigned a GHR of 20,000 pounds.

The District 5 fishery has had consistent but usually fairly low effort since the GHR was established. The GHR has only been taken during the 1995/1996 and 1996/1997 seasons. The average harvest of spot shrimp since the GHR was established is 15,000 pounds and the effort level has varied between 5 and 13 boats. Catches are usually dominated by catcher-processors. In the 2001/2002 season, catcher-processors landed 53% of the catch and 53% of the catch was landed as whole shrimp. The average coonstripe harvest in the fishery since establishment of the GHR is approximately 300 pounds.

During the 2001/2002 season, three shrimpers harvested 1,909 pounds by the end of the winter season. District 5 was the only district in the management area that was not closed prior to March 1 by emergency order. An additional 4,097 pounds were taken by four shrimpers during the summer season.

For the 2002/2003 season the district will be managed for a GHR of 20,000 pounds of spot shrimp. It is anticipated the district will close on February 28, 2002.

District 6

District 6 includes the waters of Sumner Strait east of Point Baker west of Low Point and the waters of Clarence Strait north of Narrow Point to Lemesurier Point and southern Stikine Strait. Fishing primarily occurs in the northern waters of Clarence Strait. Prior to statehood season restrictions occasionally corresponded to the beam trawl fishery season with the fishery opening in mid-April or early May and closing between late January and late February. The first two decades following statehood there were no season or quota restrictions in District 6. During the 1982/1983 season the fishery had the first egg hatch closure, which occurred in May and June. During the 1984/1985 season the egg hatch closure occurred during March and April and it remained that way until it was expanded through May 14 starting in the 1999/2000 season. The first closure to reduce harvest occurred on June 13 during the 1994/1995 season. Since then closures have occurred prior to March 1 each season.

The first GHR was established for the 1984/1985 season when District 6 together with Districts 4, 5, and 8 had a combined GHR of 55,000 pounds. From the 1985/1986 season through the 1996/1997 season it was changed to a combined GHR of 75,000–100,000 pounds for District 6 and District 8. When these two districts received separate GHRs for the 1997/1998 season the GHR was set using the baseline harvest from the 1990/1991 season through the 1994/1995 season. The District 6 GHR was set at 65,000 pounds of shrimp. This was raised to 68,000 pounds of spot shrimp when the department revised the tail weight to whole weight ratio of 1.67 to 2.0 for the 2000/2001 season. The catch of coonstripe shrimp was no longer included in the GHR starting in the 2000/2001 season. The effect of removing that catch was to raise the GHR by about another 2,000 pounds. The average harvest of spot shrimp since the start of the 1995/1996 season is 72,000. The average harvest of coonstripe shrimp during that same time period was 2,000 pounds. Effort in the district has been between 13 and 23 boats fishing since the 1995/1996 season. The season length has varied between 31 and 137 days during that time period. Catches are dominated by catcher-processors the last three seasons. In the 2001/2002 season, catcher-processors landed 86% of the catch and 66% of the catch was landed as whole shrimp.

During the 2001/2002 season, the fishery closed on October 27. Thirteen shrimpers harvested 70,919 pounds of spot shrimp and 116 pounds of coonstripe shrimp.

District 6 will be managed for a GHR of 68,000 pounds of spot shrimp for the 2002/2003 season. It is anticipated that the fishery will close around November 1 in 2002.

District 7

District 7 includes the waters of Ernest Sound, Bradfield Canal, southern Zimovia Strait, Eastern Passage, and Blake Channel. Fishing occurs throughout the district but it is concentrated in Ernest Sound. Prior to statehood and through the 1981/1982 season there were no season or quota restrictions in District 7. During the 1982/1983 season the fishery had the first egg hatch closure, which occurred in May and June. During the 1984/1985 season the egg hatch closure occurred during March and April and it remained that way until it was expanded through May 14 for the 1999/2000 season. The first closure to reduce harvest occurred on June 30 during the 1984/1985 season. For the next 10 seasons District 7 was closed from March through September. Since then closures have occurred prior to March 1 each season.

The first GHR was established for the 1984/1985 season when District 7 together with Districts 1, 2 and 3 had a combined GHR of 125,000 pounds. The first separate GHR for District 7 of 100,000 pounds of shrimp was set starting with the 1995/1996 season using the baseline harvest from the 1990/1991 season through the 1994/1995 season. This was raised to 104,000 pounds of spot shrimp when the department revised the tail weight to whole weight ratio of 1.67 to 2.0 for the 2000/2001 season. The catch of coonstripe shrimp was no longer included in the GHR starting in the 2000/2001 season. The effect of removing that catch was to raise the GHR by between 15,000 and 25,000 pounds. The average harvest of spot shrimp since the start of the 1995/1996 season is 92,000. The average harvest of coonstripe shrimp during that same time period was 25,000 pounds. Effort in the district has varied between 21 and 45 boats fishing during that same time period. The season length has varied considerably, between 20 and 55 days. Catches during the past four seasons were dominated by catcher-processors. In the 2001/2002 season, catcher-processors landed 90% of the catch and 71% of the catch was landed as whole shrimp. During the 2001/2002 season, the initial closure occurred on November 11. The harvest during that first season was 95,773 pounds. The early closure of the fishery was primarily due to overestimating effort and catch rates. It was felt the fishery could be managed for a second season, which occurred between November 25 and December 10. Seven vessels landed 7,555 pounds during the second opening for total

season's harvest of 103,328 pounds of spot shrimp and 24,668 pounds of coonstripe shrimp. The total fishing time for the season was 55 days with a total of 27 different vessels fishing during the two openings.

District 7 will be managed for a GHR of 104,000 pounds of spot shrimp for the 2002/2003 season. It is anticipated that the fishery will close around November 10, 2001.

District 8

District 8 includes the waters of the eastern portion of Frederick Sound on the north side of the Stikine Flats and Chichagof Pass and the northern portions of Stikine and Zimovia straits on the south side of the Stikine Flats. Fishing primarily occurs in those waters within about 10 miles of Wrangell. Prior to statehood, season restrictions occasionally corresponded to the beam trawl fishery season with the fishery opening in mid-April or early May and closing between late January and late February. The first two decades following statehood there were no season or quota restrictions in District 8. During the 1982/1983 season the fishery had the first egg hatch closure, which occurred in May and June. During the 1984/1985 season the egg hatch closure occurred during March and April and it remained that way until it was expanded through May 14 for the 1999/2000 season.

The first closure to reduce harvest occurred on November 13 during the 1995/1996 season. Since then closures have occurred prior to March 1 each season. The first GHR was established for the 1984/1985 season when District 8 together with Districts 4, 5, and 6 had a combined GHR of 55,000 pounds. From the 1985/1986 season through the 1996/1997 season it was changed to a combined GHR of 75,000–100,000 pounds for District 6 and District 8. When these two districts received separate GHRs for the 1997/1998 season the GHR was set using the baseline harvest from the 1990/1991 season through the 1994/1995 season. The District GHR was set at 20,000 pounds of shrimp. This was no change in the GHR when the department revised the tail weight to whole weight ratio of 1.67 to 2.0 for the 2000/2001 season because shrimp landed from District 8 are almost all landed in the round. The catch of coonstripe shrimp was no longer included in the GHR starting in the 2000/2001 season. The effect of removing that catch was to raise the GHR by about another 2,000–3,000 pounds. The average harvest of spot shrimp since the start of the 1995/1996 season is 18,000 pounds. The average harvest of coonstripe shrimp during that same time period was 2,700 pounds. Effort in the district has varied between 9 and 20 boats fishing during that same time period. The season has lasted between 22 and 36 days since the 1995/1996 season. Day boats land the majority of the catches as whole shrimp. In the 2001/2002 season, catcher-processors landed 40% of the catch and 82% of the catch was landed as whole shrimp. The 2001/2002 season was opened for 35 days. The effort has been consistently low the last three seasons and ten shrimpers made landings during the past season. The catch included 17,464 pounds of spot shrimp and 2,111 pounds of coonstripe shrimp. It is anticipated the 2002/2003 season will close around October 25.

District 9

District 9 includes waters of Chatham Strait north of Cape Decision to Coronation Island to Cape Ommaney, south of the latitude of Point Gardner, and in waters of Frederick Sound and Rocky Pass west of Point Macartney to Elliott Island and north and west of Point Camden to Salt Point. Fishing is concentrated in a small number of bays along the southern Admiralty shoreline and eastern Baranof shoreline. The more important fishing sub districts include 109-10, 109-20, and 109-30. Since significant catch occurs in both Section 9-A and 9-B, management responsibility has shifted between the Sitka and Petersburg area offices on alternate years.

Prior to statehood and through the 1994/1995 season there were no season or quota restrictions in District 9. The GHR for District 9 was set at 15,000 pounds of shrimp in the 1995/1996 season using the baseline harvest from the 1990/1991 season through the 1994/1995 season. This was raised to 18,000 pounds of spot shrimp when the department revised the tail weight to whole weight ratio of 1.67 to 2.0 for the 2000/2001 season. The catch of coonstripe shrimp was no longer included in the GHR starting in the 2000/2001 season. The effect of removing that catch was minimal since the harvest of coonstripe shrimp has totaled less than 1,000 pounds since the GHR was initiated. The average harvest of spot shrimp since the start of the 1995/1996 season is 20,000 pounds. The average harvest of coonstripe shrimp during that same time period was less than 200 pounds. Effort in the district has varied between five and 16 boats. In recent years, more than 65% of the harvest has been landed by catcher-processors. In the 2001/2002 season, catcher-processors landed 92% of the catch and 23% of the catch was landed as whole shrimp. During the 2001/2002 season, the fishery was opened for 25 days, the lowest number on record. Five vessels landed 18,286 pounds of spot shrimp.

Department area staff will rely primarily on fish tickets and reporting by catcher-processors, and may also survey and sample the fishery from the grounds as scheduling and budgets allow. In the later case a field announcement of a closure is possible. It is anticipated that the 2001/2002 season will close around the end of October.

District 10

District 10 includes the waters of the central portion of Frederick sound and the southern portion of Stephens Passage. Fishing is concentrated along the mainland shoreline north of Cape Fanshaw and in the bays along the Admiralty shoreline. Prior to statehood, the fishing season east of Cape Fanshaw occasionally corresponded to the beam trawl fishery season with the fishery opening in mid-April or early May and closing between late January and late February. The first three and a half decades following statehood there were no season or quota restrictions in District 10. Each season since then, closures have occurred prior to March 1. The first GHR for District 10 of 30,000 pounds of shrimp was set in the 1995/1996 season using the baseline harvest from the 1990/1991 season through the 1994/1995 season. This was raised to 36,000 pounds of spot shrimp when the department revised the tail weight to whole weight ratio of 1.67 to 2.0 for the 2000/2001 season. The catch of coonstripe shrimp was no longer included in the GHR starting in the 2000/2001 season. The effect of removing that catch was minimal since the harvest of coonstripe shrimp has been less than 2,000 pounds since the GHR was initiated. The average harvest of spot shrimp since the start of the 1995/1996 season is 40,000 pounds. The average harvest of coonstripe shrimp during that same time period was 1,800 pounds. Effort in the district has varied between 14 and 49 boats fishing during that same time period. The season length has varied considerably, between 14 and 98 days. For the 2001/2002 season, catcher-processors landed 32% of the catch and 2% of the catch was landed as whole shrimp. During the 2002/2002 season, the fishery was opened for 14 days, the lowest number on record. Fourteen shrimpers caught of 38,156 pounds of spot shrimp and 286 pounds of coonstripe shrimp. It is anticipated that the 2002/2003 season will close around October 20.

