

**Annual Management Reports of the 2004/2005, the
2005/2006, and the 2006/2007 Southeast Alaska
Commercial Fisheries for Geoduck Clams, Red Sea
Cucumbers, and Red Sea Urchins**

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May 2008



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**ANNUAL MANAGEMENT REPORTS OF THE 2004/2005, THE 2005/2006,
AND THE 2006/2007 SOUTHEAST ALASKA COMMERCIAL FISHERIES
FOR GEODUCK CLAMS, RED SEA CUCUMBERS, AND RED SEA
URCHINS**

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ABSTRACT

The miscellaneous shellfish, dive gear commercial fisheries in Southeast Alaska are directed at the harvest of geoduck clams, red sea urchins and red sea cucumbers. Historical summaries for each of these fisheries and their management plans are presented. The Southeast Alaska Regional Dive Fisheries Association (SARDFA) was established by the Alaska legislature in 1997 and represents all of the 574 limited entry permit holders. SARDFA provides support for fishery development and stock assessment by determining landing tax rates for each species, and by recommending new areas to be surveyed for stock assessment by the Alaska Department of Fish and Game. Each fishery is conducted in accordance with a management plan in regulation developed by the Alaska Board of Fisheries, Alaska Department of Fish and Game and the commercial fishing industry. The combined exvessel value of these fisheries is estimated at \$5.5 million in 2004–2005, \$4.1 million in 2005–2006, and \$6.2 million in 2006–2007.

Key words: Annual Management Report, California sea cucumbers, CFEC, Commercial Fisheries Entry Commission, commercial harvest, geoduck clams, Guideline Harvest Levels, *Panopea abrupta*, *Parastichopus californicus*, red sea urchins, red sea cucumbers, SARDFA, sea cucumbers, Southeast Alaska, Southeast Regional Dive Fishery Association, *Strongylocentrotus franciscanus*

INTRODUCTION

SOUTHEAST ALASKA DIVE FISHERIES

This report provides a general overview of the directed, miscellaneous shellfish dive fisheries in Southeast Alaska. These fisheries commercially harvest three species of marine invertebrates including: geoduck clams (*Panopea abrupta*), red sea cucumbers (*Parastichopus californicus*), and red sea urchins (*Strongylocentrotus franciscanus*.) The commercial dive fishery for a fourth miscellaneous shellfish species, abalone (*Haliotis kamschatkana*) has been closed to commercial harvest since 1995 and is not included in this report.

The Southeast Alaska and Yakutat areas are combined for fishery management purposes into Region I, which consists of Alaska waters between Cape Suckling on the north and Dixon Entrance on the south. The region is divided into two registration areas. Area A, the Southeast Alaska area, includes waters from Dixon Entrance to Cape Fairweather, and Area D, the Yakutat area, includes waters from Cape Fairweather to Cape Suckling. Southeast Alaska dive fisheries occur in miscellaneous shellfish registration Area A. This area is divided into 16 districts which are defined in regulation as Districts 1–16. Each district is further divided into several statistical subdistricts for catch reporting and management purposes. Geoduck clam fishing areas have been further subdivided by specific bed code. The Ketchikan Alaska Department of Fish and Game (ADF&G) office manages fisheries which occur in Districts 1–4; the Petersburg and Wrangell ADF&G offices manage Districts 5–10, excluding Section 9-A; the Sitka ADF&G office manages Section 9-A, District 12 south of Point Hayes along the Baranof Island shoreline, and District 13; and the Juneau ADF&G office manages Districts 11–16.

Southeast dive fisheries are comparatively recent additions to the region's commercial fishing industry. Commercial salmon and herring fisheries date back to the late 1800s. The first commercial landings for abalone occurred in the mid 1960s, but red sea urchin, red sea cucumber, and geoduck clam fisheries did not start until the early to middle 1980s. Participation in each fishery began with just one or two divers, increased rapidly as fisheries and markets were developed, was capped during moratorium periods, and following that the number of permits was established under the limited entry program. Currently, each fishery is a competitive, limited entry fishery with transferable permits. In 2006 there were a total of 574 limited entry permits available including 104 in the geoduck fishery, 388 in the red sea cucumber fishery, and 82 in

the red sea urchin fishery. Actual participation is presently well-below the levels that the limited entry program allows, but is subject to fluctuation. Fish ticket data during the 2006–2007 season indicates 251 permits reported landings including 66 for geoduck clams, 174 for red sea cucumbers, and 11 for red sea urchins (Tables 1, 2, and 3).

The exvessel value of the 2004–2005 Southeast Alaska dive fisheries is estimated at approximately \$5,497,000. The average price reported for geoduck clams and red sea cucumbers is based on fish tickets¹, and the average price reported for red sea urchins is based on processor logbooks. The harvest of red sea cucumbers was valued at \$2,905,286 (53% of total 2004–2005 dive fishery value), followed by geoduck clams at \$2,104,995 (38%), and red sea urchins at \$486,511 (9%) (Tables 1, 2, and 3).

The exvessel value of the 2005–2006 Southeast Alaska dive fisheries is estimated at approximately \$4,063,000. The average price reported for geoduck clams and red sea cucumbers is based on fish tickets, and the average price for red sea urchins is based on processor logbooks. The harvest of red sea cucumbers was valued at \$2,878,199 (71% of total 2005–2006 dive fishery value), followed by geoduck clams at \$887,402 (22%) and red sea urchins at \$297,042 (7%) (Tables 1, 2, and 3).

The exvessel value of the 2006–2007 Southeast Alaska dive fisheries is estimated at approximately \$6,152,000. The average price reported for geoduck clams and red sea cucumbers is based on fish tickets and the average price for red sea urchins is based on processor logbooks. The harvest of red sea cucumbers was valued at \$3,127,024 (51% of total 2006–2007 dive fishery value), followed by geoduck clams at \$2,819,219 (45%) and red sea urchins at \$205,425 (3%) (Tables 1, 2, and 3).

COMMERCIAL FISHERIES ENTRY COMMISSION

Prior to July 1, 1996, entry into Southeast Alaska’s dive fisheries was open access, requiring an interim use permit issued by the Commercial Fisheries Entry Commission (CFEC), in addition to a miscellaneous shellfish harvest permit from ADF&G for participation. Historically, most fisheries began slowly with little effort, but interest grew relatively quickly as exvessel value increased, new markets opened, and fishers explored for new ways to expand beyond the more traditional fisheries such as salmon or groundfish. Effort quickly soared to levels that made it

¹ [Editor’s note: Values based on fish tickets may underestimate actual prices paid to fishermen since any price adjustments after delivery are not recorded in the fish ticket database. In addition, values reported on geoduck tickets may not be accurate since price was reported for only 20% of total poundage in 2004–2005, 35% of total poundage in 2005–2006, and 31% of total poundage in 2006–2007. In contrast with geoducks, values for red sea cucumbers were reported on fish tickets for 97% of the total pounds landed. Red sea urchin prices are in large part determined following processing based on roe recovery and have been compiled by processor logbook data provided to ADF&G within 30 days of delivery. Price information is also compiled by CFEC based on processor’s annual reports, but is not generally available until several years after fisheries and is determined for the calendar year, not the commercial fishing season to which this report applies. The prices and exvessel values in this report are therefore included to provide the reader with an appreciation of the economic importance of the dive fisheries and recent trends in the development of these fisheries.]

difficult for the department to manage each fishery, and the relative share of individual fisher's proceeds quickly diminished.

In 1996 the Alaska State Legislature established a four-year moratorium on interim-use permits for the Southeast dive fisheries. The legislation, HB 547, was incorporated into statute as AS 16.43.228. The moratorium specified a cap on the total number of interim-use permits in the Southeast Alaska abalone, geoduck, sea cucumber, and sea urchin fisheries. This legislation temporarily halted growth in the number of participants in these fisheries and provided specific eligibility criteria to be used in each fishery.

The effective duration of the moratorium was July 1, 1996 through June 30, 2000. During the moratorium, the legislation directed the CFEC to consult with the Alaska Board of Fisheries (BOF), ADF&G, and the participants in these fisheries to consider a permanent limited entry program. The legislation also directed the CFEC to determine the type of limited entry program that would be most appropriate for these fisheries. These fisheries would have returned to open access on the expiration date unless the CFEC limited these fisheries under the current limited entry law.

In September 1999, the CFEC proposed to adopt regulations for limiting entry into the geoduck clam and sea urchin dive fisheries. For these fisheries, the CFEC proposed to establish: 1) the maximum numbers of permits to be issued for each fishery; 2) July 1, 1996 as the date for determining an applicant's qualifications for a Southeast Alaska geoduck clam or red sea urchin dive entry permit; 3) time periods for each fishery in which an individual must have participated in the fishery as an interim-use permit holder to be eligible to apply for an entry permit; and 4) definitions for the proposed limitation of the geoduck clam and red sea urchin dive fisheries. The CFEC originally proposed a return to open access status for the red sea cucumber and abalone dive fisheries at the end of the moratorium. Following a series of public comment periods and meetings, and after staff developed options for limiting entry, the three current dive fisheries became limited entry fisheries. Red urchins were finalized in November of 2000, and red sea cucumbers and geoduck clams were finalized in May of 2001. The maximum number of limited entry permits originally authorized for each fishery was 104 for geoduck clams, 436 for red sea cucumber, and 95 for red sea urchins. In 2006 a total of 584 individuals are eligible for the Southeast Alaska dive fisheries, 113 for geoduck clams, 388 for red sea cucumbers and 83 for red urchins. Abalone is currently classified as an open access fishery. Included among fishermen eligible for the geoduck fishery are 104 with limited entry permits and nine who have interim access permits. Interim access permits are provided for individuals who have applied for limited entry permits, but whose applications have not as yet been resolved.

