MEMORANDUM State of Alaska

DEPARTMENT OF FISH AND GAME

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SUBJECT: 2023/24 SHRIMP POT FISHERY GHL MEMO – PUBLIC

This memorandum provides a summary of recommendations and plans by Southeast Alaska (SEAK) Region fishery management biologists for the 2023/24 commercial shrimp pot fishery season that opens May 15, 2023.

COMMENTS ON REVIEW PROCESS

Management and research staff met via MS Teams on March 10, 2023, to review and discuss spot and coonstripe shrimp stock status for each of the 22 regulatory shrimp pot fishing areas within SEAK. Research staff summarized available information for each area in the draft *Southeast Pot Shrimp Stock Status Prior to the 2023/24 Season* (Schoenfeld, et al *In Prep.*) report and area management staff completed the review by providing fishery summaries and upcoming fishery management strategies for each of their areas.

SEASON CHANGE

The Southeast shrimp pot fishery was changed from a primarily fall/winter season, which had been in effect since the mid-1990s, to a spring/summer season at the 2022 Southeast Alaska Finfish and Shellfish Board of Fisheries (BOF) meeting. This change effectively shifted the 2022/23 season's fall fishery that would have begun October 1, 2022, to a starting date of May 15, 2023. Due to the regulatory changes, seasons will now begin May 15 rather than October 1, therefore the May 15, 2023 start date will now fall within the 2023/24

season. Although there will be no fishery shown for the 2022/23 season, there was no loss of a season, but due to semantics of the regulatory changes it will appear that way.

The goal of the season change is to rebuild the Southeast shrimp pot fishery. Over the last 2 decades, guideline harvest levels (GHLs) have been cut and areas closed resulting in an annual harvest less than half of what it was in the late 1990s and early 2000s. In addition, there have been recruitment failures observed in several of the surveyed areas in recent years. Although there have periodically been proposals to change the season since the 1990's, the decline in harvest and closures of areas resulted in a number of proposals to change the season at the 2018 BOF meeting, although the proposed changes were not adopted by the board. During the 2021 board cycle, multiple proposals were again submitted and there was more public support for the season change. The department is in support of the change as it would reduce harvest of mature, egg bearing shrimp and allow eggs to hatch before being harvested; thus, potentially increasing shrimp stocks. The department also recognizes that this season change will fundamentally change the fishery and create potential management complications.

Management complications will be prevalent for at least the first several seasons. Participation in the spring fishery will be a large unknown. The milder spring weather and lack of competing shellfish fisheries may draw more effort, at least for the first 2 weeks of the season before some participants leave the fishery in preparation for the summer Dungeness crab fishery. Shrimp distribution within fishing areas may differ in the spring compared to fall. The relative catchability of shrimp may also differ. Finally, there may be more direct competition with sport, personal use, and subsistence shrimp fisheries. As a result, managers will need to be judicious when comparing this season to past seasons and not overreact to inseason data as the fishery develops.

The department considered decrementing GHLs due to loss of heavier egg bearing shrimp in a spring/summer fishery. There was concern from industry that more individual shrimp would be harvested in a spring/summer season versus a fall/winter season to achieve the same GHL. In response, the department analyzed historical shrimp size and weight from surveys and estimated there would be a regionwide average 3.3% decrease in weight due to lack of egg bearing shrimp in May. This varied by District and/or Section and had a range of 2.2–4.5%. The analysis had 2 major assumptions: shrimp do not grow or shrink in carapace length from September to May, and length/weight relationships established in the September survey data would still be valid in May. The department has opted to not decrement GHLs based on this analysis due to the associated assumptions, imprecision in management error, and lack of a GHL decrement being part of the public record at the March BOF when discussing the season change.

SHRIMP POT FISHERY OVERVIEW

Descriptions of areas open to shrimp pot fishing can be found in **5 AAC 31.105 Descriptions of Registration Area A districts and sections and Alaska Department of Fish and Game (ADF&G) advisory announcements.**

The draft *Southeast Pot Shrimp Stock Status Prior to the 2023/24 Season* report summarized available survey and fishery data for 22 shrimp pot fishing areas (Schonfeld et al *In Prep*.). A summary of stock status evaluations for each area can be found in Table 3. Stock status was not rated for 4 areas that were closed last season: Sections 11-A/B/C (11-Remainder) and 11-D (Seymour), and Districts 14 and 16 (District 12-Tenakee Inlet and Section 13-C were closed but a preseason survey was conducted resulting in data used to rate the area). Of the areas rated in the report, 3 areas were rated *poor* (Sections 3-B/C and 6-B/C/D, and District 12-Remainder); 3 areas were rated *below average* (Districts 2 and 12-Tenakee Inlet, and Sections 10-A/B); 7 areas were rated *moderate* (Districts 1, 5, 9, and 15-Remainder, and Sections 3-A, 8-A/10-C, and 13-A/B); 4 areas were rated *above average* (Districts 4, 7, and 15-East, and Section 13-C); and one area was rated *good* (Sections 6-A/8-B). Ratings are based on analysis of catch rate data (survey, logbook, and commercial), shrimp size

(carapace length), and L_{50} (size at which 50% are female). Baselines for each data set have been established and data from the most recent season was compared to the baseline and scored. Stock status is designated as "good", "above average", "moderate", "below average", or "poor" depending on how they score.

GHLs since the 2007/08 season and planned GHL changes for the 2023/24 season are presented in Table 1. The overall proposed SEAK GHL is 466,800 pounds. This is an increase from last season's overall GHL of 457,300 pounds, but less than the recent 10-year average (2011–2020) GHL of 519,300 pounds. The historical harvest and effort by area are shown in Table 2. The combined harvest from last season of 473,400 pounds of spot and coonstripe shrimp was 103% of the available GHL of 457,300 pounds and below the recent 10-year average harvest of 551,300 pounds. Regionwide effort was 99 permits; below the recent 10-year average of 105 active permits.

Harvests in the shrimp pot fishery in SEAK remained at or below 50,000 pounds annually through the 1980s, GHLs and harvests expanded through the 1990s and early 2000s, with harvests peaking in the 2003/04 season at 1.1 million pounds. Since then, as seen in Tables 1 and 2, GHLs and harvests declined and are currently around 500,000 pounds annually, a level that appeared to be sustainable under a fall/winter fishery.

SHRIMP POT FISHERY MANAGEMENT

Management of the shrimp pot fishery is continually evolving, and the department currently utilizes several management strategies based on available information. The traditional management strategy that has been utilized since the late 1990s is to set a GHL within the guideline harvest range (GHR). GHLs remain in place for a minimum of 3 seasons and available data from each fishing area are reviewed annually and recommendations to changes in area specific GHLs are considered. If changes to GHLs are suggested based on data inputs, changes occur in increments of at least 20% but do not exceed 40% of the current GHL or the upper end of the GHR; changes to the GHL less than 20% may not demonstrate how a change in harvest affects the shrimp stock, and changes more than 40% may be larger than the stock can withstand.

Starting with the 2012/13 season, inseason management began in Districts 6 (Northern Clarence Strait) and 7. However, in 2021/22 because of conservation concerns, the department moved away from inseason GHL adjustment in Sections 6-B/C/D. Management adjusts the GHL in season based on the preseason survey data for District 7 and inseason tracking of >XL (greater than 40.5 grams) shrimp harvests through logbooks, inseason catch per unit effort (CPUE), and shrimp size information obtained from on the grounds (OTG) sampling in both districts. Inseason adjustments do not exceed 45% of the base level GHL. Inseason management for District 7 continued through the 2021/22 season. Beginning with the 2020/21 season, inseason adjustments were also considered in Districts 1 and 2. Similar to Districts 6 (prior to the 2021/2022 season) and 7, adjustments to the GHLs in Districts 1 and 2 will be based on results of the preseason survey, commercial CPUE, and distribution of effort. Adjustments will not exceed 20% of the base GHL and the department will close the fishery before the GHL is reached if it becomes evident that fishery performance is below historical levels for a healthy stock.