SITKA AREA FISHERIES

Introduction

The Sitka fishery management area includes all waters of District 13, Section 9-A, and Statistical Areas 112-11, 112-21, and 12-22 of District 12. District 13 has been divided into two areas, each managed with separate GHLS. One area consists of all waters of Section 13-C (Hoonah Sound and Peril Strait) and the other area consists of all waters of Sections 13-A and 13-B (outer coastal area of District 13). District 13 is unique since the BOF has adopted a customary and traditional finding for shrimp. The BOF also has closed the Sitka Sound special use area to the commercial harvest of shrimp. District 9 is managed with a single GHLS and encompasses waters within both the Petersburg and the Sitka management areas. With significant harvests occurring in both management areas, responsibility for managing the District 9 fishery has been shared between the Petersburg and Sitka area offices. The District 9 fishery will be managed out of the Petersburg office during the 2002/2003 season. The District 12 fishery is managed out of the Juneau area office since relatively little effort occurs within the Sitka management area.

District 13

Section 13-C

Section 13-C consists of waters of Hoonah Sound and Peril Strait west of Point Hayes to Point Thatcher and north of Pogibshi Point.

The waters of Section 13-C contain the most productive pot shrimping grounds in the Sitka management area. This area has been the focus of the Sitka area pot shrimp fishery throughout the fishery's development. The first commercial landings of pot shrimp from Section 13-C occurred during the 1977/1978 fishing season with minimal harvest through the 1980/1981 season. For the next thirteen years, from the 1981/1982 through the 1993/1994 fishing seasons, effort and harvest steadily increased with 6 to 19 boats participating and landing between 10,000 and 40,000 pounds whole weight. During this period the Section 13-C fishery was open year round with landings occurring throughout the season.

The 1994/1995 season was pivotal in the history of the fishery. During that season a floating processor moved into Section 13-C in response to a strong Japanese market for frozen whole shrimp. This resulted in a substantial increase of harvest in Section 13-C. Concerned with rapidly increasing harvest and having little information on stock size and productivity the department closed all of District 13 by emergency order. This was the first ever pot shrimp fishery emergency order closure in Southeast Alaska. The total 1994/1995-season harvest in Section 13-C was 81,000 pounds whole weight, double any previous year's harvest. Other productive areas throughout the Southeast Region had seen similar trends prompting the department to establish GHLS for all districts in the region. For districts with a relatively consistent harvest history, the GHLS was based on the average harvest over the previous five seasons. The high harvest of the 1994/1995 season was not included in the calculation and the resultant GHLS for District 13 was 40,000 pounds whole weight. In 1996/1997 Section 13-C was allocated a GHLS of 25,000 pounds whole weight and Sections 13-A and 13-B together were allocated 15,000 pounds whole weight consistent with historical harvests from each area. The GHLS for 13-C was increased to 30,000

pounds for the 2000/2001 fishing season as a result of using a more appropriate conversion factor of tail weight to whole weight. This change did not result in any real change to the amount of shrimp available for harvest in 13-C.

Since the establishment of a GHLL the harvest and the number of vessels participating in the Section 13-C fishery has remained relatively stable. However, with increased value and management to limit harvest, the fishery has greatly intensified resulting in shorter and shorter seasons. For the past two seasons the 13-C fishery has been managed by conducting an over-flight shortly after the fishery opens to determine the effort and set distribution, followed by on-grounds monitoring and skipper interviews to determine catch rates and to collect catch samples.

During the 2001/2002 fishing season, 17 vessels harvested 25,876 pounds whole weight of shrimp and the fishery lasted only four days. Fishers can expect the 2002/2003 season to last four or five days. Department managers will make a field announcement of closure time over the VHF radio. The department attempts to give as much notice as possible before a closure but closure announcements may provide as little as 24-hour notice. Catcher-processors will be exempt from weekly reporting requirements for this fishery due to the short duration of the Section 13-C fishery.

Sections 13-A and 13-B

The pattern of fishery development in Sections 13-A and 13-B was similar to that of Section 13-C. The first reported commercial harvest of pot shrimp occurred during the 1978/1979 fishing season and harvests remained below 5,000 pounds whole weight through the 1989/1990 fishing season. From the 1990/1991 through the 2001/2002 fishing season, harvests have ranged from 9,500 pounds to 30,000 pounds, averaging 16,300 pounds whole weight. A GHLL of 15,000 pounds whole weight has been established for the Section 13-A and Section 13-B fishery since the 1996/1997 fishing season. Since the establishment of the GHLL for Section 13-A and Section 13-B, the fishery has shown a trend in season length opposite to the more productive areas in the region. During the first season the GHLL was in place the season lasted 56 days, the following season lasted 69 days, and the past four seasons have remained open until the regulatory closure of February 28 or 151 days. During each of the past four seasons around 15,000 pounds whole weight have been harvested. With demand for product currently at high levels, this trend is indicative of generally low productivity of shrimp in the outer coastal areas. Almost all of the harvest comes from the bays and inlets and the department is concerned that localized depletion may be occurring in some areas.

During the 2001/2002 season, 14,328 pounds whole weight of shrimp were landed by five vessels and the fishery remained open until February 28. For the 2002/2003 fishing season harvesters can expect a season length similar to the 2001/2002 fishing season. Fishers are advised that the department will be monitoring catch rates as an indicator of stock strength. If a pattern of reduced catch rates is evident it may be necessary to close the fishery or specific areas before the upper end of the GHR has been harvested to protect the resource from localized depletion as well as to provide for subsistence use of the resource. Catcher-processors participating in the Section 13-A and Section 13-B fishery will be required to report their catch and effort information to the department on a weekly basis beginning October 1, 2002.

The offshore areas of Sections 13-A and 13-B include the waters of the EEZ.

JUNEAU/HAINES AREA FISHERIES

Introduction

The Juneau/Haines fishery management area encompasses Districts 11, 12, 14, 15, and 16. The pot shrimp fishery is managed for spot prawns in Districts 12 and 14, where spot prawns typically comprise over 95% of the shrimp harvest. Districts 15 and 16 are managed for coonstripe shrimp, which typically comprise 75–100% of the harvests in those districts. District 11 is managed for a combined spot and coonstripe GHR since the two species have contributed similar amounts to historical harvests in the district.

District 11

District 11 includes those waters of Stephens Passage north of a line from Point League to Point Hugh, waters of Seymour Canal north of 57°37' N. latitude and waters that are south of the latitude of Little Island Light and east of a line running from Little Island Light to Point Retreat Light. Major shrimp fishing areas in the district include Seymour Canal, Endicott Arm, and Port Snettisham.

Prior to the 1995/1996 season the district was open year-around to commercial pot shrimp fishing. Between the 1990/1991 and 1994/1995 seasons harvests averaged 2,000 pounds of shrimp. A 20,000 pound GHL was established for the district starting with the 1995/1996 fishing season. Effort levels and harvests increased substantially beginning that season. The 1995/1996 season was closed by emergency order in June 1996, and the 1996/1997 season was closed in May 1997, when the GHL was reached. The shortest fishing season in District 11 was last year, when the fishery closed by emergency order on January 24, 2002. It is expected that the season length will continue to shorten in future fisheries. The Southeast Alaska Pot Shrimp Management Plan passed by the Board of Fisheries in January 2000 specifies a GHR of 0–20,000 pounds of combined coonstripe and spot shrimp for District 11. The department intends to manage the district for the upper end of the GHR in the 2002/2003 season. Weekly catch reporting requirements for catcher-processors will be in place for the entire season.

District 12

District 12 includes those waters of Lynn Canal and Chatham Strait south of the latitude of Little Island Light, north of the latitude of Point Gardner, west of a line running from Little Island Light to Point Retreat, east of a line running from Point Couverden to Point Augusta, and east of a line running from Point Hayes to Point Thatcher. The district crosses management areas, with those waters along the western shoreline of Chatham Strait south of Point Hayes being located in the Sitka management area. The district is managed by the Juneau area office, with assistance from the Sitka office as needed, because most of the harvest occurs in the Juneau portions of the district.

Prior to the 1995/1996 season, the district was open year-around to pot shrimping. A 20,000 pound GHL was established for the district starting with the 1995/1996 fishing season. Annual catches during the 1990/1991 to 1993/1994 seasons averaged 22,400 pounds, 93% of which was spot shrimp. The harvest

increased tremendously to 58,900 pounds during the 1994/1995 season when a floating processor operated in the district. The season has steadily shortened since then, from 127 days for the 1995/1996 season to 9 days and 7 days for the 1999/2000 and 2000/2001 seasons, respectively.

Beginning with the 2001/2002 season, the District 12 fishery has been managed for two separate fisheries, Tenakee Inlet proper as one fishery, and the remainder of the district as a second distinct fishery. This was done because in prior years effort had concentrated in Tenakee Inlet causing the pace of the fishery to become much more intense. As a result, nearly 100% of the harvest in District 12 came from Tenakee Inlet, yet the department had data showing shrimp were available in other portions of the district that were not being fished. During the 2001/2002 season, Tenakee Inlet closed by emergency order on October 6, 2001, and the remainder of District 12 closed by emergency order on December 29, 2001.

For the 2002/2003 season, the department will manage the District 12 fisheries for the upper end of the GHRs; a GHR for Tenakee Inlet of 0–20,000 pounds of spot shrimp and a GHR for the remaining waters of District 12 of 0–15,000 pounds of spot shrimp. Along with this increased opportunity in District 12, more strict reporting requirements can be expected to ensure harvests remain within the GHRs.

Due to the rapidity of the Tenakee Inlet fishery, the department will have a vessel on the grounds beginning October 4 to gather catch and effort data. The closure of a portion or all of District 12 is expected to be made while the State's vessel is still on the grounds. Shrimp fishers can contact the State's vessel on VHF Channel 16 or Channel 10. The new reporting requirements for catcher-processors will be in place in District 12 in the upcoming season. Catcher-processors may contact the vessel with that week's reporting requirements if the vessel is still on the grounds. The department anticipates the pace of the fishery in Tenakee Inlet will be similar to the last three seasons when the fishery lasted between 6 and 9 days.

District 14

District 14 includes those waters of Icy Strait west of a line from the southernmost tip of Point Couverden to Point Augusta Light, east of a line running from the southernmost tip of Cape Spencer through Yakobi Rock, and ending at Yakobi Island, and waters that are north of a line running from the northernmost point of Soapstone Point to the westernmost point of Column Point. Federal regulations prohibit all shrimp fishing in those waters of Glacier Bay proper (north of a line from Point Carolus to Point Gustavus).