SOUTHEAST ALASKA REGIONAL DIVE FISHERIES ASSOCIATION

State general funds have not been sufficient to fund the costs of management and research activities required to maintain the dive fishery program and the industry the program supports. This funding gap has been filled through financial contributions by processors, local municipalities, federal funding, voluntary diver assessments, and test fishing projects in which the resource was harvested and sold by the state. These were ad hoc attempts to keep the dive fisheries open. The industry divers throughout Southeast saw a need to establish an organization and provide for a funding mechanism to meet the funding gap and continue to support and expand the dive fisheries. Through municipality funding, industry divers hired a project coordinator to develop and promote state legislation addressing this need. The legislation, CSHB

198, passed unanimously in the House and Senate, was signed by the governor June 20, 1997 and became effective June 21, 1997. CSHB 198 allowed for the creation of the Southeast Alaska Regional Dive Fisheries Association (SARDFA), which is empowered to select appropriate tax rates on dive fishery landings to help pay for fishery development.

SARDFA is a non-profit, economic development corporation. Voting members include all permit holders for the three southeast dive fisheries (geoduck clams, red sea cucumbers, and red sea urchins). The SARDFA is managed by a board of nine directors which is elected by the membership. The board composition includes one director from each of five Southeast communities (including Ketchikan, Craig, Sitka, Petersburg, and Wrangell), one from the State of Washington, one at-large, one from a municipality, and one from the processing sector.

SARDFA has created committees to focus on the specific needs of each dive fishery. Currently, the urchin, geoduck clam, and sea cucumber committees add another twenty-eight voices to fishery management. This diversity helps to air concerns and allows for industry input. These committees are advisory to the SARDFA board. The board reviews and votes on committee recommendations and negotiates approved recommendations with ADF&G. The department is required by the State of Alaska to protect the integrity of the state's fisheries; therefore ADF&G managers will not approve any recommendations which they do not feel supports a sustainable fishery.

The SARDFA's mission is to develop, expand, and enhance new and existing dive fisheries in Southeast Alaska in a sustainable and economically feasible manner. The first year of collected tax on the dive fisheries totaled \$227,985 (FY2000). For the 2006–2007 (FY2007) season total tax collected was \$417,252 (Table 4). This 83% increase is directly related to economic growth in the dive fisheries and indicates the successful role of SARDFA in the furthering development of dive fisheries.

GEODUCK CLAMS

BACKGROUND

Geoduck clam beds are known to have a patchy distribution in the central and southern portions of Southeast Alaska, primarily in protected waters near the outside coast. Studies conducted in Washington State, British Columbia and in Southeast Alaska indicate this clam lives to be over 100-years old (Bureau et al. 2003). Southeast Alaska is the extreme northern limit of the geographic range of this species and recruitment is sporadic or very low seasonally.

A reoccurring problem in the geoduck clam commercial fishery is the tendency for geoduck clams to bioaccumulate high levels of toxins which cause paralytic shellfish poisoning (PSP). This is most strongly associated with the clam's viscera. However, the mantle and necks are the usual body parts consumed and PSP concentrations are lower in these parts. Though this situation permits the sale of processed clams with viscera removed, exvessel value for processed clams is significantly less than that for whole, live product.

In order to protect consumers, the state requires that each individual fishery be sampled and clams tested by the Alaska Department of Environmental Conservation (ADEC). The sample, which represents clams within a commercial fishing area, must fall under a PSP criteria of 80 ug/100 grams of tissue prior to the opening of a fishery by ADF&G. In addition, water quality on commercial clam beds is tested for human pathogenic microorganisms and certified safe by ADEC. The time required for transport and testing of samples and the relatively short shelf life

of the fresh product require a close working relationship between fishery managers and industry in order to successfully market the product. The current PSP protocol is a modified version that was initially adopted prior to the 2003–2004 season. This modification was based on the two seasons (2003–2004 and 2004–2005) of PSP data collected by ADEC. These modifications will allow an additional day of harvesting opportunity, and fewer test samples prior to harvesting and marketing of live product. The additional day can also be used as a travel and fishery notification day for fishermen. These changes will reduce cost to the industry, increase live clam marketing opportunities, and maximize the fishery’s economic value.

FISHERY DEVELOPMENT AND HISTORY

Starting in 1978 with a geoduck clam survey at Noyes Island in District 3, state grants were used to find and qualitatively assess commercial geoduck clam beds in the Ketchikan, Craig, Petersburg-Wrangell, and Sitka areas. A number of potential commercial beds were located near Ketchikan, Craig, and Sitka. Procedures for testing and certifying the product for human consumption were established by the ADEC. Population assessment surveys were conducted on three beds on Noyes Island near Craig, a harvestable biomass was estimated, and the ADEC completed sanitation surveys on these areas. Two processors conducted the required modifications to their facilities and procedures to handle batch processing, lot testing, and product quarantine, and were certified to process geoducks. ADEC required a PSP test of each diver’s harvest or lot prior to live shipment.

In late 1985, the first permit was issued for the commercial harvest of geoduck clams. During the 1985–1986 season almost 144,000 pounds of the 300,000 pound, five-year quota were harvested by eight divers in the Noyes Island area in Ulitka Bay, Little Steamboat Bay, and Steamboat Bay (Table 1). During the 1986–1987 season, 28,191 pounds were harvested by only three divers. The decline was mainly due to poor marketing conditions and high operational costs. Increased interest in this fishery began after ADF&G completed a population estimate on the west side of Gravina Island in 1987. During the 1987–1988 season all harvest occurred in the spring of 1988 with a harvest of 124,568 pounds from Vallenar Bay on Gravina Island, and 60,577 pounds from Noyes Island. From the 1988–1989 through 1990–1991 seasons three additional areas on West Gravina Island (South Vallenar Point, Middle Gravina and Nehentna Bay) were successively opened for commercial harvest. Symonds Bay on Biorka Island near Sitka was included in the geoduck fishery during the 1989–1990 season, Foggy Bay was included in the 1990–1991 season, and Kah Shakes (Kirk Point/Bullhead Cove) was included for the 1991–1992 season, bringing the total number of geoduck fishing areas to 10. The Goddard area entered the fishery during the 1998–1999 season and Nakat Inlet was included in the 1999–2000 season. The next four areas, San Cristoval Channel, Cone Island, Port Santa Cruz, and southern Sea Otter Sound, were included beginning in the 2000–2001 season. The Percy and Hotspur Islands and the Port Real Marina/Bucarelli Bay areas were added to the fishery in the 2001–2002 season bringing the total numbers of geoduck fishing areas by the 2001–2002 season to 18. The next stage in the evolution of the geoduck fishery came by way of increased involvement of ADEC in collaboration with ADF&G in the determination of fishing area boundaries. The result of CFEC’s development of an acceptable PSP testing protocol was the subdivision of many existing areas into smaller areas. These fishing area subdivisions primarily took place over a period of years from the 2002–2003 through the 2005–2006 seasons, while other new clam beds were also surveyed and added to the fishery. As of the 2006–2007 season, a total of 34 distinct commercial fisheries have been identified and surveyed in Southeast Alaska, although not all areas are open

each season. It is anticipated that additional new areas will be identified and then surveyed for potential commercial harvest as funds are available. ADEC's current PSP protocol dates to the 2003–2004 season when several fishing areas were redefined and then resurveyed by the department in 2005. Additional details describing the development of the geoduck fishery will be described in a future report that summarizes geoduck research activities by the department.

With the 1991–1992 geoduck fishery there was an increased interest in participation and harvest by divers from Washington State. Prior to the 1991–1992 season non-resident participation was minimal. Exvessel value and the number of divers began to increase with the 1992–1993 season. Participation fluctuated in the late 1990's due to decreasing exvessel value with sales of processed product. However, the changes in PSP testing protocol by ADEC has recently allowed for over 90% percent of the harvested product to be sold live. This development has generated increased exvessel value and effort in the fishery (Table 1).

HARVEST STRATEGY AND INDUSTRY-DEPARTMENT COLLABORATION

A key aspect for providing a sustainable geoduck clam fishery is to harvest at a low exploitation rate due to the species' long-lived nature and sporadic and low recruitment. Harvests formerly took place under the authority of an ADF&G permit to help regulate and develop the fishery; however a permit is no longer required. The fishery is now managed according to 5AAC 38.142. SOUTHEASTERN ALASKA GEODUCK FISHERY MANAGEMENT PLAN. The season occurs from October 1 through May 31, to avoid the summer spawning and recruitment period and to minimize PSP toxin levels.

Harvests are restricted to beds with available biomass estimates. Four areas, including ten beds, had been surveyed prior to 1997 as described in the previous section. The Guideline Harvest Level (GHL) for each area was established at 2% of the harvestable adult population. Following reassessment dive surveys during the summer of 1997, it became apparent that the abundance and distribution of geoducks in fished areas was more limited and patchy than previous surveys had indicated. Preliminary results suggested that previous GHLs established for the geoduck clam fishery might not provide for a sustainable fishery. As a result, ADF&G delayed the opening, originally scheduled for October 1, 1997, until further analysis and review of the survey results were completed.

ADF&G then held public meetings to discuss possible management options for the fishery including the season's opening date. Representatives of CFEC, Fish and Wildlife Protection, and ADEC attended. An opening date and daily open hours were agreed upon and GHLs for each area were established. Generally, the 2% per year annual harvest rate was maintained for most areas but the number of years an area could be left fallow between harvest years was increased for Symonds Bay and west Gravina Island. A two-year rotational harvest was provided for Steamboat Bay and Kah Shakes Cove. This expanded rotational cycle in Symonds Bay allowed for a viable fishery on a small population. At west Gravina Island the expanded rotation provided a greater opportunity for industry to increase revenues and, thereby, to collect additional self-assessment tax to provide funds for future reconnaissance and stock assessment surveys.