Beginning in the 2020/21 season and moving forward, 2 new strategies will be utilized for select fishing areas. The first is to recognize the utility of using information gained from preseason surveys to adjust GHLs and/or fishing areas for the current season. This is a deviation from past practices of keeping GHLs in place for a minimum of 3 seasons. If adjustments to GHLs are deemed necessary from preseason survey information, the slow-up and fast-down approach will be utilized. Increases in GHLs will be in 10 to 14% increments and will not exceed 45% or the upper end of the GHR. Decreases in GHL will be in 10 to 25% decrements and if decrements more than 45% are necessary, the area may close for the season.

The second new strategy applies to the Juneau management area. This strategy is to rotate several fishing areas in northern Southeast on a 2 or 3-year basis to provide more consistent opportunity for north end shrimp fishermen. In 1995, districts were assigned GHLs based on historical harvests. Districts that did not have a significant historical record of shrimp harvest were assigned an exploratory GHR of 0 to 20,000 pounds. This applied to Districts 11, 12, 14, 15, and 16. With this change and increased participation in the shrimp pot fishery, harvests increased substantially in these areas. Over time, harvesting at the upper end of the GHR proved unsustainable. Since the mid to late 2000s, CPUE and harvests in these districts began to decline and increasingly conservative management measures were taken including GHL reductions and commercial, personal use, and sport fisheries closures. As a result, annual harvest levels became smaller and more difficult to manage and overall opportunity decreased.

2023/24 SEASON GHL AND MANAGEMENT OVERVIEW

Detailed plans for each area are provided in the following section. There are several specific changes from the 2021/22 season based on evaluation of stock status trends: 1) increase District 9 GHL from 6,500 to 10,000 pounds; 2) reopen Sections 11-A/B/C and District 16 after a 3-year closure; and 3) close District 12-Remainder and reopen District 14 on an alternate-year harvest strategy.

During the last several meeting cycles, the BOF adopted regulations that modified shrimp pot fishing areas and allowed the department to collect more detailed harvest information. In 2018, the BOF adopted 4 new or redefined GHR areas (Northern Clarence Strait, Sumner Strait, Southern Frederick Sound, and Northern Frederick Sound). In 2022, the BOF approved the split of District 15 into 2 distinct GHR areas. At the 2015 BOF meeting, a regulation was adopted requiring all shrimp catcher-processors to report catch information in logbooks, including detailed size breakdowns of their harvest. Detailed information of the reporting procedures will again be described in the first advisory announcement of the 2023/24 season.

Management practices for the 2023/24 season will be similar to the prior season. Inseason management for Districts 1, 2, and 7 will continue. The base GHLs will be 50,000 pounds for District 1, 40,000 pounds for District 2, and 74,300 pounds for District 7. Preseason survey information will again be used to adjust GHLs and/or fishing areas. Finally, Sections 6-B/C/D and District 9 will have a set opening period. If catch reports indicate better stock health, open time may be extended. Because of concerns for the Northern Clarence Strait stocks, full inseason management will not be utilized this season in Sections 6-B/C/D.

SHRIMP POT GHL RECOMMENDATIONS FOR THE 2023/24 SEASON

District 1—GHL will remain at 50,000 pounds.

For the 2006/07 season the GHL was reduced from 164,000 to 98,400 pounds due to declining harvest rates and increasing season length observed during the previous 5 seasons. The GHL was reduced for the 2008/09 season to 78,700 pounds and again for the 2009/10 season to 50,000 pounds with a preset closure. Due to improving stock health, the GHL was increased to 64,000 pounds for the 2015/16 season. The GHL was subsequently reduced for the 2019/20 season to 50,000 pounds due to sharp declines in both the preseason surveys and the commercial CPUE in Back Behm Canal.

There were several negative stock health indicators during the 2018/19 season that resulted in management actions taken for the 2019/20 season. Despite the overall District 1 commercial CPUE being above baseline, the preseason survey and commercial harvest information continued to indicate sharp declines of shrimp abundance in Back Behm Canal. There was also a sharp decline during the 2018/19 season in commercial CPUE in Back Behm Canal. The continued decrease in the preseason survey harvest rate of all size classes of

shrimp with no positive indicators justified a predetermined closure of October 7 in Back Behm Canal for the 2019/20 season. The preset closure date was not instituted for the 2020/21 season, based on the preseason survey results; however, for the 2021/22 season, Back Behm and West Behm Canal were closed on October 7, prior to the remainder of the district based on commercial harvest rates and poor recruitment in the preseason survey.

The overall District 1 shrimp stock showed improvements in stock health in the 2019/20 season, and harvest has been relatively stable throughout District 1 for the past 3 years. The commercial CPUE in Back Behm Canal increased and more importantly the 2019 preseason survey showed an increase in the recruits for the fishery (<32 mm) suggesting a large recruitment event in the area. Given these changes, the preset closure date in Back Behm Canal was not implemented for the 2020/21 season; however, the GHL remained at 50,000 pounds. The 2020/21 preseason survey data showed a further decline in large size class (≥ 41mm) shrimp and a sharp decline in small size class (<41mm) shrimp to below the baseline. Commercial fishery performance also dropped sharply from the 2019/20 season and although it is near the baseline, the complete lack of small shrimp in the preseason survey suggests extremely poor recruitment. The early closure during the 2021/22 season in Back Behm and West Behm Canal was not announced until October 5 and was not as effective in reducing effort as announcements made preseason which generally have the benefit of significantly reducing both effort and harvest while still providing some commercial harvest data. Back Behm Canal will not have a preseason closure date set for the 2023/24 season due to the upcoming changes to the fishery. The preseason survey, commercial CPUE, and distribution of effort may be used to adjust the GHL in season.

The recent 10-year average (2011–2020) harvest is 62,500 pounds. The 2021/22 season's harvest was 53,200 pounds and the season closed October 8.

District 2—GHL will remain at 40,000 pounds.

The District 2 GHL was reduced for the 2009/10 season from 86,000 to 65,000 pounds due to excessive exploitation rates, declining CPUE, and a decrease in mean carapace length (CL). For the 2014/15 season, negative survey indicators prompted a reduction in GHL to 52,000 pounds. Based on extremely poor preseason survey results, Kasaan Bay was closed prior to the 2015/16 season and the GHL was reduced to 42,000 pounds. For the 2016/17 season, continued stock decline in Kasaan Bay and Cholmondeley Sound prompted a further reduction in GHL to 29,400 pounds. After positive indicators in the preseason survey the outer portion of Kasaan Bay and Skowl Arm reopened for the 2018/19 season with a preset closure date of October 7. The GHL was increased to 40,000 pounds for the 2020/21 season in response to the improved commercial catch rates observed in both Cholmondeley Sound and Kasaan Bay, increased catch rates of large class shrimp in the preseason survey, and high districtwide CPUE.