The District 14 fishery has had only small, sporadic effort over the years. Spot shrimp harvests in the district between the 1995/1996 and 2000/2001 seasons averaged 10,000 pounds. For the 2001/2002 season, District 14 closed by emergency order on June 27, 2002; it was the first time that the 20,000 pound GHR was reached. The department will manage the district for the upper end of a 0 - 20,000 pound GHR in the 2002/2003 season.

District 15

District 15 includes those waters of Lynn Canal north of the latitude of Little Island Light. District 15 is managed out of the Haines area office. The vast majority of the pot shrimp harvest in Lynn Canal is

composed of coonstripe shrimp. Major shrimping areas include Lutak Inlet, Chilkoot Inlet, Taiya Inlet, and Chilkat Inlet.

Prior to the 1996/1997 season the district was open year-around to commercial pot shrimp fishing. The average harvest between the 1990/1991–1994/1995 seasons was 3,200 pounds, 75% of which was coonstripe shrimp. A 20,000 pound GHL was established for the district starting with the 1995/1996 fishing season. Effort and harvests have increased rapidly since then, averaging over 20,000 pounds, 99% of which was coonstripe shrimp. The fishery has closed early by emergency order each of the last five seasons. The 2000/2001 season was the shortest season to date, closing on December 12, 2000. The 2001/2002 season closed by emergency order on May 28, 2002.

The Southeast Alaska Pot Shrimp Management Plan specifies a 0–20,000 pound GHR for coonstripe shrimp in Lynn Canal. The department will manage the district for the upper end of the GHR for the 2002/2003 season. Season length will likely depend on market conditions for coonstripe shrimp. Weekly catch reporting requirements for catcher-processors will be in place for the entire season.

District 16

District 16 includes those waters that are north of a line running west from the southernmost tip of Cape Spencer and south of a line running southwest from the westernmost tip of Cape Fairweather. The offshore area of District 16 includes the waters of the EEZ. The major shrimp fishing area in District 16 is Lituya Bay and coonstripe shrimp typically dominate the harvest.

Shrimp harvests in District 16 averaged 2,900 pounds between the 1990/1991–1994/1995 seasons, of which an average 56% was spot shrimp. Seasons were year-around during these years. A 20,000 pound GHL was established for the district starting with the 1995/1996 fishing season. Shrimp harvests in the district have substantially increased since then and season length has declined rapidly, closing between late November and mid-December each of the last five years. The 2001/2002 season for District 16 was closed by emergency order on December 5, 2001. Catches have averaged 17,800 pounds of shrimp between the 1995/1996 and 2000/2001 seasons. Coonstripe shrimp comprised approximately 75% of the harvest in those years. The 2002/2003 fishery in District 16 will be managed consistent with the 0–20,000 GHR for coonstripe shrimp specified in the Southeast Alaska Pot Shrimp Management Plan. Catcher-processor reporting requirements will be in place for the entire season for District 16.

POT SHRIMP RESEARCH

The pot shrimp fishery for spot shrimp *Pandalus platyceros*, and coonstripe shrimp *Pandalus hypsinotus* in Southeast Alaska has seen a 10-fold increase in participating vessels since 1960; this has heightened concern for conservation and led to increasing restrictions, including limited entry in 1996. The concern was that the upward trend in harvests and effort would jeopardize the long-term viability of the fishery. Clearly, more information on the status of the shrimp populations was needed in order to establish sustainable harvest levels. To this end, the department initiated a pot shrimp stock assessment

research program in 1996. The objectives of the survey are to obtain information on the abundance, size composition, sex ratios, size at first spawning, and female fecundity of spot and coonstripe shrimp.

The first survey, with the objective of testing methods and protocols, was conducted in 1996 in Ernest Sound (District 7). A variety of setting styles, pot types, and mesh sizes were tested. These included singly set pyramid pots with a 4 by 4 foot base, and two types of longlined cone pots; one 42 inches in diameter with 1 1/8-inch mesh and four tunnels, the other 42 inches in diameter with 1 3/4-inch mesh and three tunnels. The large, singly set pyramid pots were time-consuming to set and retrieve and did not fish well. The result was that fewer pots could be fished. The longlined cone pots proved easier to set and retrieve. Mesh size comparisons indicated that conical pots with 1 3/4-inch mesh also provided the greatest power to detect differences in the density of commercially recruited shrimp. In order to facilitate comparison with commercial gear, a spacing of 10 fathoms between longlined pots was established. Based on comparisons of catch rates, this pot spacing seemed to be adequate to minimize effects of adjacent pots attracting shrimp from one another, thus providing discrete samples of shrimp within the fished habitat for any given pot within a string.

The pre-season survey program was subsequently expanded, first to the Cordova Bay area (Section 3-A) in 1997, followed by Hoonah Sound (Section 13-C) beginning in 1999 and Tenakee Inlet (District 12) in 2000. Survey effort distribution is described in Table 4.

In order to minimize variability in catch rates and provide more accuracy when conducting analyses, index set locations and standardized methods were established; these began in 1998 for District 3-A, in 1999 for Districts 7 and 13, and in 2000 for District 12.

Post-season surveys were initiated following the 1998 fishery for District 3, and in 2001 for District 7. The primary objective of the post-season surveys is to obtain a harvest rate estimate by comparing the ratio of pre to post-season size-specific abundance. While removals by the fishery are quite evident between pre and post-season surveys (Figures 3 and 4), this method has proved to be somewhat complicated by shrimp and pot behavior. Specifically, it appears that size-specific gear selectivity curves for shrimp may be a function of the size composition of shrimp available. In other words, smaller shrimp may saturate a pot, reducing the catch of large shrimp when they are abundant. Thus, before pre and post-season survey information can be used to obtain an accurate harvest rate estimate for shrimp, soak time experiments must be conducted and their results analyzed. This work was begun during the 2001 post-season survey of District 3 and will be continued during 2002 surveys of District 3.

Pre-season surveys of Districts 3, 7, 12, and 13, and post-season surveys of Districts 3 and 7 are planned for the fall of 2002.

A summary of the catch rate data conducted to date for pre and post-season surveys of Districts 3, 7, 12, and 13 is presented in Tables 5 – 10. No obvious trends emerge at the present level of analysis. The department is in the process of conducting further analyses of catch by size class as the data suggests a reduction in the size composition of shrimp captured in Section 3-C. Following the 2002 soak time experiments, work on the harvest rate estimate will be refined as well.

FISHERY CONTACTS

The following people are Commercial Fisheries contacts for this management plan:

Andy McGregor
Region 1 Supervisor
P.O. Box 240020
Douglas, AK 99824
(907) 465-4250

Scott Kelley
Region 1 Management Coordinator
P.O. Box 240020
Douglas, AK 99824
(907) 465-4250

Craig Farrington, Area Management Biologist or
Scott Sloane, Assistant Area Management Biologist
P.O. Box 240020
Douglas, AK 99824
(907) 465-4206

Phil Doherty, Don House,
or Scott Walker
Area Management Biologists
2030 Sea Level Drive, Suite 205
Ketchikan, AK 99901
(907) 225-5195

Bill Davidson or Dave Gordon
Area Management Biologists
304 Lake Street, Room 103
Sitka, AK 99835
(907) 747-6688

William Bergmann or Troy Thynes
Area Management Biologists
P.O. Box 667
Petersburg, AK 99833
(907) 772-3801

Randy Bachman
Area Management Biologist
P.O. Box 330
Haines, AK 99827
(907) 766-2830

Vacant
Assistant Area Management Biologist
P.O. Box 200
Wrangell, AK 99929
(907) 874-3822

Table 1. Total historical harvest (whole weight) of shrimp in the Southeast Alaska commercial pot shrimp fishery by District/Section.

| Season | 101 | 102 | 3-A ^a | 3-B/C | 104 | 105 | 106 | 107 | 108 | 109 |
|-------------------|---------|---------|------------------|--------|--------|--------|---------|---------|--------|--------|
| Oct 1971 – Sep 72 | 2,806 | | | | | | | 212 | | |
| Oct 1974 – Sep 75 | 1,280 | 2,600 | | | | | | | | |
| Oct 1975 – Sep 76 | 6,877 | 11,513 | 490 | | | | | | | |
| Oct 1976 – Sep 77 | 1,940 | 9,582 | 926 | | | | | 3,268 | | |
| Oct 1977 – Sep 78 | 5,596 | 14,141 | | | | 732 | | 3,815 | | |
| Oct 1978 – Sep 79 | 4,163 | 6,703 | 4,165 | | 1,280 | | | 3,612 | | |
| Oct 1979 – Sep 80 | 15,414 | 12,794 | 6,289 | | | | | 18,281 | 497 | |
| Oct 1980 – Sep 81 | 15,210 | 14,776 | 24,987 | | 422 | | 520 | 16,637 | 358 | 4,825 |
| Oct 1981 – Sep 82 | 26,328 | 17,531 | 56,018 | | | | 9,394 | 15,637 | 2,010 | 4,909 |
| Oct 1982 – Sep 83 | 31,008 | 36,510 | 84,806 | | 772 | | 7,769 | 73,878 | 2,676 | 9,612 |
| Oct 1983 – Sep 84 | 41,082 | 22,466 | 36,551 | | 480 | 1,050 | 7,728 | 87,221 | 16,451 | 1,659 |
| Oct 1984 – Sep 85 | 69,120 | 50,566 | 18,541 | | 84 | 244 | 6,165 | 85,211 | 8,716 | 2,351 |
| Oct 1985 – Sep 86 | 35,388 | 37,541 | 71,148 | | 878 | 104 | 6,041 | 23,118 | 2,753 | 1,677 |
| Oct 1986 – Sep 87 | 60,909 | 137,296 | 48,780 | | | 1,132 | 2,178 | 40,615 | 2,021 | 5,152 |
| Oct 1987 – Sep 88 | 118,595 | 79,955 | 27,462 | | 100 | 1,686 | 577 | 50,198 | 2,835 | 18,768 |
| Oct 1988 – Sep 89 | 200,832 | 62,775 | 19,779 | | 734 | 3,876 | 7,998 | 61,549 | 852 | 6,616 |
| Oct 1989 – Sep 90 | 155,279 | 68,625 | 27,046 | | 2,696 | | 8,384 | 44,196 | 18,698 | 324 |
| Oct 1990 – Sep 91 | 181,337 | 78,932 | 61,836 | | 11,364 | | 10,244 | 97,587 | 13,568 | 5,234 |
| Oct 1991 – Sep 92 | 168,724 | 83,577 | 274,441 | | 438 | 706 | 21,157 | 123,424 | 15,289 | 2,892 |
| Oct 1992 – Sep 93 | 160,098 | 70,100 | 221,729 | | 4,674 | 846 | 24,354 | 64,126 | 20,044 | 9,593 |
| Oct 1993 – Sep 94 | 147,955 | 120,614 | 288,632 | | 5,398 | 1,884 | 41,208 | 120,525 | 25,343 | 26,975 |
| Oct 1994 – Sep 95 | 159,975 | 76,973 | 232,232 | | 1,002 | 21,628 | 130,248 | 199,556 | 30,442 | 12,082 |
| Oct 1995 – Sep 96 | 178,048 | 89,350 | 245,140 | | 23,283 | 34,892 | 75,993 | 119,264 | 9,184 | 25,929 |
| Oct 1996 – Sep 97 | 171,868 | 82,503 | 280,964 | | 20,813 | 24,240 | 79,023 | 128,246 | 29,759 | 19,510 |
| Oct 1997 – Sep 98 | 142,684 | 83,008 | 228,010 | | 10,217 | 5,931 | 72,566 | 127,200 | 20,009 | 20,269 |
| Oct 1998 – Sep 99 | 163,190 | 76,524 | 213,931 | | 6,071 | 5,496 | 66,924 | 99,845 | 19,898 | 18,056 |
| Oct 1999 – Sep 00 | 152,728 | 76,091 | 236,952 | | 16,349 | 10,161 | 70,074 | 100,541 | 23,503 | 18,284 |
| Oct 2000 – Sep 01 | 161,277 | 121,963 | 266,837 | 36,508 | 19,007 | 14,331 | 79,442 | 115,864 | 23,536 | 20,831 |
| Oct 2001 – Sep 02 | 169,312 | 103,774 | 255,370 | 62,951 | 10,337 | 7,857 | 71,035 | 127,397 | 19,575 | 18,482 |