An outcome of the meeting prior to the 1997–1998 season was formation of the Southeast Alaska Geoduck Task Force. On January 7, 1998 the task force voted to assess divers \$0.25 on the pound for the February 1998 commercial opening. Through a cooperative agreement between ADF&G and SARDFA, portions of funds generated through this voluntary self-assessment were used to estimate the geoduck clam biomass in Port Alice in the summer 1998, and at Turn Point,

Cone Bay, and Nakat Inlet in the summer of 1999. Port Alice was scheduled to open during the 1998–1999 season but the ADEC water quality sampling was not available in time for the general opening on November 15, 1998 and this area was not opened until the 2000–2001 season.

A cooperative agreement between ADF&G and the Sitka Harvest Divers Association (SHDA) was developed. Following area reconnaissance surveys by SHDA, and using funds provided by SHDA, ADF&G conducted a survey of the geoduck clam populations on the west coast of Baranof Island and nearby islands in portions of Subdistricts 113-31 and 113-41. The Goddard area was first opened for commercial harvest in the 1997–1998 season. The area was subdivided for the 2002–2003 season and now includes three fisheries: Biorka/Legma Island, Taigud/Kolosh Island, and Elovoi/Golf/Gornoi Islands.

Reconnaissance surveys were conducted by industry divers in Sea Otter Sound, Nakat Inlet, and the Goddard area by SARDFa and SHDA prior to population assessment surveys by ADF&G. The purpose of the reconnaissance surveys was for industry to identify the most likely sites capable of supporting commercial geoduck fisheries. This data was then given to ADF&G to plan for biomass assessment surveys. The department has also received Federal Nearshore Funds² that were used through industry contracts to complete reconnaissance surveys for potential commercial beds in a substantial portion of Southeast Alaska during the spring of 2001, 2002, and 2003. Funds provided by SARDFa were available for additional reconnaissance surveys during the spring of 2004 and 2005. Five existing fisheries had additional reconnaissance work done at industry request to better define existing beds and identify additional, new beds not identified during original reconnaissance surveys. The 2005 reconnaissance was conducted in Cone Island North, Cone Island South/Paloma Pass, Port Real Marina, Portillo Channel, and Bucareli Bay fisheries. Cone Island North and Cone Island South/Paloma Pass were surveyed during the 2005 ADF&G survey season. The results from these surveys increased both survey precision and GHL. Since 1998, at least nineteen new fisheries were developed through the process of initial industry reconnaissance surveys, followed by subsequent stock assessment surveys by ADF&G before areas were opened to commercial harvest. Additional reconnaissance was conducted in the Goddard and north Lulu Island areas. Both of these areas were surveyed by the ADFG in the summer of 2006.

Due to changes in ADEC protocol for for Paralytic Shellfish Poisoning (PSP) testing many of the more recently opened commercial fishing areas had to be subdivided into smaller fishery management areas. These redefined areas effectively reduced the number of survey transects then available to estimate biomass within subdivided areas. Consequently, the increased variance between survey transects reduced the statistical precision of population estimates and reduced harvest quotas. As a conservative measure to help ensure sustainable harvests, the department population estimates and quotas are determined based on precision. The subdivided and newly defined fisheries therefore required further stock assessment surveys with additional transects to reestablish statistically adequate population estimates. A consequence was that expansion of the commercial geoduck fishery occurred at a reduced pace since available funding was applied to resurveys of already existing areas instead of new areas. However, in cooperation with

² The reconnaissance and biomass surveys were funded, in part, by grants NA06FN0385 and NA16FN1560 from the National Oceanic and Atmospheric Administration (NOAA). The views expressed are those of the authors and do not necessarily reflect the views of NOAA or any of its sub-agencies.

SARDFA, and under the proven scenario of industry reconnaissance surveys followed by department assessment surveys, survey effort was increased. Additional new fisheries have been added and previous surveys have been enhanced such that as of the 2006–2007 season a total of 34 individual commercial fisheries are defined in Southeast Alaska. It is anticipated that at least two additional new fisheries will be added during the 2007–2008 season. In cooperation with SARDFA, the department expects to continue surveys with potential expansion of the geoduck fishery at least through the 2009 survey season.

REGULATORY DEVELOPMENT

Prior to the January 2000 Board of Fisheries meeting, existing regulation (5 AAC 38.110) referred to the general harvest of clams and required a permit that would be used by the department to specify the species, method of fishing, area of operation, and harvest level. There were no regulations that specifically addressed the Southeast Alaska geoduck clam fishery. ADF&G, in cooperation with the SARDFA geoduck clam committee, developed regulations and a management plan for the Southeast Alaska commercial fishery. The Alaska Board of Fisheries formally adopted the geoduck clam management plan (5 AAC 38.142), during their regular meeting in January 2000, which was in place beginning with the 2000–2001 commercial fishery. The core elements are:

1. There are no size limits for geoduck clams and all geoduck clam harvested must be retained.
2. Annual GHL's must be established for an area before it is open to commercial harvest. The GHL must be based on biomass estimates where biomass surveys have been conducted within the previous 12 years.
3. Commercial harvest gear is limited to dive gear while using a hand-held, manually operated, water jet device.

Prior to the 2003–2004 season, ADF&G opened commercial geoduck clam fisheries in Southeast Alaska with little or no preliminary knowledge of current PSP levels. Harvested clams were held live in recirculated water and held pending ADEC testing prior to clearance for shipment or processing. ADEC also did not have a live shipment program in place for geoduck clams that was based on pre-fishery testing before the 2003–2004 season. Geoduck clams were harvested and then tested in lots before shipment to the live-clam market. Due to requests from SARDFA for changes to ADEC's program, ADEC held a geoduck conference in Anchorage on August 5–6, 2002. Resulting from this conference was implementation of an improved live shipment program for geoducks. This required changes in ADF&G fishery management in order to maximize live geoduck clam sales. The program was enacted prior to the 2003–2004 fishery. During the 2003–2004 and 2004–2005 seasons a significant amount of PSP data was collected by the ADEC. The new program provided for pre-fishery sampling of clams and harvest area approval for live sales in place of post-fishery, lot evaluation. As a result of the new PSP sampling program, in excess of 90% of clams harvested were shipped live, significantly increasing the price per pound and the value of the fishery. During these two years the fishery exvessel value exceeded \$1 million for the first time (Table 1).

Providing for fishery openings in an area based on a sample of clams passing PSP testing for live sale necessitates scheduled and timely pre-fishery sampling, expedited shipment of samples, quick turnaround in the ADEC lab, and a relatively short notice time for ADF&G opening

announcements. Since openings for specific areas could be delayed, then opened on short notice, permit holders are required to closely monitor PSP test results which are posted on ADEC's and SARDFAs web site. If quota is still available near the end of the season due to persistently high PSP levels throughout the season, regulations now allow for a "processed clam" fishery for the unharvested geoduck GHLS beginning around May 11. An additional consequence of managing the fishery based on PSP results is that the fishery, or the potential for opening an area within the fishery, may be extended over a longer time period—from October through May.

During the January 2003 Board of Fisheries meeting, regulation (5ACC 38.142) was amended. The significant addition to the regulation was the establishment of a control site (Port Mayoral) within Subdistrict 103-50. Regulations were also amended to allow ADF&G to consider PSP levels in geoduck clam management (5AAC 38.142 (a)).

During the January 2006 Board of Fisheries meeting, regulations were established requiring logbooks for the geoduck clam fishery under department's EO authority (5AAC 38.142). Logbooks were requested in the 2004–2005 fishery and in the 2005–2006 fishery in cooperation with SARDFAs, and were required by Emergency Order (EO) in the 2006–2007 fishery. Using logbooks fishermen record precise data about commercial harvest locations which can refine understanding about the extent and location of geoduck beds. By knowing more exactly where beds are located, the department can better plan stock assessment surveys, increase the precision of survey results, identify new bed locations for future surveys, and increase harvest guidelines as the fishery continues to develop.

2004–2005 GEODUCK COMMERCIAL HARVEST SEASON

The GHLS for the 2004–2005 season was 476,100 pounds located in 18 separately managed areas in Districts 1, 3, 4, and 13 in Southeast Alaska (Figure 1, Tables 5 and 6). Harvest was 535,516 pounds taken by 60 divers (Tables 1, 5, and 6). The largest area GHLS was 70,900 pounds for the Saint Nicholas and North Lulu Island area in District 3, and the smallest GHLS was 2,800 pounds for the Symonds Bay area in District 13. Other area GHLS fell in between these levels. Combined GHLS for the Ketchikan areas were 461,600 pounds, and combined GHLS for the Sitka areas were 14,500 pounds. The season opened November 2, 2004 and closed on April 14, 2005, with openings provided on 57 days.

Harvest in pounds for each area by statistical week and specific dates open is presented in Tables 5 and 6 along with the Regionwide harvest by week. Total harvest was 113% of the available GHLS for the region. This was the first geoduck fishery following the new BOF regulation, adopted in January 2003, allowing the department to manage the fishery following consideration of DEC paralytic shellfish poison (PSP) sampling results and authorization by DEC of harvest from specific areas for sale of clams on the live market. With implementation of the new program lot sampling from the commercial fishery was discontinued. Samples were collected by SARDFAs divers under contract. PSP sampling began on October 23, 2005 and continued throughout the season prior to each of the commercial openings. The results of PSP testing by ADEC are shown by statistical week and date in Table 7. Harvest for live product was allowed for two days a week and areas had to pass two consecutive weeks of samples before a fishery could be certified to ship live product. A passing sample required mouse bioassay results below 80 ug/100g. In the Ketchikan area weekly samples were collected on Saturdays and Sundays, evaluated at the DEC Palmer Lab on Mondays, and the department announced openings on Monday afternoon for Tuesday and Wednesday fishing periods. In the Sitka area weekly samples

were generally taken mid-week to provide for Saturday and Sunday fishing periods. Fisheries in the Ketchikan and Sitka areas required separate registration-permits and were managed separately. Fishing periods were generally six hours from 9:00 a.m. to 3:00 p.m., however fishery managers needed to consider expected effort and catch rates and to adjust the open days and times accordingly. Tables 8 and 9 present dates and hours each area was opened until the GHL was taken and the season closed. Tables 10 and 11 present actual effort in number of divers that made landings for each opening.