The District 2 shrimp pot fishery had a positive response to recent management actions. Districtwide commercial CPUE was at a historical low in the 2015/2016 season and has since increased, exceeding the baseline in the 2019/20 season, remaining similar for the 2020/21 season, and then decreasing to a mid-range CPUE for the 2021/22 season. For the past 3 seasons, portions of Kasaan Bay and Skowl Arm opened with no preset closure date and this management strategy will continue for the 2023/24 season. In addition, the waters of Twelve-Mile Arm will remain closed south of the latitude of Outer Point at 55°31.24´ N lat. During the 2021/22 season, the catch rates in Moira Sound and Cholmondeley Sound were at extremely high levels, whereas the catch rates in Kasaan Bay were poor. Kasaan Bay only received a few days of effort at the end of the season from fishermen who have not historically fished there. In the 2019/20 season the GHL was intentionally exceeded based on both strong preseason and inseason commercial CPUE. In the 2020/21 season, the GHL was exceeded intentionally again based on strong catch rates in both the preseason survey and the commercial fishery with catches in Kasaan Bay at historically high levels. During the 2021/22 season the

fishery was intentionally closed before meeting the GHL based on the concentrated harvest in Cholmondeley Sound which constituted two thirds of the entire harvest of District 2 for the season. District 2 has a preseason survey in both Cholmondeley Sound and Kasaan Bay which comprises 70–80% of the districtwide GHL; as a result, confidence with the survey data as an indicator of shrimp abundance in the district is good. The preseason survey, commercial CPUE, and distribution of effort may be used to adjust the GHL in season if the health of the stock shows a sudden decline.

The recent 10-year average harvest is 48,900 pounds. The 2021/22 season's harvest was 33,300 pounds and the season closed October 16.

Section 3-A—GHL will remain at 114,000 pounds.

For the 2000/01 season, the Section 3-A GHL was increased from 200,000 to 264,000 pounds. The GHL was reduced to 198,000 pounds for the 2004/05 season due to a consistent decline in shrimp size and fishery harvest rates. From the 2004/05 through the 2007/08 seasons, the shrimp population was relatively stable with an average harvest of 198,000 pounds. However, in an effort to increase the health and productivity of the Section 3-A shrimp stock, the GHL was reduced to 158,400 pounds for the 2008/09 season. The GHL remained at 158,400 pounds over the next 2 years but the average annual harvest over this period was only 128,000 pounds. There were no signs of improvement in the commercial fishery or the department survey which led to a further GHL reduction to 95,000 pounds for the 2010/11 season. Sectionwide CPUE began to increase as did biological benchmarks in the preseason survey and the GHL was increased to the current GHL of 114,000 pounds beginning with the 2015/16 season.

Sectionwide CPUE decreased slightly from the 2019/20 season but is still at the third highest level seen in the last 20 years. Section 3-A has the highest catch rates in the region and depending on effort, 10,000 to 15,000 pounds are harvested daily. Catch rates have remained high in the commercial fishery and in order to target the GHL and not remain under, the difference in one day of fishing time can and does result in overages. These overages are not perceived to be detrimental to the health or sustainability of the Section 3-A shrimp stock. The healthy stock status for Section 3-A is not reflected in Hetta Inlet which, although showing a slight increase from the 2019/20 preseason survey, is still at a low level in all indicators and virtually zero in northern Hetta Inlet. Hetta Inlet will continue to be closed north of the latitude of Hetta Point at 55°10.40´ N lat due to poor stock status indicated from both commercial fishery and preseason survey data. The overall stock status for the rest of Section 3-A is good, with sectionwide CPUE very high. The good stock status for all but Hetta Inlet will allow the GHL to remain the same despite the closure of Hetta Inlet.

The recent 10-year average harvest is 119,000 pounds. The 2021/22 season's harvest was 139,500 pounds and the season closed October 11.

Sections 3-B/C—GHL will remain at 20,000 pounds.

For the 2007/08 season the GHL was reduced from 50,000 to 40,000 pounds due to a decline in mean CL and CPUE. For the 2010/11 season the GHL was reduced to 30,000 pounds based on decreasing commercial CPUE.

In Sections 3-B/C, there is no survey and limited biological sampling. The areawide commercial CPUE, the only metric analyzed in this section, has been on a steady downward trend since the 2016/17 season and is now at its lowest level (less than half of the recent 10-year average) since standardization was possible. Due to consistently declining commercial CPUE over the previous 5 seasons, the GHL was reduced by 33% to 20,000 pounds for the 2021/22 season. Given the nature of how harvest can rapidly increase after effort spikes immediately after Section 3-A closes, there may be an announced closure shortly after the closure of Section 3-A to not exceed the reduced GHL.

The recent 10-year average harvest is 31,000 pounds. The 2021/22 season's harvest was 18,000 pounds and the season closed October 28.

District 4—GHL will remain at 20,000 pounds.

Data is very limited in District 4. No survey is conducted, and the fishery has never been sampled. Effort and harvest have been sporadic throughout the history of the fishery. Fishery performance and logbooks are the only data from District 4 that can be used as an indicator of stock health. District 4 is on the open ocean and is exposed to inclement weather for much of the fall season. It often receives little to no effort during the fall fishery resulting in little harvest. The district has reopened for the summer fishery but due to the timing, often received little effort as the local Craig fleet began salmon fishing during the same time period. Commercial CPUE remains stable, although it is low compared to other districts, and there are currently no concerns with stock health.

The recent 10-year average harvest is 17,300 pounds. The 2021/22 season's harvest was 9,900 pounds and after the summer season on July 31, 2022.

District 5—GHL will remain at 12,000 pounds.

The GHL for District 5 was 20,000 pounds from the 1995/96 season until the 2015/16 season, when it was reduced to 12,000 pounds. The low harvest for the 2021/22 season can be partly attributed to very low effort in District 5. No biological data is available for this area and a survey is not conducted.

The recent 10-year average harvest is 3,900 pounds. The district closed July 31, 2022. The 2021/22 season's harvest is confidential.

Sections 6-B/C/D—Fixed season length of 8 days**.**

The GHL has been adjusted downward for the last 4 seasons to around 30,000 pounds and then to 15,000 pounds for the most recent season in 2021/22. Whereas the adjusted GHL was achieved in the first 3 seasons, the GHL of 15,000 pounds was not achieved in 2021/22 and no samples were collected. Additionally, there has been a declining trend in the carapace size of egg bearing females. Feedback from fishermen suggest that the quantity of large shrimp has been in decline, which is supported by size class catch information from logbook data. Beginning in the 2020/21 season, available markets preferred a product form of head off tails instead of the more traditional size-based product and although logbooks were still required, size class information was not as detailed making it more difficult to track the condition of the larger sized segments of the population.

During the 2019/20 season, 10 vessels participated with a CPUE of approximately 3.4 pounds per pot lift. In the 2020/21 season, effort was lower with 8 vessels participating and a CPUE of approximately 3.9 pounds per pot lift. The 2020/21 season closed after 17 days (October 17) compared to 19 days (October 19) in the 2019/20 season. Biological data shows that the size of egg bearing females is among the smallest within the Petersburg management area. The available data presents a confusing picture for Sections 6-B/C/D. On one hand CPUE increased in the 2020/21 season and even though the GHL was decremented by 30% as it was during the 2019/20 season, it was reached 2 days sooner with less effort. Better weather in the fall of 2020 may have been partially responsible. However, a particular concern is the decline of larger sized shrimp and coupled with reports from fishermen on the grounds suggests that the population may not be as healthy as indicated when just harvest rates alone are considered. To respond to this situation the department considered options ranging from complete closure to reducing the GHL, to allowing fishing to occur for a fixed length of time. Recent harvest trends in the fishery have been stable but considering the reduction in size of females mentioned above, the department will continue with efforts to reduce harvest. During the 2021/22 season, effort dropped off

considerably with only 3 vessels participating and the commercial harvest for the season closed with less than 5,000 pounds harvested. Reported combined subsistence and sport harvest for the 2022 season was less than 2,000 lbs. With the switch to a spring season the department will keep the previous strategy in place and open Sections 6-B/C/D for a fixed season of 8 days. The department will monitor harvest metrics in season and could extend the season if the data indicates that an extension is warranted. It is estimated that an eight-day fishery will likely result in a harvest around 15,000 pounds, will allow the department to collect information on the shrimp stock in the area, and will give the department enough time to assess fishery data for any inseason adjustments.