-continued-

Table 1. (page 2 of 2)

| Season | 10 | 11 | Tenakee ^b | Rest of 12 | 14 | 15 | 16 | 13-A/B | 13-C | Total |
|-------------------|--------|--------|----------------------|------------|--------|--------|--------|--------|--------|-----------|
| Oct 1971 – Sep 72 | | | | | | | | | | 3,018 |
| Oct 1974 – Sep 75 | | | | | | | | | | 3,880 |
| Oct 1975 – Sep 76 | | | | | | | | | | 18,880 |
| Oct 1976 – Sep 77 | | | | | | | | | | 15,716 |
| Oct 1977 – Sep 78 | | | | | | | | | 347 | 24,631 |
| Oct 1978 – Sep 79 | | | | 1,282 | | | | 50 | 63 | 21,318 |
| Oct 1979 – Sep 80 | | | | | 270 | | | 8 | 645 | 54,198 |
| Oct 1980 – Sep 81 | 2,148 | | | 380 | | | | 98 | 414 | 80,775 |
| Oct 1981 – Sep 82 | 12 | 1,004 | | 2,759 | 1,796 | | 4,686 | 1,388 | 13,242 | 156,714 |
| Oct 1982 – Sep 83 | 3,880 | | | 440 | 108 | | 2,300 | 4,817 | 10,104 | 268,680 |
| Oct 1983 – Sep 84 | 14,188 | 66 | | 3,270 | | | 3,960 | 674 | 20,396 | 257,242 |
| Oct 1984 – Sep 85 | 33,519 | 1,129 | | 1,920 | 510 | | 3,640 | 120 | 16,970 | 298,806 |
| Oct 1985 – Sep 86 | 13,400 | 313 | | 371 | 97 | 683 | 3,336 | | 11,053 | 207,901 |
| Oct 1986 – Sep 87 | 33,058 | 2,307 | | 3,908 | 159 | 1,212 | 4,300 | | 11,031 | 354,058 |
| Oct 1987 – Sep 88 | 29,021 | 2,342 | | 13,850 | 2,048 | 34 | 98 | | 21,518 | 369,087 |
| Oct 1988 – Sep 89 | 36,461 | 618 | | 10,748 | 12 | | 918 | 3,894 | 22,953 | 440,615 |
| Oct 1989 – Sep 90 | 47,904 | 4,528 | | 6,574 | | | 1,052 | 3,431 | 27,091 | 415,828 |
| Oct 1990 – Sep 91 | 42,768 | 1,546 | | 16,830 | | 664 | 837 | 11,118 | 28,731 | 562,596 |
| Oct 1991 – Sep 92 | 49,642 | 1,901 | | 12,326 | | 3,262 | 4,456 | 24,682 | 36,481 | 823,398 |
| Oct 1992 – Sep 93 | 30,685 | 1,258 | | 26,799 | | 1,212 | 362 | 9,546 | 30,901 | 676,327 |
| Oct 1993 – Sep 94 | 36,083 | 2,120 | | 33,505 | 378 | 1,752 | 3,180 | 22,639 | 39,880 | 918,071 |
| Oct 1994 – Sep 95 | 88,119 | 3,100 | | 58,910 | 2,264 | 8,924 | 5,877 | 30,088 | 80,724 | 1,142,144 |
| Oct 1995 – Sep 96 | 48,842 | 23,371 | | 28,227 | 17,710 | 10,102 | 7,676 | 11,037 | 38,195 | 986,243 |
| Oct 1996 – Sep 97 | 53,019 | 20,499 | | 28,617 | 4,311 | 22,156 | 19,925 | 16,120 | 33,771 | 1,035,344 |
| Oct 1997 – Sep 98 | 39,484 | 18,337 | | 25,265 | 12,246 | 20,669 | 20,814 | 12,402 | 27,420 | 886,531 |
| Oct 1998 – Sep 99 | 31,789 | 8,475 | | 30,089 | 6,570 | 22,704 | 17,584 | 15,038 | 51,772 | 853,956 |
| Oct 1999 – Sep 00 | 37,921 | 7,896 | | 23,778 | 240 | 22,493 | 19,033 | 14,839 | 30,597 | 861,480 |
| Oct 2000 – Sep 01 | 46,244 | 14,510 | | 25,627 | 14,934 | 24,168 | 21,832 | 13,928 | 33,001 | 1,053,840 |
| Oct 2001 – Sep 02 | 38,442 | 23,351 | 19,771 | 14,175 | 21,858 | 18,942 | 19,954 | 14,328 | 25,876 | 1,042,557 |

^a District 3 was split into Section 3-A and Sections 3-B and C beginning in the 2000–2001 season. Harvests prior to that time are for District 3 as a whole.

^b District 12 was split into Tenakee and the remainder of the District for the 2000–2001 season. Harvest prior to that time are for District 12 as a whole.

Table 2. Historical closure dates and days fished by District/Section for the Southeast Alaska commercial pot shrimp fishery, 1995/1996 through 2000/2001.

| District /Section | GHL in Pounds ^a | 2001/02 Season Closure Date | Days Fished | 2000/01 Season Closure Date ^b | Days Fished | 1999/00 Season Closure Date ^c | Days Fished | 1998/99 Season Closure Date ^d | Days Fished |
|-------------------|----------------------------|----------------------------------|-------------|--|-------------|--|-------------|--|-------------|
| 1 | 164,000 | 19 Nov 01 | 50 | 10-Nov-00 | 41 | 7-Feb-00 | 130 | 5-Jan-99 | 97 |
| 2 | 86,000 | 28 Oct 01 | 28 | 29-Oct-00 | 29 | 3-Nov-99 | 34 | 5-Jan-99 | 97 |
| 3-A | 264,000 | 28 Oct 01 | 28 | 10-Oct; 4-Nov-00 | 14 | 12-Oct-99 | 12 | Oct 9, Oct 26-30 | 14 |
| 3-B, C | 20,000 | 15 Nov 01 | 46 | 15-Oct-00 | 15 | - | - | - | - |
| 4 | 20,000 | 31 Jul 02 | 197 | 16-Jul-01 | 213 | 31-Jul-00 | 230 | 31-Aug-99 | 335 |
| 5 | 20,000 | 31 Jul 02 | 229 | 31-Jul-01 | 229 | 31-Jul-00 | 230 | 31-Aug-99 | 335 |
| 6 | 68,000 | 27 Oct 01 | 27 | 11-Nov; 17-Dec | 51 | 14-Feb-00 | 137 | 14-Feb-99 | 137 |
| 7 | 104,000 | 8 Nov 01, 10 Dec 01 ^e | 71 | 3-Nov-00 | 34 | 24-Nov-99 | 55 | 31-Dec-98 | 92 |
| 8 | 20,000 | 4 Nov 01 | 35 | 23-Oct-00 | 23 | 22-Oct-99 | 22 | 19-Oct; 2-Nov; 13-Nov ^f | 29 |
| 9 | 18,000 | 25 Oct 01 | 25 | 1-Nov-00 | 32 | 26-Nov-99 | 57 | 2-Dec-98 | 63 |
| 10 | 35,000 | 14 Oct 01 | 14 | 26-Oct-00 | 26 | 30-Oct-99 | 30 | 20-Nov-98 | 51 |
| 11 | 20,000 | 24 Jan 02 | 116 | 10-Feb-01 | 133 | 31-Jul-00 | 230 | 31-Aug-99 | 335 |
| Tenakee | 20,000 | 6 Oct 01 | 6 | 7-Oct-00 | 7 | 9-Oct-99 | 9 | 15-Oct-98 | 15 |
| Rest of 12 | 15,000 | 29 Dec 01 | 90 | - | - | - | - | - | - |
| 13-C | 30,000 | 4 Oct 01 | 4 | 5-Oct-00 | 5 | 5-Oct-99 | 5 | 7-Oct-98 | 7 |
| Remainder D13 | 15,000 | 28 Feb 02 | 151 | 28-Feb-01 | 151 | 29-Feb-00 | 152 | 28-Feb-99 | 151 |
| 14 | 20,000 | 27 Jun 02 | 194 | 31-Jul-01 | 229 | 31-Jul-00 | 230 | 31-Aug-99 | 335 |
| 15 | 20,000 | 28 May 02 | 163 | 12-Dec-01 | 73 | 10-Jun-00 | 178 | 21-May-99 | 264 |
| 16 | 20,000 | 5 Dec 01 | 66 | 20-Nov-01 | 51 | 15-Dec-99 | 76 | 1-Dec-98 | 62 |

-continued-

Table 2. (page 2 of 2)

| District /Section | GHL in Pounds ^a | 1997/98 Season ^g Closure Date | Days Fished | 1996/97 Season Closure Date | Days Fished | 1995/96 Season Closure Date | Days Fished |
|-------------------|----------------------------|---|----------------|--------------------------------|----------------|--------------------------------|-----------------|
| 1 | 164,000 | 7-Nov-97 | 38 | 6-Nov-96 | 37 | 2-Jan-96 | 94 |
| 2 | 86,000 | 22-Oct-97 | 22 | 30-Oct-96 | 30 | 10-Jan-96 | 102 |
| 3-A | 264,000 | 9-Oct-97 | 9 | 14-Oct-96 | 14 | 13-Nov-95 | 44 |
| 3-B, C | 20,000 | - | - | - | - | - | - |
| 4 | 20,000 | 31-Aug-98 | 335 | 29-Aug-97 | 333 | 8-May-96 | 220 |
| 5 | 20,000 | 31-Aug-98 | 335 | 27-Dec-96 | 88 | 13-Mar-96 | 164 |
| 6 | 68,000 | 3-Nov-97 | 34 | 1-Nov-96 | 32 | 5-Nov-95 | 36 |
| 7 | 104,000 | 24-Oct-97 | 24 | 20-Oct-96 | 20 | 5-Nov-95 | 36 |
| 8 | 20,000 | 23-Oct; 26-Oct 29-97 ^h | 27 | 1-Nov-96 | 32 | 5-Nov-95 | 36 |
| 9 | 18,000 | 9-Dec-97 | 70 | 27-Dec-96 | 88 | 11-Mar-96 | 162 |
| 10 | 36,000 | 3-Nov-97 | 34 | 29-Nov-96 | 60 | 6-Jan-96 | 98 |
| 11 | 20,000 | 31-Aug-98 | 335 | 18-May-97 | 230 | 23-Jun-96 | 266 |
| 12 | 20,000 | 31-Oct-97 | 31 | 18-Nov-96 | 49 | 4-Feb-96 | 127 |
| 13-C | 30,000 | 10-Oct-97 | 10 | 18-Oct-96 | 18 | 16-Jan-96 | 16 ⁱ |
| Remainder D13 | 15,000 | 8-Dec-97 | 69 | 25-Nov-96 | 56 | 16-Jan-96 | 16 ⁱ |
| 14 | 20,000 | 31-Aug-98 | 335 | 30-Sep-97 | 365 | 30-Sep-96 | 365 |
| 15 | 20,000 | 26-Jun-98 | 269 | 30-Sep-97 | 365 | 30-Sep-96 | 365 |
| 16 | 20,000 | 8-Dec-97 | 69 | 26-Feb-97 | 149 | 30-Sep-96 | 365 |

^a GHLs shown for 2000/2001 season which for many areas increased due to 2.0 conversion tail to whole weight.