The 2004–2005 season was at the time the largest GHL and, retrospectively, the second largest GHL since geoduck clam fishing began in Southeast Alaska. Although there were provisions to harvest the GHL from any area that did not pass PSP testing for processed market sale on May 11, 2005, all fishing areas were harvested for sale on the live market. Exvessel value averaged \$3.93 per pound for a total value of \$2,104,995 (Table 1). The exvessel value of the 2004–2005 season was nearly double that of any previous season. Average reported earnings per diver was just over \$35,000 for the 2004–2005 season.

2005–2006 GEODUCK COMMERCIAL HARVEST SEASON

The GHL for the 2005–2006 season was 403,800 pounds located in 18 areas in Districts 1, 3, and 13 in Southeast Alaska (Figure 2, Tables 12 and 13). Harvest was 436,040 pounds taken by 64 divers (Tables 1, 12, and 13). The largest area GHL was 72,100 pounds in Portillo Channel in District 3, and the smallest area GHL was 3,100 pounds in Symonds Bay in District 13. Combined GHLs for the Ketchikan areas were 381,900 pounds, and combined GHLs for the Sitka areas were 21,900 pounds. The season opened on November 2, 2005, and closed on May 11 15, 2006, with openings provided on 51 days.

Harvest in pounds for each area by statistical week and dates open is presented in Tables 12 and 13. Total harvest was 108% of the available GHL for the region.

PSP sampling began on October 29 and continued until May 7, 2006, prior to each of the commercial openings. For the 2005–2006 season, following a DEC review of PSP data collected from the prior two seasons, the description of some areas, in consultation with ADF&G, were altered. The requirement that samples must pass testing for two consecutive weeks before an area would be approved for the live market was dropped. A new option for product recall from commerce was implemented by DEC in the event that the following week's samples determined PSP levels exceeded 119 ug/100g. For the Ketchikan areas, a fishery could be opened for the three days following a sample collection, and for the Sitka area, a fishery could be opened for seven days following a sample collection. Sampling in Ketchikan was planned for Sunday, but could occur as late as Tuesday, and sampling in Sitka was planned for Wednesday or Thursday. Fisheries in Ketchikan could occur on Tuesday, Wednesday, or Thursday. Fisheries in Sitka could occur on Saturday or Sunday, but up to seven days after the sample. As in 2004–2005 separate registrations were required for the Ketchikan or Sitka areas and 24-hour notice was required to change registration areas. As during the prior year fishing periods were generally six hours from 9:00 a.m. to 3:00 p.m., however fishery managers needed to consider expected effort and catch rates and to adjust the open days and times accordingly. Results of PSP sampling by ADEC are presented in Table 14. The ADEC lab processed 194 PSP samples throughout the season. The three areas on the West Gravina Island shoreline, Nehenta Bay, Middle Gravina, and Vallenar Bay did not pass PSP during any test, although each area was sampled during at least 20 weeks. These areas were therefore opened to harvest clams for the processed market on May 10

and May 11, 2006. Dates and hours each area was open are presented in Tables 15 and 16. The number of divers participating during each opening is presented in Tables 17 and 18.

Ex-vessel value as reported on fish tickets was \$2.04 per pound for a total exvessel value of \$887,402 (Table 1). Specific reasons for a decline in reported price are not clear. The reported price of processed clams from the West Gravina areas averaged \$1.77/lb, which is almost as much as the price from other areas of \$2.09/lb where clams were sold live. Only 35% of fish tickets included price data. Price data from the CFEC website, based on annual processor reports, is not comparable since it is reported by calendar year and is still preliminary at the time of this report. Price data from the CFEC website indicates an average price between 2005 and 2006 calendar years is \$3.40/lb. If that data more accurately reflects value in the fishery then the exvessel value would be closer to \$1.5 million for the 2005–2006 season.

2006–2007 GEODUCK COMMERCIAL HARVEST SEASON

The GHL for the 2006–2007 season was 687,100 pounds located in 14 areas of Districts 1, 3, 4, and 13 of Southeast Alaska (Figure 3, Tables 19 and 20). Harvest was 726,866 pounds taken by 66 divers. Exvessel value of the harvest, as reported on fish tickets, was \$2.8 million. The 2006–2007 geoduck fishery had the highest GHL, the largest harvest, the second highest price per pound, and the highest exvessel value since the fishery began in 1985 (Table 1).

Harvest in pounds for each area by statistical week and dates open is shown in Tables 19 and 20. Since fishery registration and management is separate for the Sitka and Ketchikan areas, they are presented separately. Combined GHLs for the Sitka area are 15,200 pounds and combined GHLs for the Ketchikan area are 671,900 pounds, representing 98% of the regional GHL. The largest area GHL is 147,700 pounds for the Saint Nicholas and North Lulu Island area, and the smallest area GHL is 1,200 pounds in the Taigud and Kolosh Islands area. The season opened October 5, 2006 and closed March 1, 2007 in the Ketchikan areas. The season opened December 2, 2006 and closed February 11, 2007 in the Sitka areas. During these dates openings were provided on 42 days.

As during the previous two seasons the management approach for the fishery was to maximize the harvest of clams for the live clam market in order to maximize revenues for participants. Throughout most of the season, only those areas that have passed ADEC testing for PSP would be opened for harvest. Any areas that did not pass testing for the live market by the end of the season would be opened for harvest for the processed clam market on May 9, 2007. Pre-fishery harvest of clams for sampling purposes was conducted under contract with SARDFa. In the Ketchikan areas, since ADEC had determined that live clam fisheries could occur within three days after testing, samples were collected on Saturday or Sunday to provide for a fishery opening on Wednesday and Thursday following a diver travel day on Tuesday. Ketchikan fisheries were limited to one-day, Thursday openings through November 16, 2006. Fisheries would be closed during the weeks of Thanksgiving and Christmas in all areas. In the Sitka areas, due to a history of lower PSP testing, live-market clam fisheries would be allowed for seven days after testing. Sitka area sampling was planned on Wednesday or Thursday to support fishery openings on Saturday and Sunday. Results of PSP testing by ADEC are shown in Table 21. Sampling began on September 30, 2006 and continued through February 25, 2007. All of the regional GHL was eventually harvested for live-market sales by the close of the season.

For the 2006–2007 season a new BOF regulation was implemented making logbooks mandatory in the geoduck fishery. Logbook information is intended to provide site specific information on

clam beds which would be available for ADF&G's use for improved stock assessment surveys to further develop the fishery. Logbook information would be kept confidential by ADF&G.

Another new development in 2006–2007 was work on a harvest policy to decrement any fishery harvest overages from GHLS available for harvest during the next fishery cycle. An example would be that East San Fernando Island exceeded the GHLS by 75% in 2004–2005 season (Table 5) and again by 107% in the 2006–2007 season (Table 19). Under this policy, this area would not be reopened during the next cycle in order to maintain a sustainable harvest rate for this area.

Tables 22 and 23 summarize the dates and hours each area was open for the season. Tables 24 and 25 summarize effort in each fishery for each opening.

SEA CUCUMBERS

BACKGROUND

The commercial species of sea cucumber harvested in Southeast Alaska is the red or California sea cucumber (*Parastichopus californicus*). It is a common species distributed from Mexico to Southeast Alaska and has been observed at least as far west and north as Cook Inlet and Kodiak Island. It occupies a broad range of subtidal habitats from nearshore shallows to over 100 fathoms. The sea cucumber's primary food is detritus which it ingests along with significant amounts of fine substrate. *P. californicus* is generally found in locations with hard substrate types and moderate current and not in locations with mud bottoms or in areas subject to substantial freshwater or glacial runoff. The abundance of sea cucumbers in Southeast Alaska is greatest in the southern and western portions of the region, and generally in protected bays and inlets.

FISHERY DEVELOPMENT AND HISTORY

The first experimental fishing permits for sea cucumbers were requested in 1981. One or two permits were issued each year between 1981 and 1986, with only one vessel reporting landings during this period. These initial fisheries were based in Ketchikan and later in Sitka. Over the years, a management strategy has been developed that establishes harvest quotas based on stock assessment surveys, and commercially harvests those quotas for specific areas in every third year out of a three-year rotation. Initially, the fishery had no established season, however since 1990, the season has begun in October until the guideline harvest levels (GHL) have been taken. Historical harvests, values, and effort levels since 1986 are reported in Table 2.

Most of the vessels pioneering this fishery were small skiffs of limited range and capability operating in the vicinity of either Ketchikan or Sitka, mostly as a day fishery. Larger vessels with two divers and a crewman with living quarters and the capability of transporting product and divers during typical fall and winter weather conditions are now the norm. Harvest is conducted by scuba or hookah diving gear usually at depths of 30 to 60 feet. The number of hours each diver can work each day depends on the maximum working depths and may be as little as three or four hours. Harvesting consists of collecting sea cucumbers by hand in large mesh bags and then transporting the filled bags to the tendering vessels.

Processing is currently conducted in a two-step process. Initial preservation of sea cucumbers takes place on the fishing grounds. Sea cucumbers are eviscerated by a process called "poking," where a knife is used to make an inch long puncture in the body wall of the animal. Drained sea cucumbers are then placed in totes and transported to the processing facility where they are

processed immediately or held for up to two days under refrigeration. Sea cucumbers were purchased by the bucket in the early years of the fishery, but are now sold exclusively by drained weight. Holding times for the eviscerated, densely packed sea cucumbers is limited by their rapid decomposition even when refrigerated.

Processing at the plant consists of separating the muscle bundles from the skin with a scraper or knife. The two major products from this fishery are the longitudinal and transverse muscle bundles or meat, and the skins. Skins are processed by cooking or boiling to a specific texture and drying the product. The dried skins are a preferred item in upscale oriental cuisine. Sea cucumbers harvested in Southeast Alaska are processed in Craig, Juneau, Ketchikan, Petersburg, Sitka, British Columbia and the state of Washington.