The GHL for District 6 has ranged from 82,000 pounds in the 2005/06 season to 24,000 pounds in 2011/12 season. Following meetings with industry in 2012, the department devised an experimental management plan to use inseason fishery data to adjust the GHLs in Districts 6 and 7. In 2021/22 because of conservation concerns the department moved away from inseason adjustment in Sections 6-B/C/D and instead allowed fishing for a fixed length season as described above. The adjustment in District 6 was based on catcher-processer CPUE and logbook data and CL data obtained from OTG sampling. The base GHL was set at 32,000 pounds for the 2012 through 2016 seasons. In 2017, the base GHL was raised to 42,900 pounds to allow for adjustment to reach the 60,000-pound upper end of the proposed GHR range. Adjustments to the base GHL have ranged from decreasing by 35% in 2014 to increasing by 40% in 2017.

Sections 6-B/C/D is a new management area created by the BOF in 2018. It is comprised of 2 analysis areas: Northern Clarence and Southwest Etolin Island with a combined GHR of 0 to 60,000 pounds. This area has historically been the core fishing area of District 6.

The recent 10-year average harvest is 34,000 pounds. The 2021/22 season's harvest was 4,700 pounds and the season closed October 8.

District 7—The GHL will be adjusted in season with an initial base GHL of 74,300 pounds. Inseason adjustment will not exceed 45% of the initial GHL. Additionally, the department may close the fishery before the inseason GHL is reached if it becomes evident that fishery performance is below historical levels for healthy stocks.

The GHL for District 7 has ranged from 104,000 pounds in the 2000/01 season to 54,600 pounds in the 2010/11 season. Following meetings with industry in 2012, the department devised an experimental management plan to use inseason fishery data to adjust the GHLs in Districts 6 and 7. As mentioned above, inseason management has been temporarily discontinued in District 6. The adjustment in District 7 is based on catcher-processer CPUE and logbook data, CL obtained from OTG sampling, and initial preseason survey results. These inseason management criteria have been used for the past 9 seasons. The base GHL was 63,700 pounds for the 2012/13, 2013/14, and 2014/15 seasons. The base GHL for the area was increased to 74,300 pounds beginning with the 2015/16 season to allow the upper end of the GHR to be reached with inseason adjustments. Inseason adjustments have ranged from no change to a 30% increase.

Preseason survey data in the fall of 2019 showed a strong recruitment of juvenile shrimp which supported good harvests during the 2019/20, 2020/21 and 2021/22 seasons. However, the fall surveys of 2021 and 2022 detected lowered levels of younger age classes of shrimp. Because of this and many unknown factors associated with the switch to a spring fishery the department will closely observe harvest trends during the 2023/24 season and make appropriate adjustments based on inseason data. With a harvest of 91,000 pounds the inseason GHL was exceeded in 2021/22. Effort and fishing time was similar to 2020/21. For the 2019/20 season, CPUE was 4.3 pounds per pot lift with 15 vessels participating. During the 2020/21 season CPUE was 6.2 pounds per pot lift with 16 vessels participating. During the 2021/22 season the CPUE was 5.4 pounds per pot lift, a decrease from the 2020/21 season and once again reporting was not occurring at the pace needed for inseason

management to be effective. To address this the department plans on having staff present on the grounds more frequently during the 2023/24 season. The harvest rates continue to suggest that the stock is healthy, and the higher harvest likely did not jeopardize shrimp stocks in District 7.

The recent 10-year average harvest is 85,700 pounds. The 2021/22 season's harvest was 91,200 pounds and the season closed October 10.

Sections 8-A and 10-C—GHL will remain at 12,000 pounds.

Sections 8-A and 10-C were combined into a new management area by the BOF in 2018. It is comprised of 2 analysis areas—Farragut Bay and Southern Frederick Sound—with a combined GHR of 0 to 20,000 pounds. The 2023/24 season will be the fifth season for this new area**.**

Commercial CPUE increased to above baseline levels in the 2020/21 season and again in 2021/22. Commercial harvest data is difficult to interpret as effort in those sections can vary considerably from year to year. Most of the effort occurs after other management areas close for the season. Additionally, effort in Section 10-C has been low and sporadic in recent years. However, in 2021/22 much of the fleet in Section 10-A/B relocated to Section 10-C when that area closed, with a good portion of the fishermen focusing on one or 2 areas which contributed to a large percentage of the overall harvest in Sections 8-A/10-C. A disproportionate level of harvest from a limited area could have a negative impact on shrimp stocks in that area.

During the 2019/20 season 5 vessels participated with a CPUE of approximately 4.0 pounds per pot lift. In the 2020/21 season, effort was higher with 7 vessels participating and a CPUE of approximately 3.8 pounds per pot lift. The 2020/21 season closed after only 13 days (October 13) compared to 17 days (October 17) in the 2019/20 season. The 2021/22 season lasted 16 days with 6 vessels participating with a harvest of 14,400 pounds. CPUE for the season was 2.3 pounds per pot lift. Similar to other areas in 2021/22, reporting lagged and as a result the department had difficulty keeping pace with the harvest levels of the fleet. Like other areas the department plans to have a greater presence on the fishing grounds in the 2023/24 season to address the reporting issues. No biological samples were collected during the 2021/22 season. This is another area that is not surveyed and has only been a combined management area since 2018.

The recent 10-year average harvest is 9,700 pounds. The 2021/22 season's harvest was 14,400 pounds and the season closed on October 13.

Sections 8-B and 6-A—GHL will remain at 15,000 pounds.

Sections 6-A and 8-B were combined into a new management area by the BOF in 2018, comprising 3 subareas—Eastern Sumner, Western Sumner, and Stikine Strait/Chichagof Pass—with a combined GHR of 0 to 25,000 pounds. The 2023/24 season will be the fifth season for this new area.

Fishery performance has been generally increasing over the past 6 seasons. Although commercial harvest data is difficult to interpret because effort in these areas can be variable from year to year, commercial CPUE increased slightly and is still above baseline in all analysis areas.

During the 2019/20 season, 6 vessels participated with a CPUE of approximately 4 pounds per pot lift. In 2020/21 effort was lower with 4 vessels participating and a CPUE of approximately 4.7 pounds per pot lift. The 2020/21 season closed after only 11 days (October 11) compared to 18 days (October 18) in the 2019/20 season. During the 2021/22 season the fishery was open 14 days with a harvest of 14,500 pounds with a CPUE of 4.1 pounds per pot lift. This area has seen consistent harvests over the past several years which would suggest that an increase in GHL might be warranted. However, this area has only been fished as a combined area since 2018, is not surveyed, and biological samples have not been obtained in the past few years.

Additionally, with a switch to a spring season and following the slow-up/fast-down approach, the department would like to collect biological samples and see how the 2023/24 season progresses before considering raising the GHL.

The recent 10-year average harvest is 11,400 pounds. The 2021/22 season's harvest was 14,600 pounds and the season closed on October 14.

District 9—GHL will **increase to 10,000 pounds with a fixed season length of 5 days**.