^b During the 2000/2001 season District 6 was open from October 1 to November 14 and December 9 to 17. Section 3-A was open from October 1 to 10 and from November 1 to 4.

^c During the 1999/2000 season Districts 4, 5, 11, 14, and 15 were closed from March 1 through May 14.

^d During the 1997/1998 season District 8 was open October 1 to 20 and October 26 to 29.

^e During the 2001/2002 season, District 7 was open October 1 to November 8 and November 25 to December 10.

^f During the 1998/1999 season District 8 closed October 19, reopened October 30 through November 2, and then reopened from November 8 through 13.

^g During the 1997/1998 shrimp pot fishery, gear operation was restricted to daylight hours only, 8 a.m. to 4 p.m. Several districts were closed August 31, 1998 for re-registration and issuing of pot tags.

^h During the 1998/1999 season Districts 4, 5, 11, 14, and 15 were closed from March 1 through April 30.

ⁱ During the 1995/1996 season, District 13 did not open October 1, 1995, but opened January 1, 1996.

Table 3. Guideline harvest levels for the 2002/2003 Southeast Alaska commercial pot shrimp fishery by District or Section.

| District/Section | Guideline Harvest Level (whole pounds) |
|-------------------------------|---|
| 1 | 164,000 |
| 2 | 86,000 |
| 3-A | 264,000 |
| 3-B/C | 50,000 |
| 4 | 20,000 |
| 5 | 20,000 |
| 6 | 68,000 |
| 7 | 104,000 |
| 8 | 20,000 |
| 9 | 18,000 |
| 10 | 36,000 |
| 11 | 20,000 |
| 12 (Tenakee Inlet) | 20,000 |
| 12 (other than Tenakee Inlet) | 15,000 |
| 13-A/B | 15,000 |
| 13-C | 30,000 |
| 14 | 20,000 |
| 15 | 20,000 |
| 16 | 20,000 |
| Total | 1,010,000 pounds |

Table 4. Number of sets fished and number of pots sampled by statistical area, year of survey and survey type.

| <i>Preseason Surveys</i> | | | | | | | | | | | | |
|---------------------------|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| District & Sub district | 1996 | | 1997 | | 1998 | | 1999 | | 2000 | | 2001 | |
| | # sets fished | #pots sampled | # sets fished | #pots sampled | # sets fished | #pots sampled | # sets fished | #pots sampled | # sets fished | #pots sampled | # sets fished | #pots sampled |
| 103-21 | | | 11 | 65 | | | | | | | | |
| 103-23 | | | 10 | 57 | 12 | 72 | 11 | 62 | 12 | 72 | 12 | 72 |
| 103-25 | | | 11 | 65 | 12 | 71 | 12 | 71 | 12 | 77 | 12 | 71 |
| 103-30 | | | 8 | 47 | | | | | | | | |
| 103-40 | | | 12 | 61 | | | | | | | | |
| 107-10 | 5 | 50 | | | | | | | | | | |
| 107-20 | 9 | 91 | | | | | 18 | 93 | 18 | 108 | 12 | 119 |
| 107-30 | | | | | | | | | 3 | 27 | 3 | 30 |
| 107-40 | 3 | 22 | | | | | 3 | 19 | 3 | 27 | 6 | 59 |
| 112-41 | | | | | | | | | 4 | 22 | | |
| 112-42 | | | | | | | | | 2 | 12 | | |
| 112-45 | | | | | | | | | 12 | 72 | | |
| 112-48 | | | | | | | | | 8 | 48 | | |
| 113-55 | | | | | | | 6 | 47 | 8 | 37 | 7 | 68 |
| 113-57 | | | | | | | 6 | 38 | 10 | 33 | 7 | 34 |
| 113-58 | | | | | | | 12 | 73 | 12 | 45 | 10 | 96 |
| <i>Postseason Surveys</i> | | | | | | | | | | | | |
| District & Sub district | 1996 | | 1997 | | 1998 ¹⁾ | | 1999 | | 2000 | | 2001 | |
| | # sets fished | #pots sampled | # sets fished | #pots sampled | # sets fished | #pots sampled | # sets fished | #pots sampled | # sets fished | #pots sampled | # sets fished | #pots sampled |
| 103-23 | | | | | 12 | 68 | | | 12 | 72 | | |
| 103-25 | | | | | 12 | 72 | | | 12 | 70 | 12 | 96 |
| 107-20 | | | | | | | | | | | 12 | 120 |
| 107-30 | | | | | | | | | | | 3 | 30 |
| 107-40 | | | | | | | | | | | 6 | 59 |

¹⁾ 1998 postseason survey conducted in February of 1999

Table 5. Preseason pot shrimp surveys District 3, 1997–2001. Mean soak times, variability of mean soak times for pots fished, mean catches by weight and number for spot shrimp, mean catch per hour by weight and number, total pots sampled, and district totals for two mesh sizes fished.

| Small Mesh (1.125 inch stretch), Spot shrimp | | | | | | | | | |
|--|--------------------------|-------------------------|----------------|--------------------------|-----------------|---------------------------|------------|-------------|---------------------------------|
| District & Subdistrict | Mean Soaktime (dec. hrs) | St Err of Mean Soaktime | Mean Catch(Kg) | St Err of Mean Catch(Kg) | Mean No. caught | St Err of Mean No. caught | Mean Kg/hr | Mean No./hr | Total No. pots sampled (n size) |
| 2001 | | | | | | | | | |
| 103-23 | 19.2382 | 1.7117 | 4.317 | 3.469 | 120 | 171 | 0.224 | 6.2 | 36 |
| 103-25 | 22.6021 | 5.1200 | 6.693 | 3.637 | 165 | 180 | 0.296 | 7.3 | 36 |
| <i>Entire District:</i> | | | 5.505 | | 143 | | 0.260 | 6.8 | 72 |
| 2000 | | | | | | | | | |
| 103-23 | 19.8604 | 2.0830 | 3.595 | 2.213 | 153 | 105 | 0.181 | 7.7 | 36 |
| 103-25 | 23.2863 | 4.3688 | 7.420 | 3.868 | 284 | 179 | 0.319 | 12.2 | 38 |
| <i>Entire District:</i> | | | 5.507 | | 219 | | 0.250 | 10.0 | 74 |
| 1999 | | | | | | | | | |
| 103-23 | 18.8039 | 6.01790323 | 2.827 | 2.428 | 249 | 133 | 0.150 | 13.3 | 32 |
| 103-25 | 25.0904 | 7.1325 | 4.480 | 3.903 | 231 | 147 | 0.179 | 9.2 | 35 |
| <i>Entire District:</i> | | | 3.653 | | 240 | | 0.164 | 11.2 | 67 |
| 1998 | | | | | | | | | |
| 103-23 | 21.1869 | 4.1234 | 4.456 | 2.065 | 191 | 93 | 0.210 | 9.0 | 36 |
| 103-25 | 21.2009 | 1.2287 | 4.884 | 3.073 | 202 | 129 | 0.230 | 9.5 | 36 |
| <i>Entire District:</i> | | | 4.670 | | 196 | | 0.220 | 9.3 | 72 |
| 1997 | | | | | | | | | |
| 103-21 | 22.6230 | 1.2711 | 3.110 | 1.594 | 132 | 71 | 0.144 | 5.8 | 23 |
| 103-23 | 21.4339 | 0.8940 | 3.133 | 1.817 | 135 | 89 | 0.127 | 6.3 | 19 |
| 103-25 | 20.7045 | 2.3615 | 3.856 | 1.708 | 125 | 55 | 0.203 | 6.0 | 23 |
| 103-30 | 23.0925 | 2.3617 | 3.982 | 3.736 | 153 | 115 | 0.176 | 6.6 | 18 |
| 103-40 | 23.4172 | 2.5557 | 4.603 | 2.735 | 205 | 111 | 0.209 | 8.8 | 20 |
| <i>Entire District:</i> | | | 3.737 | | 150 | | 0.172 | 6.7 | 103 |

| Large Mesh (1.75 inch stretch), Spot shrimp | | | | | | | | | |
|---|--------------------------|-------------------------|----------------|--------------------------|-----------------|---------------------------|------------|-------------|---------------------------------|
| District & Subdistrict | Mean Soaktime (dec. hrs) | St Err of Mean Soaktime | Mean Catch(Kg) | St Err of Mean Catch(Kg) | Mean No. caught | St Err of Mean No. caught | Mean Kg/hr | Mean No./hr | Total No. pots sampled (n size) |
| 2001 | | | | | | | | | |
| 103-23 | 19.2505 | 1.7264 | 3.021 | 2.861 | 54 | 80 | 0.157 | 2.8 | 36 |
| 103-25 | 22.4912 | 5.0765 | 5.850 | 3.176 | 107 | 109 | 0.260 | 4.7 | 35 |
| <i>Entire District:</i> | | | 4.436 | | 81 | | 0.209 | 3.8 | 71 |
| 2000 | | | | | | | | | |
| 103-23 | 20.0467 | 1.9709 | 2.330 | 1.971 | 91 | 77 | 0.116 | 4.5 | 36 |
| 103-25 | 23.4693 | 4.4233 | 6.629 | 3.196 | 222 | 117 | 0.282 | 9.5 | 39 |
| <i>Entire District:</i> | | | 4.479 | | 157 | | 0.199 | 7.0 | 75 |
| 1999 | | | | | | | | | |
| 103-23 | 18.9255 | 3.1483 | 3.885 | 1.942 | 144 | 77 | 0.205 | 7.6 | 30 |
| 103-25 | 24.7476 | 2.1380 | 5.069 | 3.030 | 148 | 90 | 0.205 | 6.0 | 36 |
| <i>Entire District:</i> | | | 4.477 | | 146 | | 0.205 | 6.8 | 66 |
| 1998 | | | | | | | | | |
| 103-23 | 21.2640 | 4.4194 | 3.235 | 2.122 | 112 | 74 | 0.152 | 5.2 | 36 |
| 103-25 | 21.1781 | 1.1952 | 5.407 | 3.559 | 160 | 106 | 0.255 | 7.5 | 35 |
| <i>Entire District:</i> | | | 4.321 | | 136 | | 0.204 | 6.4 | 71 |
| 1997 | | | | | | | | | |
| 103-21 | 22.6686 | 1.1962 | 1.729 | 1.390 | 66 | 48 | 0.085 | 2.9 | 42 |
| 103-23 | 21.5338 | 0.9709 | 2.045 | 1.341 | 78 | 48 | 0.110 | 3.6 | 38 |
| 103-25 | 20.3953 | 2.3960 | 3.369 | 2.085 | 97 | 68 | 0.162 | 4.8 | 42 |
| 103-30 | 23.1201 | 2.1619 | 2.156 | 3.134 | 89 | 93 | 0.117 | 3.8 | 29 |
| 103-40 | 23.1152 | 2.5859 | 2.613 | 2.221 | 103 | 95 | 0.119 | 4.5 | 41 |
| <i>Entire District:</i> | | | 2.382 | | 87 | | 0.119 | 3.9 | 192 |