Effort in the sea cucumber fishery increased to a maximum of 413 divers during the 1995–1996 season. This high number can be attributed to high prices the previous year along with anticipation that the fishery would be limited by the CFEC. Beginning July 1, 1996 the CFEC imposed a moratorium into Southeast dive fisheries that limited the number of divers able to participate in the sea cucumber fishery to 472. The CFEC moratorium ended July 1, 2000 with a maximum of 436 limited entry permits authorized. For the 2006–2007 season 388 permits were available in the fishery. The GHL has ranged from 0.9 million to 1.6 million pounds (drained weight) over the past 10-years (Table 2).

From 2003–2007, based on input from SARDFSA, ADF&G surveyed and added ten new areas to the commercial fishery rotation. In 2003–2004, the three new areas increased the available GHL by 515,200 pounds. In 2004–2005 another three new areas added 84,300 pounds to the GHL. In 2005–2006 two new areas added 166,100 pounds to the GHL. In 2006–2007 two new areas were added and two existing areas were increased in size, adding 186,065 pounds to the GHL. In general the poundages added when new areas have come on line have more than offset decreases due a variety of other factors and have therefore provided for overall growth of the fishery.

MANAGEMENT STRATEGY AND REGULATION DEVELOPMENT

The fishery expanded rapidly in the late 1980s, and in 1989 the fishery exceeded the ability of the ADF&G to manage by the permit system. The department closed the fishery in May 1990 and reopened it in October 1990 following development of the Southeast Alaska Sea Cucumber Commercial Fisheries Management Plan (5 AAC 38.140). This plan seeks to protect subsistence opportunities in the vicinity of communities, provides unharvested areas for research purposes, and provides for sustainable commercial fishing. To protect subsistence opportunities, the cucumber management plan established 18 areas closed to commercial fishing (5 AAC 38.140 (k)). There are also provisions to prevent the use of diving gear in the subsistence (5 AAC 02.020 (1)) and personal use (5 AAC 77.010 (1)(3)) fisheries in those areas. Annual commercial fishery guideline harvest levels are 6.4% of the total sea cucumber biomass annually, taken on a three-year rotational basis (i.e. 19.2% on a three-year basis). Three-year rotational-area fisheries have the advantage of lowering overall departmental assessment survey and management costs.

The original Sea Cucumber Management Plan of 1990 provided a season beginning on October 1 with two 48-hour openings per week. In 1993 the BOF changed the season opening to November. In order to extend the season length, weekly fishing periods were reduced to seven daylight hours on Mondays in November, plus four additional daylight hours on Tuesdays from December through March. The Management Plan was again amended by the BOF in 1997 by restoring the October season, while providing for weekly fishing periods of seven daylight hours

on Mondays in October, plus an additional four daylight hours on Tuesdays from November through March. In the Management Plan, to slow the pace of the fishery, there are additional provisions that limit the numbers of divers per vessel to two, provide trip limits of 2,000 pounds per person per fishing period, and that limit gear to scuba, surface-supplied systems, or snorkels.

In January of 2000 the open weekly fishing period was again modified by the BOF, providing for a Monday, 8:00 a.m. to 3:00 p.m. and Tuesday 8:00 a.m. to 12:00 p.m. opening beginning in October. The BOF also modified gear to allow the use of enhanced air nitrox of $\leq 40\%$ oxygen with the balance consisting of nitrogen.

The time series of stock assessment data was used to evaluate sea cucumber population response to harvest under the current management plan. Preliminary analysis reveals highly diverse response among management units. Although changes in mean density, mean weight, and biomass are apparent in many areas, variability makes detection of statistically significant differences difficult. In general, a majority of areas open to commercial harvest have decreased in mean density, increased in mean weight, and decreased in biomass. However, in several surveyed areas which have remained closed to commercial harvest, decreases have also been observed in density, weight, and biomass. Stock assessment studies in these unharvested areas indicates that populations can respond to environmental variables in addition to exploitation. Overall, based on trends observed in stock assessment data, ADF&G does not have serious concerns about the sustainability of harvests for this species.

During the January 2003 Board of Fisheries meeting the only significant changes were modifications to closed areas in Districts 2, 3 and 10 (5 AAC 38.140 (k)(1)(B), (k)(2)(A) and (k)(6).

During the January 2006 Board of Fisheries meeting, regulations were established changing the definitions of closed areas in sections 3A and 3B (5 AAC 38.140 (k)(3)(A and B)) and eliminated the district 112 closure (5 AAC 38.140 (k)(9).

2004–2005 SEA CUCUMBER COMMERCIAL HARVEST SEASON

The 2004–2005 season opened by emergency order beginning October 4–5, 2004, with weekly fishing periods of seven hours on Mondays and four hours on Tuesdays. A GHL of 1,381,200 pounds was available in 16 separate areas within Districts 1, 2, 3, 6, 11, 12, and 13 (Figure 4; Tables 26 and 27). Total harvest was 1,374,532 pounds of sea cucumbers (including overages) by 194 divers (Tables 26 and 27). The first area to close was Revillagigedo Channel and Felice Strait (Subdistrict 101-23) following the second opening week. Other areas opened on a weekly basis until GHGs had been harvested, with the last two areas closing after the November 29–30 fishing period. The season was opened for 9 weeks, with openings provided on 18 days. The maximum number of divers in any weekly fishing period for the entire region was 194, and participation decreased following the first four weeks of the fishery after 70 percent of the available had been harvested (Tables 28 and 29). Fishery managers reduced the days or hours areas were open as needed to maintain harvests within the area GHGs (Tables 30 and 31). Commercially harvested sea cucumbers averaged 0.49 pounds (224.8 gms) across all areas that were sampled areas in the region. The number of divers was the lowest number since the 1991–1992 season. Exvessel price was the second highest at \$2.12 per pound (Table 2). The fishery exvessel value was around \$2.9 million, the second highest to date, resulting in average earnings of \$15,000 for the 194 divers who participated in the fishery.

Tebenkof Bay, a formerly productive area that had supported a harvest of up to 395,000 pounds in 1992–1993 season, was not opened this season. A substantial population decline was documented based on stock assessment surveys. The decline was apparently due to sea otter predation. The decrease in the regional GHL was partially offset by an increase in GHL of 84,300 pounds associated with three new areas added to the fishery.

2005–2006 SEA CUCUMBER COMMERCIAL HARVEST SEASON

The 2005–2006 season opened by emergency order beginning October 3–4, 2005 with weekly fishing periods of seven hours on Mondays and four hours on Tuesdays. A total GHL of 1,451,750 pounds was provided in 18 areas within Districts 1, 2, 3, 4, 7, 8, 9, 12, 13, and 14 (Figure 5; Tables 32 and 33). The original GHL of 1,475,800 pounds from surveys was reduced by 24,050 pounds to account for a portion of the Excursion Inlet and Homeshore Area that was located within the Glacier Bay National Park boundaries. Total harvest was 1,437,731 pounds of sea cucumbers (including overages) by 198 divers throughout Southeast Alaska (Tables 32 and 33). The Gravina Island area (subdistrict 101-29) was only opened for 6 hours on October 3, 32,500 pounds of the 35,000 pound GHL was harvested, and the fishery was closed for the season. Other areas were opened until GHLs were harvested until as late as December 13. The season was concluded after 11 weekly fishing periods and up to 23 days in the final two areas. The maximum number of divers in any one weekly fishing period was 197 with decreased participation during the second and fourth openings due to poor weather (Tables 34 and 35). Fishery managers took action to deviate from the standard 11 hours per week in 14 out of 18 areas in consideration of expected effort levels as GHLs were approached. Hours each area was open on a weekly basis are shown in Tables 36 and 37. Commercially harvested sea cucumbers averaged 0.49 pounds (221.9 gms) in fisheries sampled. At the time this was the sixth highest GHL on record with three new areas contributing 166,100 pounds to the GHL. Exvessel value was \$2,878,199 based on \$2.00 per pound. Eleven processors purchased product for the season. This was the third highest exvessel value since the sea cucumber fishery originated and resulted in average earnings of around \$14,500 for 198 divers.

2006–2007 SEA CUCUMBER COMMERCIAL HARVEST SEASON

The 2006–2007 season opened by emergency order beginning October 2–3, 2006 with weekly fishing periods of seven hours on Mondays and four hours on Tuesdays. The total GHL for the season was 1,598,700 pounds in 17 areas within Districts 1, 2, 3, 6, 9, 12, and 13 (Figure 6; Tables 38 and 39.) The total regional harvest for the season was 1,597,287 pounds (including overages) by 174 divers. The maximum number of divers in any one weekly fishing period was 154 during the third week of the fishery, with the typical pattern of declining effort levels as the season progressed (Tables 40 and 41). The season concluded after just one weekly fishing period of 11 hours in the Percy Islands area (subdistrict 101-25) and extended until the December 25-26 fishing period in the Chatham Strait and Kelp Bay area (subdistricts 112-11, 112-21, and 112-22). The season extended for a total of 13 consecutive weekly fishing periods and 26 days. Fishing hours for each area by week are presented in Tables 42 and 43. Hours were decreased below the standard 11 hours per week in 7 of the 17 areas in consideration of expected harvest rates and effort levels to stay within the established GHLs. The department discontinued port sampling of sea cucumbers for average weights for the 2006–2007 season, and will instead rely on sampling of each area during the pre-season stock assessment surveys to monitor any trends in average weights. The GHL in 2006–2007 was 1,598,700 pounds, the third highest of record. The average price was \$1.97 per pound for the season. Seven processors purchased product this

season compared with eleven processors during the previous season. The fishery exvessel value of \$3,127,024 was the highest to date for the sea cucumber fishery, and resulted in average earnings of about \$18,000 per diver.