The GHL in District 9 has changed 5 times since the 1998/99 season. It was increased 20% from 15,000 to 18,000 pounds for the 2000/01 fishing season, where it remained until the 2011/12 season when it was reduced to 14,000 pounds. In response to continued declining standardized CPUE values, the GHL was reduced by 20% to 11,000 pounds for the 2015/16 season and further reduced to 6,500 pounds since the 2018/19 season. The analysis area composition of the harvest is variable, but most harvest comes from Eliza Harbor and SE Baranof Island. There were no landings from Keku Strait or Western Kuiu Island during the 2011/12 to 2020/21 fishing seasons.

The only data available for this district is commercial CPUE. Commercial CPUE declined severely in the 2018/19 season but has rebounded since the 2019/20 season. Districtwide CPUE has been below baseline for 15 consecutive seasons, yet standardized CPUE is above baseline in Eliza Harbor.

If inseason harvest rates indicate steep declines in the shrimp population as observed during the 2018/19 season, a small area closure may be necessary in future seasons. The remote nature of this district and the relatively small GHL justify the 5-day season; however, depending on inseason harvest information, the season length may be altered to achieve the GHL.

The recent 10-year average harvest is 12,300 pounds. The 2021/22 season's harvest was 11,100 pounds and the season closed October 5.

Sections 10-A/B—GHL will be remain at 35,000 pounds.

Sections 10-A/B were created by the BOF in 2018. It is comprised of 3 analysis areas: Port Houghton, Hobart/Windham, and Southeast Admiralty with a combined GHR of 0 to 50,000 pounds. The 2023/24 season will be the fifth season for this new area. This area has historically been the core fishing area of District 10.

The GHL in District 10 increased from 30,000 to 35,000 pounds for the 2000/01 season and to 48,000 pounds for the 2004/05 season. The GHL was reduced to 36,000 pounds for the 2013/14 season and to 29,000 pounds for the 2016/17 season. Commercial harvest information for District 10 indicated shrimp populations declined sharply during the 2011/12 and 2012/13 seasons and again during the 2014/15 season.

The 2019/20 season closed after 9 days with a total of 7 vessels making deliveries. The fleet was well distributed and commercial CPUE was approximately 7.8 pounds per pot lift—the highest CPUE during the previous 20 years. In the 2020/21 season, effort doubled to 14 vessels fishing with much of the effort located in the Hobart Bay area, CPUE was approximately 6.8 pounds per pot lift, or about a pound less per pot and second highest CPUE during the previous 20 years. In the 2019/20 season, the closure date of October 9 set a record for the earliest closure date but was surpassed in the 2020/21 season when the season closed October 6. The pace of the harvest was faster than the speed of harvest reports from the fishing grounds; by the time the first set of delivery reports arrived at department offices the GHL had already been exceeded. In the 2021/22 season, 15 vessels harvested 51,100 pounds during an 8-day season and due to a lack of timely reporting from the fleet the GHL was once again exceeded. CPUE declined to 5 pounds per pot lift and the majority of the

fleet was in and around Port Houghton and north up the shoreline to Hobart Bay. Similar to District 7, the department will have a stronger presence on the grounds for the 2023/24 season.

Currently, the department has some concern with the high harvest rates from the 2019/20, 2020/21 and 2021/22 seasons having a negative impact on the shrimp population in Sections 10-A/B. In the 2019/20 season, the fleet was dispersed, and harvest rates were consistent throughout the sections. In 2020, and 2021 effort was twice that in 2019, however, the fleet was more localized in the Hobart Bay/Port Houghton area where a larger percentage of the overall harvest came from, which could be cause for concern. This upcoming season, the department will be extremely attentive to harvest rates.

The recent 10-year average harvest is 41,300 pounds. The 2021/22 season's harvest was 51,000 pounds and the season closed on October 8.

Sections 11-A/B/C (11-Remainder)—**will reopen with a GHL of 4,000 pounds**.

A GHL of 7,500 pounds of spot and coonstripe shrimp was established for Sections 11-A/B/C for the 2012/13 season. Due to the observed decreases in commercial CPUE in Section 11-A adjacent to the community of Juneau, combined with an analysis of Division of Sport Fish creel data indicating the sport and personal use harvest was at least equal to the commercial harvest, Section 11-A was closed in 2013 to all shrimping to rebuild stock health. A department survey of **Section 11-A** was conducted in the winters of 2018, 2019, and 2020 with the results pointing to a stock experiencing recruitment failures for multiple years and the area **will remain closed** to preserve the existing spawning stock. The Sections 11-A/B/C 7,500-pound GHL was in place through the 2016/17 season and declining CPUE and concerns of serial depletion led to the closure of Endicott Arm and a reduction of the GHL to 4,000 pounds for Sections 11-A/B/C for the 2017/18 and 2018/19 seasons.

Sections 11-A/B/C has exhibited serial depletion of the spot shrimp stock with the sequential closures of Section 11-A in 2013, Endicott Arm in 2017, and the entirety of the area due to declines in commercial CPUE and harvest in 2019. It is anticipated Sections 11-A/B/C openings will remain on a multiple-year rotational strategy.

The recent 10-year average harvest is 5,800 pounds of spot and coonstripe shrimp. This area was closed for the 2021/22 season.

Section 11-D (Seymour Canal)—will remain closed.

A GHL of 20,000 pounds of spot and coonstripe shrimp was established for all of District 11 in 1995. In 2012, the BOF established separate GHRs of 0 to 30,000 pounds of spot shrimp for Section 11-D and 0 to 15,000 pounds of spot and coonstripe shrimp for Sections 11-A/B/C. In the 2011/12 and 2012/13 seasons, an experimental inseason management approach modeled on the spawner index (SI) method utilized in British Columbia, Canada was investigated in Section 11-D, but managers felt that with the small extent of the fishing area and rapid pace of the fishery, the SI approach was not suitable and reverted to the preseason GHL approach for the 2013/14 season. Based on declines in commercial CPUE and the observed contraction of the area fished while investigating the SI approach, the GHL for Section 11-D was reduced to 15,000 pounds for the 2013/14 season and was further reduced to 12,000 pounds for the 2014/15 through 2018/19 seasons. With continuing declines in CPUE and further contraction of the fishing grounds the GHL was reduced to 10,000 pounds for the 2019/20 season.

Commercial CPUE in the 2019/20 season decreased from the previous season to the lowest since the 2001/02 season. Surveys were conducted here for the first time in 2021 and 2022, and results from the third year in 2023 will help establish a baseline to inform future management decisions.

The recent 10-year average harvest is 13,700 pounds. This area was closed for the 2021/22 season.

District 12–Tenakee Inlet (12-T)—will remain closed.

A GHL of 20,000 pounds of spot shrimp was established for all of District 12 in 1995. In the 2000/01 season the entire 20,000-pound GHL for the district was taken from Tenakee Inlet and for the 2001/02 season Tenakee Inlet was separated from the District 12 remainder (12-R) and given its own GHL of 20,000 pounds, and a 15,000-pound GHL was put in place for 12-R. The Tenakee Inlet GHL was increased to 28,000 pounds for the 2005/06 season. With declining CPUE in department preseason surveys, the GHL for Tenakee Inlet was reduced to 17,000 pounds for the 2008/09 season and was further reduced to 10,000 pounds for the 2010/11 season. Following the 2011 preseason survey a stock collapse was evident, and Tenakee Inlet was closed to commercial harvest. With continuing declines in preseason survey performance, Tenakee Inlet was closed to sport and personal use shrimping in 2012. With survey results returning to near baseline levels, personal use and sport shrimping was reopened in December of 2017 and the commercial fishery was reopened in 2018.