Table 6. Postseason pot shrimp surveys District 3, 1998–2001. Mean soak times, variability of mean soak times for pots fished, mean catches by weight and number for spot shrimp, mean catch per hour by weight and number, total pots sampled, and district totals for two mesh sizes fished.

| Small Mesh (1.125 inch stretch), Spot shrimp | | | | | | | | | |
|---|--------------------------|-------------------------|----------------|--------------------------|-----------------|---------------------------|------------|-------------|---------------------------------|
| District & Subdistrict | Mean Soaktime (dec. hrs) | St Err of Mean Soaktime | Mean Catch(Kg) | St Err of Mean Catch(Kg) | Mean No. caught | St Err of Mean No. caught | Mean Kg/hr | Mean No./hr | Total No. pots sampled (n size) |
| <i>2001</i> | | | | | | | | | |
| 103-23 | | | | | | | | | |
| 103-25 | 22.9550 | 4.4594 | 4.742 | 1.869 | 126 | 128 | 0.207 | 5.5 | 48 |
| <i>Entire District:</i> | | | 4.742 | | 126 | | 0.207 | 5.5 | 48 |
| <i>2000</i> | | | | | | | | | |
| 103-23 | 18.8244 | 2.0477 | 3.893 | 2.720 | 183 | 143 | 0.207 | 9.7 | 37 |
| 103-25 | 23.6043 | 3.6917 | 7.399 | 3.582 | 297 | 156 | 0.313 | 12.6 | 36 |
| <i>Entire District:</i> | | | 5.646 | | 240 | | 0.260 | 11.2 | 73 |
| <i>1998 (survey conducted February, 1999)</i> | | | | | | | | | |
| 103-23 | 18.0929 | 6.4639 | 3.959 | 2.239 | 181 | 107 | 0.219 | 10.0 | 35 |
| 103-25 | 22.2156 | 3.1562 | 3.430 | 1.919 | 122 | 79 | 0.154 | 5.5 | 37 |
| <i>Entire District:</i> | | | 3.695 | | 151 | | 0.187 | 7.7 | 72 |

| Large Mesh (1.75 inch stretch), Spot shrimp | | | | | | | | | |
|---|--------------------------|-------------------------|----------------|--------------------------|-----------------|---------------------------|------------|-------------|---------------------------------|
| District & Subdistrict | Mean Soaktime (dec. hrs) | St Err of Mean Soaktime | Mean Catch(Kg) | St Err of Mean Catch(Kg) | Mean No. caught | St Err of Mean No. caught | Mean Kg/hr | Mean No./hr | Total No. pots sampled (n size) |
| <i>2001</i> | | | | | | | | | |
| 103-23 | | | | | | | | | |
| 103-25 | 22.7819 | 4.3976 | 4.510 | 1.725 | 87 | 84 | 0.198 | 3.8 | 48 |
| <i>Entire District:</i> | | | 4.510 | | 87 | | 0.198 | 3.8 | 48 |
| <i>2000</i> | | | | | | | | | |
| 103-23 | 19.0237 | 2.0404 | 1.972 | 1.474 | 82 | 65 | 0.104 | 4.3 | 35 |
| 103-25 | 23.6917 | 3.6224 | 5.693 | 2.239 | 214 | 87 | 0.240 | 9.0 | 34 |
| <i>Entire District:</i> | | | 3.833 | | 148 | | 0.172 | 6.7 | 69 |
| <i>1998 (survey conducted February, 1999)</i> | | | | | | | | | |
| 103-23 | 16.4652 | 8.3515 | 2.478 | 1.691 | 87 | 57 | 0.150 | 5.3 | 33 |
| 103-25 | 22.7124 | 3.4567 | 3.969 | 2.234 | 111 | 60 | 0.175 | 4.9 | 35 |
| <i>Entire District:</i> | | | 3.223 | | 99 | | 0.163 | 5.1 | 68 |

Table 7. Preseason pot shrimp surveys District 7, 1996-2001. Mean soak times, variability of mean soak times for pots fished, mean catches by weight and number for spot shrimp, mean catch per hour by weight and number, total pots sampled, and district totals for two mesh sizes fished.

| Small Mesh (1.125 inch stretch), Spot shrimp | | | | | | | | | |
|--|--------------------------|-------------------------|----------------|--------------------------|-----------------|---------------------------|------------|-------------|---------------------------------|
| District & Subdistrict | Mean Soaktime (dec. hrs) | St Err of Mean Soaktime | Mean Catch(Kg) | St Err of Mean Catch(Kg) | Mean No. caught | St Err of Mean No. caught | Mean Kg/hr | Mean No./hr | Total No. pots sampled (n size) |
| 2001 | | | | | | | | | |
| 107-20 | 20.4350 | 2.1623 | 2.711 | 2.368 | 69 | 81 | 0.133 | 3.4 | 59 |
| 107-30 | 15.5111 | 0.7913 | 2.825 | 1.864 | 24 | 38 | 0.182 | 1.5 | 15 |
| 107-40 | 16.8875 | 0.7937 | 1.120 | 0.949 | 6 | 9 | 0.066 | 0.4 | 30 |
| <i>Entire District:</i> | | | 2.218 | | 33 | | 0.127 | 1.8 | 104 |
| 2000 | | | | | | | | | |
| 107-20 | 18.2060 | 1.8161 | 1.378 | 1.363 | 29 | 33 | 0.076 | 1.6 | 55 |
| 107-30 | 19.2722 | 0.5661 | 2.972 | 1.879 | 55 | 54 | 0.154 | 2.8 | 15 |
| 107-40 | 16.5243 | 0.1727 | 0.290 | 0.369 | 4 | 6 | 0.018 | 0.2 | 14 |
| <i>Entire District:</i> | | | 1.546 | | 29 | | 0.082 | 1.6 | 84 |
| 1999 | | | | | | | | | |
| 107-20 | 17.6313 | 2.4742 | 0.322 | 0.214 | 18 | 20 | 0.018 | 1.0 | 51 |
| 107-30 | | | | | | | | | |
| 107-40 | 16.6621 | 0.3677 | NT | | 13 | 16 | | 0.8 | 9 |
| <i>Entire District:</i> | | | 0.322 | | 16 | | 0.018 | 0.9 | 60 |
| 1996 | | | | | | | | | |
| 107-10 | 18.4667 | 1.5385 | NT | | 122 | 93 | | 6.6 | 10 |
| 107-20 | 23.7286 | 3.4755 | NT | | 24 | 20 | | 1.0 | 39 |
| 107-40 | 21.0833 | 0.7704 | NT | | 15 | 11 | | 0.7 | 6 |
| <i>Entire District:</i> | | | | | 53 | | | 2.8 | 55 |

| Large Mesh (1.75 inch stretch), Spot shrimp | | | | | | | | | |
|---|--------------------------|-------------------------|----------------|--------------------------|-----------------|---------------------------|------------|-------------|---------------------------------|
| District & Subdistrict | Mean Soaktime (dec. hrs) | St Err of Mean Soaktime | Mean Catch(Kg) | St Err of Mean Catch(Kg) | Mean No. caught | St Err of Mean No. caught | Mean Kg/hr | Mean No./hr | Total No. pots sampled (n size) |
| 2001 | | | | | | | | | |
| 107-20 | 20.3630 | 2.1549 | 1.902 | 2.054 | 46 | 52 | 0.093 | 2.3 | 60 |
| 107-30 | 15.5111 | 0.7913 | 2.056 | 1.288 | 22 | 24 | 0.133 | 1.4 | 15 |
| 107-40 | 16.9184 | 0.7888 | 0.488 | 0.548 | 6 | 7 | 0.029 | 0.3 | 29 |
| <i>Entire District:</i> | | | 1.482 | | 25 | | 0.085 | 1.3 | 104 |
| 2000 | | | | | | | | | |
| 107-20 | 18.4161 | 1.7446 | 1.158 | 1.270 | 24 | 28 | 0.063 | 1.3 | 53 |
| 107-30 | 19.2705 | 0.5807 | 2.549 | 1.440 | 42 | 34 | 0.132 | 2.2 | 12 |
| 107-40 | 16.5310 | 0.1772 | 0.351 | 0.771 | 8 | 18 | 0.021 | 0.5 | 13 |
| <i>Entire District:</i> | | | 1.352 | | 25 | | 0.072 | 1.3 | 78 |
| 1999 | | | | | | | | | |
| 107-20 | 17.8010 | 2.4492 | 0.629 | 0.662 | 18 | 20 | 0.035 | 1.0 | 42 |
| 107-30 | | | | | | | | | |
| 107-40 | 16.5667 | 0.3130 | | | 13 | 16 | | 0.8 | 3 |
| <i>Entire District:</i> | | | 0.629 | | 16 | | 0.035 | 0.9 | 45 |
| 1996 | | | | | | | | | |
| 107-10 | 18.6147 | 1.5253 | | | 60 | 55 | | 3.2 | 40 |
| 107-20 | 21.7863 | 4.6093 | | | 27 | 21 | | 1.2 | 56 |
| 107-40 | 20.9475 | 0.5956 | | | 28 | 45 | | 1.3 | 16 |
| <i>Entire District:</i> | | | | | 38 | | | 1.9 | 112 |

Table 8. Postseason pot shrimp surveys District 7, 2001. Mean soak times, variability of mean soak times for pots fished, mean catches by weight and number for spot shrimp, mean catch per hour by weight and number, total pots sampled, and district totals for two mesh sizes fished.