RED SEA URCHINS

BACKGROUND

There are two commercially harvested species of sea urchins in Southeast Alaska. The red sea urchin *Strongylocentrotus franciscanus* occurs primarily on rocky shorelines of the outside coast with largest concentrations in southern Southeast Alaska. Green sea urchins *S. droebachiensis* are most common in protected waters of Southeast Alaska in a wider variety of habitats. The only commercial fishery for urchins in recent years in Southeast Alaska has been for red sea urchins, and efforts to identify commercially significant quantities of green sea urchins have been unsuccessful. The red sea urchin population has been decimated by sea otter predation in many areas throughout southeast Alaska and as a result several areas have closed for commercial harvest.

Urchins are harvested for their gonads, commonly called roe or *uni*, with no distinction made between males or females. The product is most valuable fresh and is marketed primarily in Japan. Divers using SCUBA or surface-supplied air (hookah) harvest sea urchins by hand using an urchin rake, which usually consists of a metal bar formed into a narrow loop. Urchins are selected and tested underwater in order to harvest urchins with marketable roe content. Harvested urchins are placed in mesh bags underwater and buoyed to the surface for transport to a support vessel and then to a processing location.

FISHERY DEVELOPMENT AND HISTORY

Harvests of red sea urchins in Southeast Alaska began in 1981 near Ketchikan, primarily around Gravina Island. Both red and green sea urchins were harvested, with the vast majority of the harvest comprised of red urchins. Participation and harvest increased through the mid-1980s (Table 3), expanding to include Districts 1, 2, 3, and 4. Harvests peaked at 890,092 pounds in 1986–1987, and then tapered off due to difficulties in marketing. In 1988, harvests were restricted to Gravina Island in District 1 and the West Coast of Prince of Wales Island in District 3 due to limited staff time and insufficient budgetary support. When the remaining processing company ceased operations in 1989 the fishery was closed.

Interest in establishing a commercial urchin fishery in Southeast Alaska resurged in 1990 due to the success of urchin fisheries in California, Washington, and British Columbia. This interest was directed towards the Sitka area; however, lacking basic stock information, further commercial harvest was postponed until completion of a test fishery there in late 1990 and early 1991 to estimate population size and to gather size frequency data. The department received a three-year grant from the Pacific States Marine Fisheries Commission to help the development of a red sea urchin fisheries management plan. A limited commercial fishery opened in southern Sitka Sound in January 1991 with a harvest of 174,233 pounds before it was closed in April. Subsequent fisheries were opened in 1992 and 1993, and then closed indefinitely due to extreme predation by sea otters. In an area from the southern shoreline of Sitka Sound to West Crawfish Inlet it was estimated that 16,000,000 sea urchins were consumed by sea otters over a 15-month period from December, 1992 through February, 1993 (unpublished urchin fishery recap, B. Davidson, Alaska Department of Fish and Game, Division of Commercial Fisheries, 1992-1993 data).

All other areas of Southeast Alaska remained closed pending development of a management plan, stock assessments, harvest quotas, and means of monitoring and managing the fishery.

ADF&G initiated a test fishery in District 1 near Ketchikan in the spring of 1995 as a method to pay for population assessment surveys. The test fishing contract was awarded to Ocean Fresh Seafoods of Fort Bragg, California, the sole bidder. Under the contract, Ocean Fresh paid the department \$139,567 in exchange for the opportunity to harvest 3,000,000 pounds of red sea urchins. The test fishery spanned 14 months from March 1995 through April 1996, and harvested 2,988,647 pounds of red sea urchins (Table 3). Monthly roe recovery averaged between 5.5% and 12.2%. The average monthly price per pound ranged from \$0.29 to \$0.81, and the overall average price per pound during the 1995–96 season was \$0.52. This is the highest price on record in the red sea urchin fishery. The test fishery provided considerable employment and revenues to Southeast Alaska, and was estimated to have an ex-vessel value of approximately \$1,442,046 paid to dive harvesters. During this test fishery harvest primarily occurred in the southern portion of District 1 and was processed on Annette Island where the contractor operated a processing facility.

Subsequent to the test fishery, regular population assessment surveys have been completed in portions of Districts 1, 2, 3, and 4 on a three-year rotational basis. Surveys are conducted only in subdistricts where commercially viable populations exist. Fully developed red sea urchin fisheries have occurred ever since the 1996–1997 fishing season. The overall quota has remained between 4.2 and 6.8 million pounds (Table 3) however; some areas have nearly complete reductions in biomass due to sea otter predation. Areas of Southeast Alaska on the outer coast in Districts 3 and 4 are threatened by continued predation from an expanding sea otter population. The numbers of participating divers, numbers of landings, as well as the numbers of available sea urchin buyers have decreased during recent years, most likely due to declining market conditions in Japan and Asia and the illegal harvest and export of millions of pounds of sea urchins from the Kuril Islands, a Russian-owned archipelago stretching from northern Japan to the southeast coast of Russia.

One of the most notable changes affecting the red urchin fishery has been the formation of the Southeast Alaska Regional Dive Fisheries Association (SARDFA) in February 1998. Prior to the SARDFA formation, funding of the sea urchin fishery was obtained through processors, municipalities, diver self-assessments, federal funding, and test fishing conducted by the state. Federal Nearshore Funds were used extensively to complete reconnaissance, control site, and stock assessment surveys from 1999 through 2005. Currently, sea urchin landings are assessed by SARDFA at 7% of the landed red sea urchin value. These funds support management of the fishery.

MANAGEMENT STRATEGY AND REGULATION DEVELOPMENT

Until 1996, permits to fish for sea urchins were required and were provided by the department under authority of 5AAC 38.062. In 1984, the first year with significant landings of red urchins, there was a size limit of 3 to 5 inches test diameter to protect small urchins for recruitment, to provide large urchins as a protective spine canopy for small urchins, and to give processors the desired size urchin. An interim management plan was in place in 1987 for the Ketchikan area with a three-year area rotation and size limits modified slightly to 3 to 4.5 inches. A second interim plan was developed for 1991 through 1993 for the Sitka area. The Sitka area plan

included a 3.2% annual harvest rate on the estimated biomass, three-year area rotations, weekly fishing periods of noon, Saturday through noon, Thursday, and no size limits.

In 1996, ADF&G, in cooperation with the sea urchin fishing industry, developed interim regulations and a management plan for a commercial fishery in Southeast Alaska beginning with the 1996–1997 season. The regulations were adopted by the commissioner under authority of 5 AAC 39.210, Management Plan For High Impact Emerging Fisheries, and became effective in December 1996. The Alaska Board of Fisheries formally adopted 5AAC 38.145 Southeastern Alaska Red Sea Urchin Management Plan during their regular meeting in January 1997. Since the management plan became effective, there have been few major regulatory changes made to the red urchin fishery. The core elements of the 1997 plan were:

1. Annual guideline harvest levels are 6% of the biomass estimate. Fisheries will only be opened where biomass surveys have been conducted within the previous three years.
2. Harvest opportunities are to be distributed to each week of every month that the fishery is open during daylight hours. The fishery is to be managed to span approximately four months, subject to needs for conservation, law enforcement, reducing waste, and promoting fishery development.
3. Size limits and trip limits may be imposed if needed to slow the pace of the fishery.
4. Processing vessels must carry observers and vessels transporting unprocessed product out of Registration Area A must first obtain a transport permit.
5. In addition to standard fish ticket reporting requirements, processors must submit records of the roe recovery within 30 days of landing according to (5AAC 39.130(m)(1)).

At the 2002–2003 meeting, the BOF modified the regulation that required onboard observers for processing vessels. Regulations subject to a three-year sunset clause allowed a catcher-seller to catch and process his own product onboard the harvest vessel under provisions of a permit (5 AAC 38.145 (n)).

During the January 2006 Board of Fisheries meeting, regulations were established standardizing and increasing the open fishing hours to 5:00 am to 8:00 pm daily (5 AAC 38.145 (d)). Provisions were also made for the department to continue to permit onboard processing on fishing vessels by removing the sunset clause (5 AAC 38.145 (n)). The board also changed the regulations that had previously stipulated stock assessment to read as follows: Fishing shall not be allowed in a district or sub district unless a stock assessment survey to determine biomass and size distribution has been conducted in that district or subdistrict within the previous six years. Between assessment surveys, no more than the equivalent of three annual guideline harvest levels may be harvested (5AAC 38.145 (p)). These changes were made in order to increase the efficiency of harvesting and processing, and to reduce unnecessary costs for the department in areas where GHs were established but were not being harvested by the fishery.

2004–2005 RED SEA URCHIN COMMERCIAL HARVEST SEASON

The 2004–2005 season opened by regulation on October 1, 2004 with a GH estimated at 5,518,300 pounds of red sea urchins (Table 3). Separate GHs were available for harvest in 17 areas within Districts 1–4 (Figure 7; Tables 44 and 45.) A harvest of 1,801,893 pounds was landed by 31 divers during the year long fishery that closed by regulation on September 30,

2005. The harvest was one-third of the available GHL. Ex-vessel value was \$486,511 based on \$0.27 per pound, and the average earnings per diver were around \$15,700.

Only two of the 17 areas open for commercial harvest were closed after the GHL's for those areas were harvested. Bee Rocks (Subdistrict 101-22) was closed on May 8, and Bucarilli Bay/Port Real Marina was closed on May 20, reopened on May 27, and then closed for the season on September 12 (Tables 44 and 45). Most of the available GHL (97%) was also taken in Tlevak Strait (Subdistrict 103-40), however a closure for that area was not necessary before the season ended. Roe percent during the season averaged 6.9 percent—an average recovery for the fishery.

Fishery trends included the following: declining poundage harvested, declining price, declining participation, decreased numbers of landings, and declining exvessel value (Table 3). Ex-vessel price was the lowest seen since the fishery management plan was established in 1996–1997 and represents weakness in the primary market in Japan (Table 3). No transport permits were issued during the season to process urchins out of the state. There were two primary processors and one direct marketer who operated during the 2004–05 season.