A set 2-day commercial fishery in 2018 with a GHL of 7,500 pounds of spot shrimp and an area closure west of Long Bay to provide some refugia resulted in minimal effort or harvest. Tenakee Inlet was again opened in 2019 with a 7,500-pound GHL. With 6 boats on the grounds, managers set the season for 2 days again, with the fishery occurring in the same area as the preseason survey. Harvest was 11,900 pounds of spot shrimp. A similar set 2-day opening in 2020 drew 6 boats again with a harvest of 11,700 pounds. In 2021, it was announced that Tenakee Inlet would open for 2 days and then the survey was conducted and CPUE of small size class shrimp dropped so substantially that the area was closed a week before the season opener. The 2022 survey showed continued decrease of small size class shrimp CPUE and a significant decrease in large size class shrimp CPUE from the 2021 results. Overall CPUE from the 2022 survey is at the lowest level yet and there appears to be a recruitment failure with minimal small size class shrimp observed. The personal use and sport shrimp pot fisheries were closed effective March 17, 2023. With no survey or harvest data from the eastern portion of Tenakee Inlet, the stock status of the entire inlet is unknown and the personal use and sport fishery was closed west of the longitude of Corner Point to potentially provide some indication of abundance from the permits. Tenakee Inlet will not be included in the rotational fishery management strategy in the Juneau Area at this time. The preseason survey will monitor the health of the shrimp population and inform commercial fishery opportunities.

The recent 10-year average harvest is 8,800 pounds (only includes 3 seasons). This area was closed for the 2021/22 season.

District 12–Remainder (12-R)—will be closed.

The 15,000-pound GHL of spot shrimp for 12-R was reduced to 10,000 pounds for the 2008/09 season, and due to declining commercial CPUE and fishermen concerns the area was closed to rebuild the stock from the 2012/13 through 2014/15 seasons. 12-R was reopened for the 2015/16 season with a reduced GHL of 7,500 pounds; CPUE remained poor, and the area was closed again for the 2016/17 through 2018/19 seasons. 12-R reopened for the 2019/20 season with a GHL of 7,500 pounds, was closed for the 2020/21 season, and reopened for the 2021/22 season with a GHL of 7,500 pounds.

After a three-year closure to rebuild stocks, 12-R was reopened for the 2015/16 season with catch rates in Kelp Bay, the primary driver of this GHL area unchanged, and another three-year closure was instated to continue to rebuild stocks. This area reopened for the 2019/20 season with a GHL of 7,500 pounds and a harvest of 10,300 pounds. Kelp Bay saw improved commercial CPUE and harvest with fishermen reporting consistent CPUEs but noted a decreasing size of shrimp over the course of the season. Freshwater Bay performed well but did not have any commercial effort for 7 years prior to the 2019/20 season. There was no effort in the Point

Couverden analysis area. Four boats made landings in the 2021/22 season with nearly 90% of the total harvest coming from Kelp Bay. CPUE in Kelp Bay dropped substantially from the 2019/20 season to below baseline for that analysis area. 12-R openings are anticipated to remain on a multiple-year rotational strategy.

The recent 10-year average harvest is 7,900 pounds (only includes 3 seasons). The 2021/22 season's harvest was 5,700 pounds and the season closed October 8.

Sections 13-A/B—GHL will remain at 15,000 pounds.

Sections 13-A/B were separated from Section 13-C with a GHL of 15,000 pounds of spot shrimp beginning with the 2000/01 season. The GHL has not been modified since its inception. Fishery performance is the only information available for an indicator of stock health. Sectionwide commercial CPUE increased from last season and is above baseline.

The recent 10-year average harvest is 16,000 pounds. The 2021/22 season's harvest was 14,500 pounds and the season closed October 7.

Section 13-C—will remain closed.

GHLs for Section 13-C have steadily been reduced over the last 15 years: from 42,000 pounds to 34,000 pounds for the 2007/08 season, to 30,000 pounds for the 2008/09 season, to 26,000 pounds for the 2012/13 season, to 16,000 pounds prior to the 2017/18 season. In the more productive Hoonah Sound portion of Section 13-C, annual surveys were conducted from 1998 through 2014 and 2017 through 2022. Due to continued poor stock health metrics from the survey, Section 13-C has remained closed since the 2020/21 season.

Overall, results from the preseason surveys conducted from 2017 through 2022 indicated poor stock health in Hoonah Sound. However, in 2020, the survey catch rate of large size class shrimp continued to increase following 2 years of record and near-record lows in 2018 and 2019. The absence of small size class shrimp continues to be a concern since the near-record low in 2019. Both the subsistence and sport shrimp fisheries in Hoonah Sound have been closed since March 1, 2020.

The average harvest from 2010–2019 is 24,000 pounds. This area has been closed since the 2020/2021 season.

District 14—**will reopen with a GHL of 7,500 pounds**.

A GHL of 20,000 pounds of spot shrimp was established for District 14 in 1995. With declining commercial CPUE, the GHL was reduced to 15,000 pounds for the 2006/07 season and further reduced to 10,000 pounds for the 2008/09 season. The fishery closed for 3 seasons to rebuild the stock and reopened for the 2012/13 season with a GHL of 10,000 pounds. With CPUE unchanged, District 14 closed again for 3 seasons. The district reopened for the 2016/17 season with a reduced GHL of 7,500 pounds and an alternate-year rotational harvest strategy. In the 2020/21 season, overall fishery CPUE improved substantially over the 2018/19 season. It is anticipated that District 14 openings will remain on a two-year rotational strategy.

The recent 10-year average harvest is 7,400 pounds (only includes 4 seasons). This area was closed for the 2021/22 season.

District 15-East—GHL will remain at 3,500 pounds of coonstripe shrimp in Taiya Inlet. Chilkoot and Lutak Inlets will remain closed.

Historically, the District 15 GHR for coonstripe shrimp was 0 to 20,000 pounds districtwide through the 2004/05 season. The GHR was reduced 25% (0 to 15,000 pounds) for the 2005/06 season in response to conservation concerns, which resulted in a 3-year closure from 2006/07 to 2008/09. The district reopened in the 2009/10 season under a new spatial management strategy that involved managing District 15 as 2 separate

areas each with specific GHLs. The 2 core fishing areas became District 15 East and the remainder of District 15. District 15 East encompasses Lutak, Chilkoot, and Taiya Inlets. District 15 East has been managed for a GHL of 7,500 pounds since reopening in 2009/10 until the 2018/19 season when the GHL was reduced to 3,500 pounds. In addition, Chilkoot and Lutak Inlets were closed due to stock health concerns, leaving Taiya Inlet the only open area. Chilkoot and Lutak Inlets opened for the 2019/20 season, but fishery performance remained poor. These areas have remained closed since the 2020/21 season. This alternative management strategy of splitting the district into 2 separate fishing areas, each with specific GHLs, proved to be more sustainable and was adopted into regulation at the Alaska BOF meeting in 2022. The new GHR for District 15 East is 0 to10,000 pounds of coonstripe shrimp.

During the 2021/22 season, standardized CPUE in Taiya Inlet increased and remained above baseline showing a significant 4-year trend. The minimum requirements for dockside sampling were not met, however the limited data did show that mean CL was at baseline, and L_{50} decreased and was at baseline.

The recent 10-year average harvest is 6,300 pounds of coonstripe shrimp which includes harvests from Chilkoot, Lutak, and Taiya Inlets. The 2021/22 season's harvest in Taiya Inlet was 5,400 pounds and the season closed October 22.