| Small Mesh (1.125 inch stretch), Spot shrimp | | | | | | | | | |
|--|--------------------------|-------------------------|----------------|--------------------------|-----------------|---------------------------|------------|-------------|---------------------------------|
| District & Subdistrict | Mean Soaktime (dec. hrs) | St Err of Mean Soaktime | Mean Catch(Kg) | St Err of Mean Catch(Kg) | Mean No. caught | St Err of Mean No. caught | Mean Kg/hr | Mean No./hr | Total No. pots sampled (n size) |
| 2001 | | | | | | | | | |
| 107-20 | 18.6972 | 3.9825 | 1.105 | 1.690 | 29 | 56 | 0.059 | 1.6 | 60 |
| 107-30 | 20.7444 | 0.6291 | 1.107 | 0.743 | 8 | 12 | 0.053 | 0.4 | 15 |
| 107-40 | 21.9583 | 2.9689 | 1.108 | 0.771 | 13 | 22 | 0.050 | 0.6 | 30 |
| <i>Entire District:</i> | | | 1.107 | | 17 | | 0.054 | 0.8 | 105 |

| Large Mesh (1.75 inch stretch), Spot shrimp | | | | | | | | | |
|---|--------------------------|-------------------------|----------------|--------------------------|-----------------|---------------------------|------------|-------------|---------------------------------|
| District & Subdistrict | Mean Soaktime (dec. hrs) | St Err of Mean Soaktime | Mean Catch(Kg) | St Err of Mean Catch(Kg) | Mean No. caught | St Err of Mean No. caught | Mean Kg/hr | Mean No./hr | Total No. pots sampled (n size) |
| 2001 | | | | | | | | | |
| 107-20 | 18.6972 | 3.9825 | 0.798 | 0.914 | 19 | 25 | 0.043 | 1.0 | 60 |
| 107-30 | 20.7444 | 0.6291 | 0.492 | 0.458 | 6 | 8 | 0.024 | 0.3 | 15 |
| 107-40 | 22.5369 | 2.5568 | 0.997 | 1.016 | 15 | 24 | 0.044 | 0.7 | 29 |
| <i>Entire District:</i> | | | 0.762 | | 13 | | 0.037 | 0.7 | 104 |

Table 9. Preseason pot shrimp surveys District 12, 2000. Mean soak times, variability of mean soak times for pots fished, mean catches by weight and number for spot shrimp, mean catch per hour by weight and number, total pots sampled, and district totals for two mesh sizes fished.

| Small Mesh (1.125 inch stretch), Spot shrimp | | | | | | | | | |
|--|--------------------------|-------------------------|----------------|--------------------------|-----------------|---------------------------|------------|-------------|---------------------------------|
| District & Subdistrict | Mean Soaktime (dec. hrs) | St Err of Mean Soaktime | Mean Catch(Kg) | St Err of Mean Catch(Kg) | Mean No. caught | St Err of Mean No. caught | Mean Kg/hr | Mean No./hr | Total No. pots sampled (n size) |
| 2000 | | | | | | | | | |
| 112-41 | 15.6220 | 0.8941 | 1.566 | 1.543 | 48 | 54 | 0.100 | 3.0 | 11 |
| 112-42 | 17.7000 | 0.3601 | 3.508 | 2.729 | 133 | 92 | 0.198 | 7.5 | 6 |
| 112-45 | 21.6500 | 0.9969 | 5.227 | 2.805 | 90 | 56 | 0.241 | 4.1 | 36 |
| 112-48 | 19.7317 | 4.1340 | 5.629 | 2.024 | 125 | 59 | 0.285 | 6.3 | 24 |
| <i>Entire District:</i> | | | 3.983 | | 99 | | 0.206 | 5.3 | 77 |

| Large Mesh (1.75 inch stretch), Spot shrimp | | | | | | | | | |
|---|--------------------------|-------------------------|----------------|--------------------------|-----------------|---------------------------|------------|-------------|---------------------------------|
| District & Subdistrict | Mean Soaktime (dec. hrs) | St Err of Mean Soaktime | Mean Catch(Kg) | St Err of Mean Catch(Kg) | Mean No. caught | St Err of Mean No. caught | Mean Kg/hr | Mean No./hr | Total No. pots sampled (n size) |
| 2000 | | | | | | | | | |
| 112-41 | 15.5530 | 0.9158 | 1.370 | 1.635 | 39 | 42 | 0.088 | 2.5 | 11 |
| 112-42 | 17.7000 | 0.3656 | 3.256 | 2.180 | 94 | 65 | 0.184 | 5.3 | 6 |
| 112-45 | 21.6289 | 0.9870 | 4.600 | 2.990 | 78 | 51 | 0.213 | 3.6 | 36 |
| 112-48 | 19.5128 | 4.3167 | 5.620 | 1.687 | 117 | 45 | 0.288 | 6.0 | 24 |
| <i>Entire District:</i> | | | 3.711 | | 82 | | 0.193 | 4.3 | 77 |

Table 10. Preseason pot shrimp surveys District 13, 1999–2001. Mean soak times, variability of mean soak times for pots fished, mean catches by weight and number for spot shrimp, mean catch per hour by weight and number, total pots sampled, and district totals for two mesh sizes fished.

| Small Mesh (1.125 inch stretch), Spot shrimp | | | | | | | | | |
|--|--------------------------|-------------------------|----------------|--------------------------|-----------------|---------------------------|------------|-------------|---------------------------------|
| District & Subdistrict | Mean Soaktime (dec. hrs) | St Err of Mean Soaktime | Mean Catch(Kg) | St Err of Mean Catch(Kg) | Mean No. caught | St Err of Mean No. caught | Mean Kg/hr | Mean No./hr | Total No. pots sampled (n size) |
| 2001 | | | | | | | | | |
| 113-55 | 20.8652 | 4.3213 | 3.161 | 1.909 | 72 | 69 | 0.152 | 3.4 | 35 |
| 113-57 | 22.2324 | 3.3665 | 3.658 | 1.579 | 69 | 49 | 0.165 | 3.1 | 17 |
| 113-58 | 21.3178 | 3.0747 | 4.961 | 3.208 | 112 | 93 | 0.233 | 5.3 | 48 |
| <i>Entire District:</i> | | | 3.927 | | 84 | | 0.183 | 3.9 | 100 |
| 2000 | | | | | | | | | |
| 113-55 | 18.5735 | 1.1751 | 1.634 | 1.254 | 33 | 31 | 0.088 | 1.8 | 18 |
| 113-57 | 19.7346 | 1.3408 | 3.059 | 1.973 | 67 | 82 | 0.155 | 3.4 | 15 |
| 113-58 | 20.7122 | 1.4398 | 6.405 | 4.013 | 174 | 107 | 0.309 | 8.4 | 23 |
| <i>Entire District:</i> | | | 3.699 | | 91 | | 0.184 | 4.5 | 56 |
| 1999 | | | | | | | | | |
| 113-55 | 18.7297 | 0.4050 | 1.021 | 0.699 | 20 | 18 | 0.054 | 1.0 | 24 |
| 113-57 | 25.3526 | 1.2000 | 5.054 | 1.825 | 124 | 49 | 0.199 | 4.9 | 18 |
| 113-58 | 27.7309 | 13.8610 | 3.559 | 2.390 | 110 | 85 | 0.128 | 4.0 | 38 |
| <i>Entire District:</i> | | | 3.211 | | 84 | | 0.127 | 3.3 | 80 |

| Large Mesh (1.75 inch stretch), Spot shrimp | | | | | | | | | |
|---|--------------------------|-------------------------|----------------|--------------------------|-----------------|---------------------------|------------|-------------|---------------------------------|
| District & Subdistrict | Mean Soaktime (dec. hrs) | St Err of Mean Soaktime | Mean Catch(Kg) | St Err of Mean Catch(Kg) | Mean No. caught | St Err of Mean No. caught | Mean Kg/hr | Mean No./hr | Total No. pots sampled (n size) |
| 2001 | | | | | | | | | |
| 113-55 | 20.9040 | 4.3829 | 2.423 | 1.793 | 48 | 48 | 0.116 | 2.3 | 33 |
| 113-57 | 22.9487 | 3.5239 | 3.458 | 2.002 | 70 | 49 | 0.151 | 3.0 | 17 |
| 113-58 | 21.0356 | 2.9224 | 4.681 | 2.627 | 94 | 73 | 0.223 | 4.4 | 48 |
| <i>Entire District:</i> | | | 3.521 | | 70 | | 0.163 | 3.3 | 98 |
| 2000 | | | | | | | | | |
| 113-55 | 18.5211 | 1.2393 | 1.558 | 1.660 | 30 | 34 | 0.084 | 1.6 | 19 |
| 113-57 | 19.7919 | 1.5107 | 2.578 | 1.666 | 64 | 46 | 0.130 | 3.2 | 18 |
| 113-58 | 20.6616 | 1.4893 | 5.975 | 4.230 | 131 | 94 | 0.289 | 6.3 | 22 |
| <i>Entire District:</i> | | | 3.370 | | 75 | | 0.168 | 3.7 | 59 |
| 1999 | | | | | | | | | |
| 113-55 | 18.7250 | 0.4411 | 0.437 | 0.365 | 11 | 10 | 0.023 | 0.6 | 23 |
| 113-57 | 25.0085 | 1.2510 | 4.019 | 1.396 | 111 | 39 | 0.161 | 4.4 | 20 |
| 113-58 | 29.2903 | 14.4233 | 3.262 | 2.042 | 86 | 0 | 0.111 | 2.9 | 35 |
| <i>Entire District:</i> | | | 2.573 | | 69 | | 0.098 | 2.6 | 78 |