2005–2006 RED SEA URCHIN COMMERCIAL HARVEST SEASON

The 2005–2006 season opened by regulation on October 1, 2005 with a GHL estimated at 5,753,100 pounds of red sea urchins (Table 3). Fifteen areas with separate GHLS were available for harvest in Districts 1–4 (Figure 8; Tables 45 and 47). A harvest of 1,024,282 pounds was harvested by 17 divers during the year long fishery that closed by regulation on September 30, 2006. Only 18% of the available GHL was harvested by the close of the season. Ex-vessel value was \$297,042 based on \$0.29 per pound, and average earnings per diver were \$17,473. Overall roe recovery for the season was slightly below average at 6.6%.

Several areas which had previously been surveyed and had provided GHLS available for harvest in the fishery were not opened in 2005–2006 due to the near complete loss of red sea urchins resulting from sea otter predation. The areas included Bucareli Bay and Port Real Marina (Subdistrict 103-50), the western shoreline of Baker and Cone Islands (Subdistrict 104-35, and the western half of Mears Passage and Bucareli Bay (subdistrict 104-30). The combined GHLS for these areas was 363,300 pounds in the 2004–2005 season.

Only one of the 15 areas open for commercial harvest was closed by emergency order during the season. Bee Rocks (Subdistrict 101-22) closed was closed on June 2 when the 168,800-pound GHL was taken (Tables 46 and 47). Trends in the fishery, compared with the prior season, included a sharp decline in total pounds harvested, a slight increase in average price, a substantial decline in the overall exvessel value, and a substantial decline in the number of participating fishermen.

During the 2005–06 season, two processors operated in the Ketchikan/Craig area. Two other direct marketers processed and shipped out red sea urchins from Craig. The largest sea urchin processing operator over the prior four seasons shut down in July of 2006. In September of 2006 a new processor began to purchase red sea urchins. No out-of-state transport permits were issued during the season.

2006–2007 RED SEA URCHIN COMMERCIAL HARVEST SEASON

The 2006–2007 season opened by regulation on October 1, 2006 with a GHL estimated at 5,599,500 pounds of red sea urchins (Table 3). Fifteen areas with separate GHLS were available

for harvest in Districts 1–4 (Figure 9; Tables 48 and 49). A total harvest of 622,501 pounds was harvested by 11 divers during the year long fishery that closed by regulation on September 30, 2007. Only 11% of the available GHL was harvested by the close of the season. Ex-vessel value was \$205,425 based on \$0.33 per pound, and average earnings per diver were \$18,675. Overall roe recovery for the season was the lowest yet recorded for the fishery at 5.1%.

Similar to the 2005–2006 season only one of the 15 areas open for commercial harvest was closed by emergency order. Bee Rocks (Subdistrict 101-22) closed was closed on April 21, when the 174,100 pound GHL was taken (Table 48). Trends in the fishery, compared with the prior season, included another sharp decline in total pounds harvested, a slight increase in average price, a decline in the overall exvessel value, and another substantial decline in the number of participating fishermen. Only one processor operated in the Ketchikan area with one other direct marketer operating in the Craig area. No out-of-state transport permits were issued.

ACKNOWLEDGEMENTS

This report was originated by Marc Pritchett, Scott Walker, and Zac Hoyt to provide a review of the miscellaneous shellfish species dive fisheries and to summarize the department's work with SARDFa in support of fishery development for the 2004–2005 and the 2005–2006 seasons. Before this report was finalized the department initiated a new series of Fishery Management Reports to annually summarize major fisheries from a management perspective. This report was re-written and re-organized to accomplish that objective, and the 2006–2007 season was added to bring the report current. Managers of the fisheries as well as the original authors contributed to that effort.

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TABLES

Table 1.–Southeast Alaska commercial geoduck clam harvests, effort, price, ex-vessel value, and season length, 1985–1986 through 2006–2007 seasons.

Season ^a	Guideline Harvest Level (lb)	Total Pounds Landed	Average Price per Pound ^b	Estimated Exvessel Value ^b	Number of Divers	Number of Landings	Total Days Open	Average Pounds per Diver	Average Earnings per Diver ^b
1985–86	c	143,868	\$0.21	\$29,821	8	40	240	17,984	\$3,728
1986–87	c	28,191	\$0.25	\$7,045	3	9	240	9,397	\$2,348
1987–88	125,000 ^d	185,674	\$0.30	\$55,702	6	156	240	30,946	\$9,284
1988–89	189,232 ^e	143,188	\$0.49	\$70,291	9	127	240	15,910	\$7,810
1989–90	199,000	207,083	\$0.51	\$106,635	18	165	240	11,505	\$5,924
1990–91	196,000	189,585	\$0.51	\$96,119	15	130	176	12,639	\$6,408
1991–92	219,000	193,074	\$0.66	\$127,784	20	131	33	9,654	\$6,389
1992–93	196,000	189,379	\$1.11	\$210,828	22	109	19	8,608	\$9,583
1993–94	219,000	209,322	\$1.50	\$315,001	40	115	11	5,233	\$7,875
1994–95	195,000	197,246	\$1.85	\$364,754	64	190	14	3,082	\$5,699
1995–96	209,000	229,681	\$2.03	\$465,417	109	401	10	2,107	\$4,270
1996–97	196,000	203,017	\$2.57	\$522,585	97	359	6	2,093	\$5,387
1997–98	196,000	180,443	\$3.89	\$702,097	110	312	3	1,640	\$6,383
1998–99	112,500	111,311	\$2.13	\$237,088	98	206	66	1,136	\$2,419
1999–00	250,400	202,260	\$1.60	\$323,589	61	240	50	3,316	\$5,305
2000–01	391,100	438,334	\$1.06	\$465,320	74	543	148	5,923	\$6,288
2001–02	285,322	283,405	\$0.72	\$203,408	37	324	78	7,660	\$5,498
2002–03	382,100	392,406	\$1.69	\$662,320	50	537	35	7,848	\$13,246
2003–04	341,000	377,584	\$2.87	\$1,082,203	49	482	25	7,706	\$22,086
2004–05 ^f	477,000	535,516	\$3.93	\$2,104,995	60	710	57	8,925	\$35,083
2005–06 ^f	403,800	436,040	\$2.04	\$887,402	64	545	51	6,813	\$13,866
2006–07 ^f	687,100	726,866	\$3.88	\$2,819,219	66	812	42	11,013	\$42,715

^a Season is October 1 through September 30.

^b Price is the seasonal average price reported on ADFG fish tickets. 1985–2000 prices were reported for 90% of total pounds landed, however from 2001–2006 prices were reported for only 35% of total pounds landed.

^c Five year GHl for three Noyes Island areas was 300,000 pounds.

^d Remainder of the 5-year 300,000 pound GHl for Noyes Island is not included in 1987–1988 season. GHl of 125,000 pounds is for Gravina Island only.

^e Individual area GHls were first established for the 1988–1989 season for Noyes Island areas and Gravina Island.

^f Harvests shown exclude mariculture site fishery harvests as follows: 2004–05 harvest was 167,822 pounds, 37 permits and 171 landings; 2005–06 fishery was 24,799 pounds, 8 permits and 32 landings; and 2006–07 fishery 10,171 pounds, 4 permits, and 13 landings.

Table 2.—Southeast Alaska commercial sea cucumber harvest, effort, price, exvessel value, and season length, 1986–87 through 2006–07 seasons.

Season ^a	Guideline Harvest Level	Total Pounds Landed ^b	Average Price per Pound ^c	Estimated Exvessel Value	Number of Permits (Divers)	Number of Landings	Total Days Open	Average Pounds per Permit	Average Earnings per Permit
1986–87	34,043	34,043	\$0.21	\$7,149	7	44	27	4,863	\$1,021
1987–88	65,056	65,056	\$0.22	\$14,589	11	143	57	5,914	\$1,326
1988–89	801,405	801,105	\$0.37	\$295,754	57	921	237	14,054	\$5,189
1989–90	2,318,305	2,317,465	\$0.54	\$1,246,920	203	2,260	210	11,416	\$6,142
1990–91	704,491	803,784	\$0.74	\$597,433	142	889	81	5,660	\$4,207
1991–92	839,160	873,649	\$0.72	\$625,748	187	706	41	4,672	\$3,346
1992–93	1,100,440	1,249,621	\$0.90	\$1,126,693	240	1,003	22	5,207	\$4,695
1993–94	799,235	964,343	\$1.04	\$998,096	320	949	17	3,014	\$3,119
1994–95	1,351,000	1,320,390	\$1.56	\$2,055,963	260	1,377	42	5,078	\$7,908
1995–96	1,157,500	1,209,405	\$1.17	\$1,418,594	413	1,462	20	2,928	\$3,435
1996–97	939,300	909,789	\$1.29	\$1,169,256	294	1,234	14	3,095	\$3,977
1997–98	892,410	893,893	\$1.66	\$1,487,830	225	973	17	3,973	\$6,613
1998–99	1,026,345	1,055,572	\$1.55	\$1,635,932	219	971	10	4,820	\$7,470
1999–00	1,580,000	1,569,626	\$1.95	\$3,060,824	200	1,378	30	7,848	\$15,304
2000–01	1,122,500	1,154,371	\$2.23	\$2,577,302	220	913	14	5,247	\$11,715
2001–02	1,425,200	1,434,684	\$1.75	\$2,516,384	235	1,200	18	6,105	\$10,708
2002–03	1,576,700	1,637,221	\$1.26	\$2,060,411	201	1,313	40	8,145	\$10,251
2003–04	1,637,700	1,690,214	\$1.47	\$2,491,323	195	1,293	24	8,668	\$12,776
2004–05	1,381,200	1,373,645	\$2.12	\$2,905,286	194	1,139	26	7,081	\$14,976
2005–06	1,451,750 ^d	1,436,393	\$2.00	\$2,878,199	198	1,414	33	7,255	\$14,541
2006–07	1,598,700	1,584,072	\$1.97	\$3,127,024	174	1,231	31	9,104	\$17,971

^a Season is October 1 through September 30. Landings before this season are at low levels and are confidential.