District 15-Remainder —GHL will remain at 7,500 pounds of coonstripe shrimp.

The remainder of District 15 includes Chilkat Inlet and waters of Lynn Canal south of the latitude of Ayiklutu Point and north of the latitude of Little Island Light. The traditional, core fishing area occurs in Chilkat Inlet. The remainder of District 15 has been managed for a GHL of 7,500 pounds since reopening for the 2009/10 season. Commercial CPUE dropped precipitously in the 2015/16 season to the lowest on record. There was no harvest during the 2016/17 season. The 2017/18 and 2018/19 season's CPUE was at baseline levels, but CL decreased. The 2019/2020 season's CPUE increased to the highest level compared to the prior 7 seasons and was above baseline. During the 2020/21 season there was a dramatic decrease in CPUE, and during the 2021/22 season, CPUE increased and was above baseline. Harvest and effort decreased from the previous 2 years, and this area remains highly variable with no significant 4-year trend. Dockside samples collected during the 2021/22 season were too limited to draw any significant conclusion on stock health, however, the limited data did show L_{50} above baseline and CL at baseline. During the BOF meeting in 2022, the board adopted a new GHR for the remainder of District 15 which is now 0 to 10,000 pounds of coonstripe shrimp.

The recent 10-year average harvest in Chilkat Inlet is 4,800 pounds of coonstripe shrimp. The 2021/22 season's harvest is confidential. District 15 remainder closed by regulation on February 28, reopened for the spring/summer season, then closed for the season on May 27, 2022.

District 16—will reopen with a GHL of 12,000 pounds.

A GHL of 20,000 pounds of coonstripe shrimp was established for District 16 in 1995. With declining commercial CPUE, the GHL was reduced to 15,000 pounds for the 2004/05 season and with continued declines closed for 3 seasons to rebuild stocks. The fishery reopened in 2008 with a 15,000-pound GHL of spot and coonstripe shrimp and an alternate-year rotational harvest strategy was established. The spot shrimp contribution has historically made up a significant proportion of the harvest, and in recent seasons has been as high as 70% of the harvest. The GHL has been considered in total pounds of shrimp, combining coonstripe and spot shrimp, since the alternate-year rotational harvest strategy has been in place.

This district was the first in the region to employ the alternate-year rotational harvest strategy to reduce impacts on the stock, beginning with the 2008/09 season. This fishery opened for the sixth time in its biennial schedule in 2018 and CPUE of all shrimp decreased to levels that prompted the initial three-year closure in the 2005/06

season, so the fishery was again closed for 3 consecutive seasons from 2019/20 through 2021/22. The 2018/19 season harvest of 5,400 pounds of spot and coonstripe shrimp was the second season since rotational fisheries began that the GHL was not harvested. The District 16 GHL will be reduced by 20% to 12,000 pounds and it is anticipated that openings will remain on a multiple-year rotational strategy.

The recent 10-year average harvest is 10,900 pounds of spot and coonstripe shrimp (only includes 4 seasons). This area was closed for the 2021/22 season.

References Cited

Schoenfeld, M., M. Reynolds, and Q. Smith 2023. Southeast Pot Shrimp Stock Status Prior to the 2023/24 Season. Alaska Department of Fish and Game, Fishery Data Series No. 20-XX, Anchorage

Table 1.–GHLs in pounds whole weight by season for the Registration Area A shrimp pot fisheries, 2007/08 through 2021/22 seasons.

Fishing	2023/24	2021/22	2020/21	2019/20	2018/19	2017/18	2016/17	2015/16	2014/15	2013/14	2012/13	2011/12	2010/11	2009/10	2008/09	2007/08
1	50,000	50,000	50,000	50,000	64,000	64,000	64,000	64,000	50,000	50,000	50,000	50,000	50,000	50,000	78,700	98,400
2	40,000	40,000	40,000	30,000	29,400	29,400	29,400	42,000	52,000	65,000	65,000	65,000	65,000	65,000	86,000	86,000
3-A	114,000	114,000	114,000	114,000	114,000	114,000	114,000	114,000	95,000	95,000	95,000	95,000	95,000	158,400	158,400	198,000
3-B/C	20,000	20,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	40,000	40,000	40,000
4	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000
5	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000
6-B/C/D[5]	15,000[1]	15,000[1]	30,030[3]	34,320[3]	51,480[3]	44,800[3]	32,000[3]	20,800[3]	36,800[3]	38,400[3]	38,400[3]	24,000	68,000	68,000	68,000	82,000
7[2]	74,300[3]	74,300[3]	74,300[3]	74,300[3]	74,300[3]	96,590[3]	81,730[3]	74,300[3]	70,070[3]	77,500[3]	80,700[3]	54,600	54,600	78,000	78,000	78,000
8-A/10-C[5]	12,000	12,000	12,000	12,000	12,000	–	–	–	–	–	–	–	–	–	–	–
8-B/6-A[5]	15,000	15,000	15,000	15,000	15,000	10,500	10,500	10,500	10,500	15,000	15,000	15,000	15,000	20,000	20,000	20,000
9	**10,000**	6,500	6,500	6,500	6,500	11,000	11,000	11,000	14,000	14,000	14,000	14,000	18,000	18,000	18,000	18,000
10-A/B[5]	35,000	35,000	35,000	35,000	35,000	29,000	29,000	36,000	36,000	36,000	48,000	48,000	48,000	48,000	48,000	48,000
11-A/B/C	**4,000**	Closed	Closed	Closed	4,000	4,000	7,500	7,500	7,500	7,500	7,500	–	–	–	–	–
11-D	Closed	Closed	Closed	10,000	12,000	12,000	12,000	12,000	12,000	15,000	N/A[4]	20,000	20,000	20,000	20,000	20,000
12-Ten	Closed	Closed	10,000	7,500	7,500	Closed	Closed	Closed	Closed	Closed	Closed	Closed	10,000	17,000	17,000	28,000
12-Rem	**Closed**	7,500	Closed	7,500	Closed	Closed	Closed	7,500	Closed	Closed	Closed	10,000	10,000	10,000	10,000	15,000
13-A/B	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000
13-C	Closed	Closed	Closed	16,000	16,000	16,000	26,000	26,000	26,000	26,000	26,000	30,000	30,000	30,000	30,000	34,000
14	**7,500**	Closed	7,500	Closed	7,500	Closed	7,500	Closed	Closed	Closed	10,000	Closed	Closed	Closed	10,000	15,000
15-East[6]	3,500	11,000	11,000	11,000	11,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	Closed	Closed
15-Rem[6]	7,500															
16	**12,000**	Closed	Closed	Closed	15,000	Closed	15,000	Closed	15,000	Closed	15,000	Closed	15,000	Closed	15,000	Closed
TOTAL	466,800	457,300	482,330	500,120	551,680	523,290	531,630	517,600	524,870	539,400	564,600	525,600	598,600	692,400	752,100	835,400

Table Notes: All GHLs with the exception **of 11-A/B/C, 15, and 16 are GHLs for spot shrimp. 11-A/B/C and 16 GHLS are combined spot and coonstripe shrimp and 15 is for coonstripe shrimp only.** Bolding for 2021/22 GHLs indicates a change from the 2020/2021 season.

[1] Section 6-B/C/D GHL is expected harvest for a set 8-day opening.

[2] District 7 GHL may be adjusted in season. District 6 base = 42,900 pounds and District 7 base = 74,300 pounds.