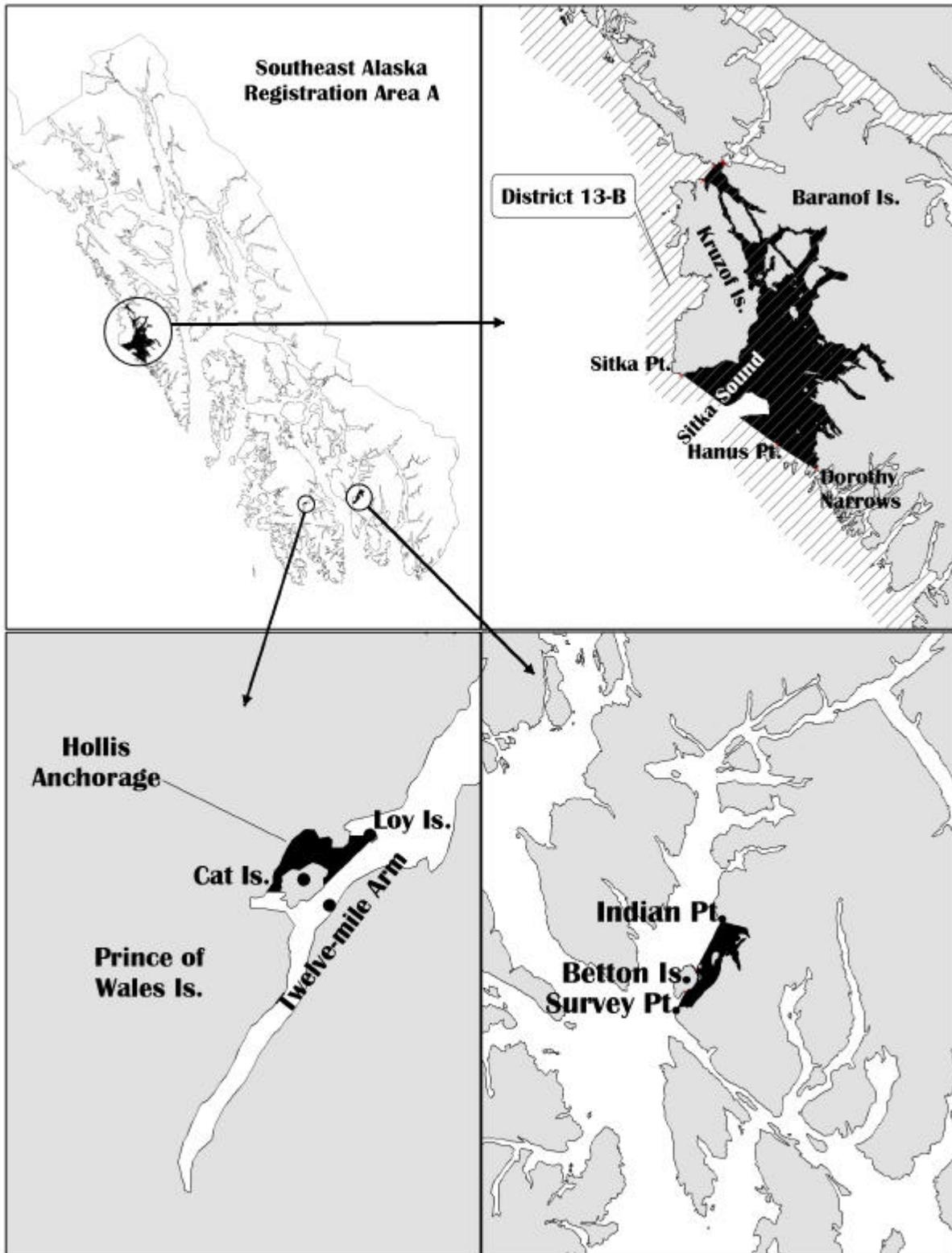


Figure 2. Closed waters for pot shrimping in Registration Area A.

Figure 3. Section 3-C, 2000. Length frequency graphs depicting catch by mesh size and comparing catches pre- and post-commercial fishery for Statistical Areas 103-23 and 103-25.

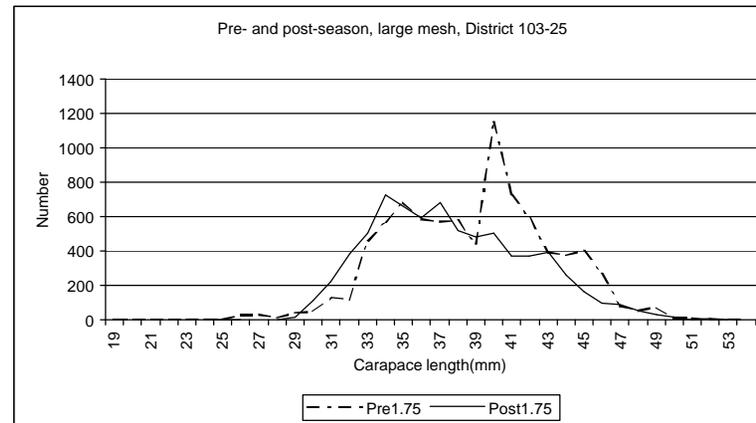
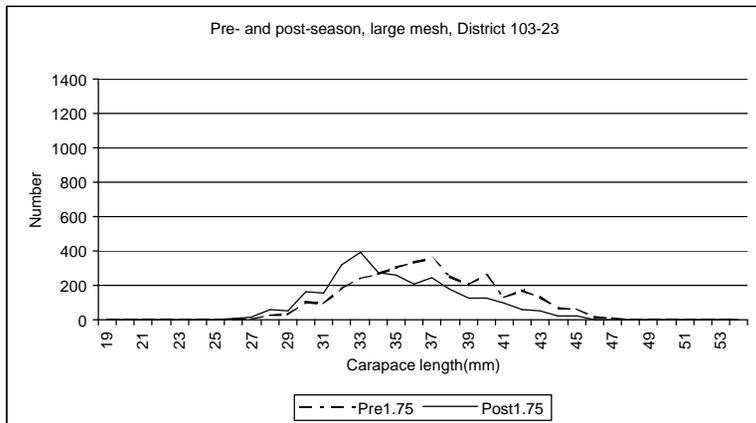
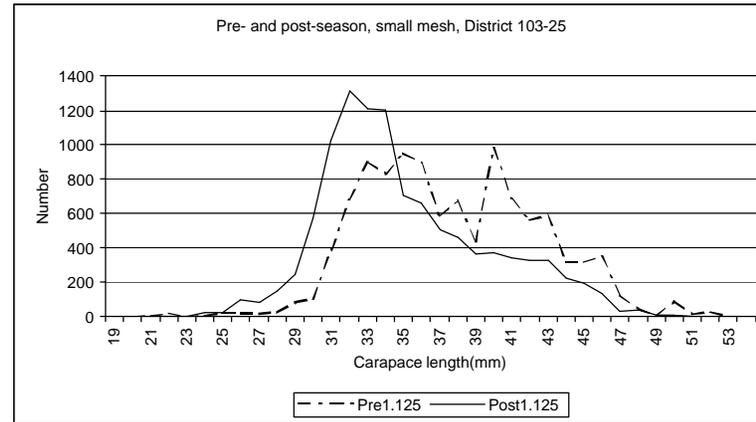
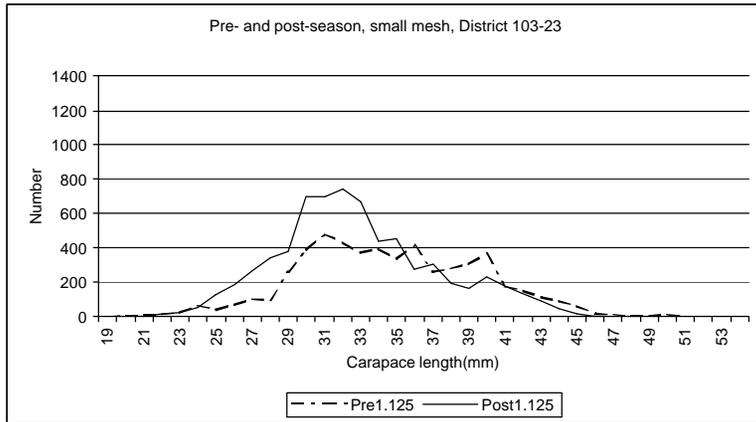
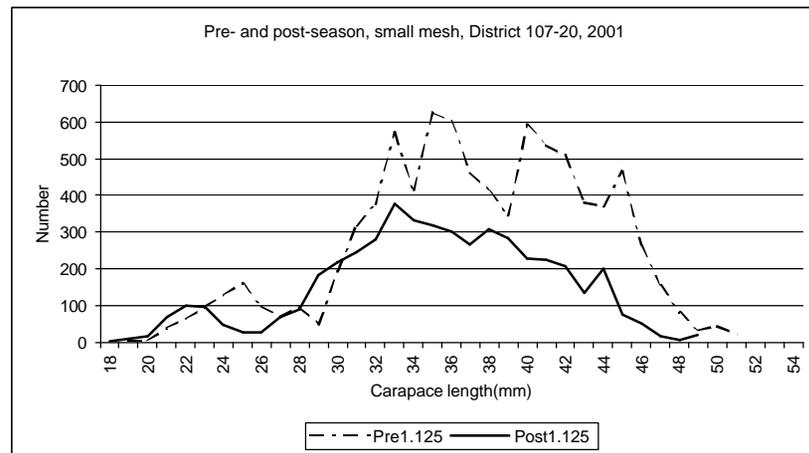
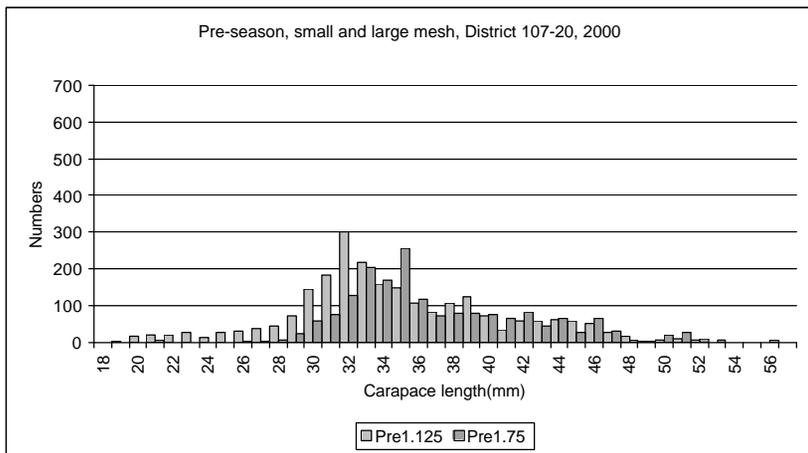
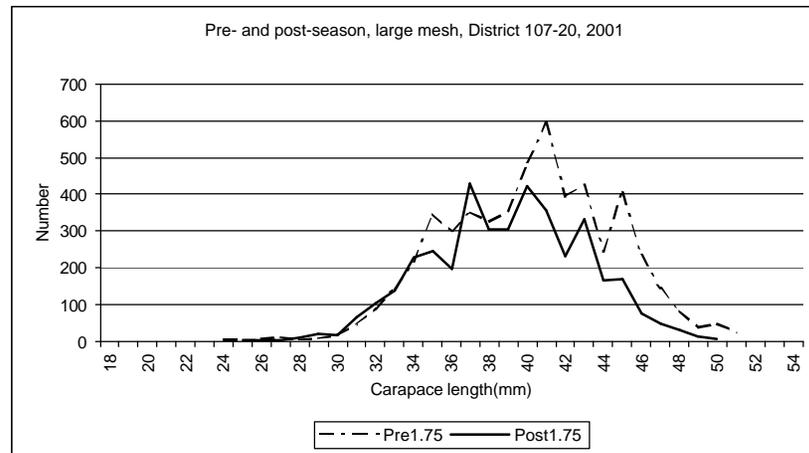


Figure 4. Length frequency graphs depicting catch by mesh size for the 2000 preseason survey in Statistical Area 107-20 and comparing catches pre and post commercial fishery for Statistical Area 107-20. District 7, 2000 and 2001.



No post-season survey, District 107-20 in 2000



APPENDICES

The Alaska Department of Fish and Game administers all programs and activities free from discrimination on the bases of race, color, national origin, age, sex, religion, marital status, pregnancy, parenthood, or disability. The department administers all programs and activities in compliance with Title VI of the Civil Rights Act of 1964, Section 504 of the Rehabilitation Act of 1973, Title II of the Americans with Disabilities Act of 1990, the Age Discrimination Act of 1975, and Title IX of the Education Amendments of 1972.

If you believe you have been discriminated against in any program, activity, or facility, or if you desire further information please write to ADF&G, P.O. Box 25526, Juneau, AK 99802-5526; U.S. Fish and Wildlife Service, 4040 N. Fairfield Drive, Suite 300, Arlington, VA 22203 or O.E.O., U.S. Department of the Interior, Washington DC 20240.

For information on alternative formats for this and other department publications, please contact the department ADA Coordinator at (voice) 907-465-4120, (TDD) 907-465-3646, or (FAX) 907-465-2440.