[3] GHLs were adjusted in season. District 6 base = 32,000 pounds for years 2012 through 2016, then increased to 42,900 starting in 2017. District 7 base = 63,700 pounds for 2012 through 2014, then increased to 74,300 stating in 2015.

[4] Section 11-D did not have a GHL assigned in the 2012/13 season due to experimentation with Spawner Index based management.

[5] New area in 2018.

[6] New area in 2022.

Table 2.–Shrimp pot fishery harvest in whole pounds by season for the Registration Area A shrimp pot fisheries, 2006/07 through 2021/22 seasons.

Fishing Area	2021/22	2020/21	2019/20	2018/19	2017/18	2016/17	2015/16	2014/15	2013/14	2012/13	2011/12	2010/11	2009/10	2008/09	2007/08	2006/07
1	53,162	55,125	57,536	57,925	73,114	72,790	61,718	65,993	55,615	70,000	54,688	36,682	46,572	53,278	87,556	141,851
2	33,270	53,316	43,569	31,296	27,758	30,629	39,205	50,915	62,058	74,554	76,002	68,724	64,522	87,947	89,787	99,090
3-A	139,470	132,684	128,215	105,959	132,102	135,730	115,950	112,061	122,914	107,068	97,580	84,711	135,276	118,845	182,137	205,435
3-B/C	17,977	27,315	23,682	21,733	33,422	37,562	30,405	36,049	26,717	33,107	40,116	33,104	46,980	30,136	44,703	47,305
4	9,940	17,232	17,956	14,429	18,353	18,459	19,507	***	***	***	***	21,384	20,795	0	***	15,085
5	***	2,127	***	***	7,656	***	4,464	3,737	***	5,136	8,562	10,523	16,688	8,029	0	10,216
6-B/C/D	4,714	32,609	29,048	38,181	52,179	39,126	26,048	22,040	35,106	35,050	30,657	32,784	48,764	28,551	30,957	70,685
7	91,190	90,378	85,829	77,482	95,952	84,347	80,069	75,452	94,526	81,488	60,073	48,757	74,012	52,349	76,484	80,492
8-A/10-C	14,424	20,554	12,737	10,780	8,924	4,035	3,680	9,386	9,318	9,246	8,431	16,851	18,343	6,454	7,886	10,174
8-B/6-A	14,598	15,099	16,808	16,434	12,132	12,389	9,301	3,588	6,277	9,663	12,302	9,456	13,374	9,586	19,397	25,860
9	11,124	10,622	11,259	5,412	10,784	12,528	12,201	18,435	15,241	16,183	10,795	21,890	18,960	17,139	17,333	24,110
10-A/B	51,091	58,581	62,041	39,973	40,365	34,647	32,693	31,323	31,940	36,419	45,324	47,002	47,483	50,805	39,097	46,599
11-A/B/C	Closed	Closed	Closed	***	4,768	6,888	6,356	6,438	8,313	8,211	***	***	***	***	4,250	***
11-D	Closed	Closed	***	***	***	***	***	***	13,209	21,969	20,877	23,209	25,288	***	***	***
12-Ten	Closed	11,748	11,984	***	Closed	Closed	Closed	Closed	Closed	Closed	Closed	14,072	10,979	12,270	18,371	30,032
12-Rem	5,686	Closed	10,282	Closed	Closed	Closed	5,100	Closed	Closed	Closed	8,335	8,952	7,907	12,382	15,198	18,551
13-A/B	14,457	18,989	15,802	12,696	20,623	18,968	13,454	17,297	16,300	13,769	14,590	13,650	9,446	11,902	11,270	16,819
13-C	Closed	Closed	13,383	14,182	12,693	26,970	26,096	24,919	23,033	28,493	38,109	31,851	25,223	29,614	29,395	36,449
14	Closed	8,474	Closed	5,541	Closed	6,806	Closed	Closed	Closed	8,773	Closed	Closed	Closed	7,736	13,054	13,259
15-East	5,358	3,812	3,700	3,882	4,282	5,486	7,502	10,091	8,111	7,386	8,836	7,031	6,589	Closed	Closed	Closed
15-Rem	*******	8,228	9,829	4,060	***	***	***	4,570	6,263	8,382	5,372	***	***	Closed	Closed	Closed
16	Closed	Closed	Closed	***	Closed	***	Closed	14,706	Closed	***	Closed	***	Closed	***	Closed	Closed
Total	473,406	566,893	563,674	485,748	567,853	568,655	505,581	537,198	550,405	609,275	558,157	548,808	642,354	571,441	703,538	915,540
GHL	457,300	482,330	500,120	551,680	523,290	531,630	517,600	524,870	539,400	564,600	525,600	598,600	692,400	752,100	835,400	853,400
% of GHL	103%	118%	113%	92%	108%	105%	96%	100%	101%	104%	107%	93%	93%	78%	85%	108%
Permits	99	109	101	106	106	108	95	104	109	106	110	108	108	92	108	136

***Table notes*:** Harvest data shown is harvest of spot shrimp, except for 11-Rem, 15, and 16. Districts 11-Remainder and 16 are combined harvest of spot and coonstripe shrimp and District 15 is harvest of coonstripe shrimp only.

*** Confidential information, less than 3 permits reporting.

Table 3.–Summary of commercial shrimp pot fishery management area stock status evaluations following the 2021/2022 season, showing stock status designation (*good, above average, moderate, below average, poor*) and data confidence scores.

Management Area	Fishing Area Unit	Stock Status	Matrix Score	Standardized Score	Data Confidence
Ketchikan	District 1	Moderate	-0.70	-0.10	0.35
	District 2	Below Average	-1.22	-0.25	0.48
	Section 3-A	Moderate	-0.03	-0.01	0.54
	Sections 3-B/C	Poor	-0.73	-0.63	0.18
	District 4	Above Average	0.50	0.00	0.20
Petersburg	District 5	Moderate	0.00	0.00	0.07
	Sections 6-B/C/D	Poor	-0.70	-0.60	0.18
	District 7	Above Average	1.39	0.23	0.60
Petersburg	Sections 8-A, 10-C	Moderate	-0.19	-0.16	0.20
	Sections 8-B, 6-A	Good	0.79	0.67	0.18
Sitka	District 9	Moderate	0.11	0.09	0.19
Petersburg	Sections 10-A/B	Below Average	-0.51	-0.21	0.32
Juneau	Sections 11-A/B/C	Closed	0.00	N/A	0.00
	Section 11-D	Closed	0.00	N/A	0.00
	12-Tenakee	Below Average	-1.08	-0.39	0.30
	12-Remainder	Poor	-1.00	-0.86	0.13
Sitka	Sections 13-A/B	Moderate	0.00	0.00	0.18
	Sections 13-C	Above Average	1.00	0.76	0.27
Juneau	District 14	Closed	N/A	N/A	0.00
Haines	15-East	Above Average	0.50	0.33	0.13
	15-Remainder	Moderate	0.00	0.00	0.18
Juneau	District 16	Closed	N/A	N/A	0.00

Notes: Stock status designations: Designations of *Good, Above Average, Moderate, Below Average, or Poor* are provided from a standardized matrix score based on equal weighting of all data categories available by geographic subdivisions, long-term and short-term trends.

Standardized scores: The standardized score is used to compare among districts and ranges from +1 to -1. The standardized score is calculated as the score divided by the total possible score for a given management unit. A standardized score of ≥0.6 gives a stock status of Good, 0.2 to 0.59 Above Average, -0.19 to 0.19 Moderate, -0.2 to -0.59 Below Average, and ≤-0.6 Poor.

Data confidence: Percentage of data sources available in any given area, out of all possible sources.