^b Shown are pounds landed by divers and do not include forfeited pounds over the trip limits or pounds confiscated. All pounds are shown in annual tables.

^c Price is seasonal average as reported on fish tickets. 1986–2007 prices were reported for 97% of total pounds landed.

^d GHL was reduced from 1,475,800 inseason after removal of poundage within Glacier Bay National Park.

Table 3.—Southeast Alaska commercial red sea urchin harvest, effort, price, and value, 1983–1984 through 2006–2007 seasons.

Season ^a	Guideline Harvest Level (lb)	Total Pounds Landed (lb)	Percent of GHL not Harvested	Average Price Per Pound ^b	Season Average Roe Percentage	Estimated Exvessel Value ^b	Number of Divers	Number of Landings	Average Pounds per Diver	Average Earnings per Diver ^b
1983–84	-	23,303	-	\$0.12	-	\$2,796	3	8	7,768	\$932
1984–85	-	154,019	-	\$0.17	-	\$26,183	14	79	11,001	\$1,870
1985–86	-	36,276	-	\$0.13	-	\$4,716	4	21	9,069	\$1,179
1986–87	-	888,212	-	\$0.14	-	\$124,350	26	458	34,162	\$4,783
1987–88	-	cf	-	cf	-	cf	cf	cf	cf	cf
1988–89	-	184,259	-	\$0.41	-	\$75,546	11	128	16,751	\$6,868
1989–90	-	23,617	-	\$0.25	-	\$5,904	9	33	2,624	\$656
1990–91	154,000	174,233	0%	\$0.26	-	\$45,301	6	91	29,039	\$7,550
1991–92	-	428,220	-	\$0.30	-	\$128,466	37	256	11,574	\$3,472
1992–93	-	143,485	-	\$0.29	-	\$41,611	17	108	8,440	\$2,448
1993–94 ^c	0	0	n/a	-	-	\$0	0	-	0	\$0
1994–95 ^c	3,000,000	1,600,714	n/a	\$0.45	-	\$720,321	n/a	970	-	-
1995–96 ^c	-	1,387,933	n/a	\$0.52	-	\$721,725	n/a	1,126	-	-
1996–97	6,093,579	4,929,280	19%	\$0.29	6.1%	\$1,429,491	150	3,483	32,862	\$9,530
1997–98	4,255,364	4,083,877	4%	\$0.40	6.8%	\$1,633,551	129	2,465	31,658	\$12,663
1998–99	4,822,700	3,075,095	36%	\$0.40	7.8%	\$1,230,038	62	1,524	49,598	\$19,839
1999–00	5,748,700	2,676,856	53%	\$0.41	7.8%	\$1,097,511	48	1,095	55,768	\$22,865
2000–01 ^d	6,806,700	2,373,993	65%	\$0.32	7.2%	\$759,678	34	842	69,823	\$22,343
2001–02	5,689,300	3,064,191	46%	\$0.30	6.1%	\$919,257	33	1,116	92,854	\$27,856
2002–03	5,309,900	3,579,493	33%	\$0.31	6.8%	\$1,109,643	36	1,265	99,430	\$30,823
2003–04	5,095,100	2,834,872	44%	\$0.31	6.9%	\$878,810	40	1,019	70,872	\$21,970
2004–05	5,518,300	1,801,893	67%	\$0.27	6.9%	\$486,511	31	651	58,126	\$15,694
2005–06	5,753,100	1,024,282	82%	\$0.29	6.6%	\$297,042	17	354	60,252	\$17,473
2006–07	5,599,500	622,501	89%	\$0.33	5.1%	\$205,425	11	209	56,591	\$18,675

Notes: Harvest from 1980–81, 1981–82, 1982–83, and 1987–88 is confidential, < 3 permits reported landings. Cf = confidential. n/a = does not apply.

^a Season is October 1 through September 30. GHL in 1990–91 converted from 220,000 urchins to pounds.

^b Price from 1996–97 through 2006–07 seasons is based on ADF&G logbook data after roe recovery data has been determined. Price from 1983–84 through 1995–96 is based on CFEC data, which is reported by calendar year, not by season.

^c There was no fishery in 1993–1994. Data shown is from an ADF&G test fishery from spring of 1995—spring of 1996, in exchange for research funds. GHL shown is the maximum poundage awarded under the test fishery contract.

^d 2000–2001 number of divers is 34, some new limited entry permit numbers were issued inseason so the Division of Commercial Fisheries fish ticket database will show 56 permits.

Table 4.—Monies collected by the Department of Revenue in the initial and most recent fiscal years from landings in the geoduck, sea cucumber, and red sea urchin commercial fisheries.

	Fiscal Year	Assessment	Value	Percent Difference
Red Sea Urchins	July 1st 1999 to June 30th, 2000	7%	\$ 71,490	
Sea Cucumbers		5%	\$ 136,716	
Geoduck Clams		5%	\$ 19,779	
Total			\$ 227,985	
Red Sea Urchins	July 1st 2006 to June 30th, 2007	7%	\$ 21,986	31%
Sea Cucumbers		5%	\$ 218,513	160%
Geoduck Clams		7%	\$ 176,753	894%
Total			\$ 417,253	183%

Table 5.—2004–2005 Season geoduck harvest in pounds by opening date for Foggy Bay, Cat and Dog Islands, Slate Island, East San Fernando Island, Port Alice and Cone Bay, Turn Point, Little Steamboat Bay, Ulitka Bay, Palisades Islands, and Blanquizal Islands.

STAT WEEK	KETCHIKAN AREAS	Foggy Bay	Cat and Dog Islands	Slate Island	East San Fernando	Port Alice Cone Bay	Turn Point	Little Steamboat	Ulitka Bay	Palisades Islands	Blanquizal Islands
	SUB DIST	101-23-001	101-(23/41)-005	101-23-004	103-60-001	103-90-002	103-90-003	103-70-002	103-70-001	103-70-006	103-70-005
GHL		50,100	15,700	18,500	14,100	23,400	10,200	15,800	18,200	38,400	19,000
Dates Open- Ktn.		Harvest in Pounds									
45	November 2,3	-	-	-	-	-	2,533	-	-	-	9,780
46	November 9,10	-	-	-	-	-	-	-	-	-	11,496
47	November 16,17	42,449	-	-	-	-	-	-	0	-	-
48	November 23,24	4,307	-	-	-	-	-	-	0	-	-
49	Nov 30	-	-	-	-	-	-	-	-	36,386	-
50	-	-	-	-	-	-	-	-	-	-	-
51	-	-	-	-	-	-	-	-	-	-	-
52	December 21	-	-	-	-	-	-	-	-	-	-
53	December 28,29	-	-	-	24,613	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-
3	January 11,12	-	-	-	-	-	-	11,202	-	-	-
4	January 20	-	-	-	-	-	-	5,501	-	-	-
5	January 25,26	-	-	-	-	-	-	-	-	-	-
6	February 2	-	-	-	-	-	7,058	-	-	-	-
7	February 8,9,10	-	-	-	-	-	-	-	731	-	-
8	-	-	-	-	-	-	-	-	-	-	-
9	February 23,24	-	0	20,038	-	4,845	-	-	-	-	-
10	March 1,2,3	-	-	-	-	10,516	-	-	2,048	-	-
11	March 8,9	-	-	-	-	8,315	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-
13	March 22,23,24	-	-	-	-	-	-	-	4,958	-	-
14	March 30,31 Apr 1	-	-	-	-	-	-	-	465	-	-
15	Apr 5,6,7	-	-	-	-	-	-	-	1,870	-	-
16	Apr 12,13,14	-	46,369	-	-	-	-	-	9,380	-	-
17	Apr 19,20,21	-	-	-	-	-	-	-	0	-	-
GHL TAKEN		46,756	46,369	20,038	24,613	23,676	9,591	16,703	19,452	36,386	21,276
Percent of GHL		93%	295%	108%	175%	101%	94%	106%	107%	95%	112%

Table 6.—2004-2005 Season geoduck harvest in pounds by opening date for St. Nicholas and North Lulu Island, Cone Island North, Cone Island South and Paloma, Port Santa Cruz, Northwest Dall Island, Symonds Bay, Biorka Island, and Taigud and Kolosh Islands with regional total by week.

KETCHIKAN AREAS	St. Nicholas N. Lulu	Cone Is. North	Cone Is. S. Paloma	Port Santa Cruz	NW. Dall Island	SITKA AREAS	Symonds Bay	Biorka Island	Taigud/ Kolosh I.	REGIONAL TOTAL
STAT WEEK	103-70-007	103-50-005	(103-50/104-35)-006	104-30-002	104-(20/30)-003	113-31-002 113-31-003 113-31/41-004			GHL	
	70,900	44,500	27,200	52,900	42,700	2,800	8,300	3,400	476,100	
	Harvest in Pounds					Dates Open-Sitka	Harvest in Pounds			
45	-	-	-	-	-	-			12,313	
46	-	-	-	40,777	-				52,273	
47	-	-	-	-	-	Nov 20	0	735	1,844	45,028
48	65,044	-	-	-	-	Nov 21,27	0	1,825	cf	72,217
49	973	-	-	977	-	Nov 28, Dec 4	cf	0	933	39,509
50	-	-	-	-	-	Dec 5,11	0	3,574		3,574
51	-	-	-	-	-	Dec 12,18	0	0		0
52	-	-	39,513	-	-	Dec 19,25	0	0		39,513
53	-	-	-	-	-	Dec 26	0	1,988		26,601
2	-	-	-	-	-	Jan 2	1,116			1,393
3	-	-	-	-	-	Jan 9	2,969			14,171
4	7,979	-	-	-	-					13,480
5	-	50,687	-	11,394	-					62,081
6	-	-	-	-	-					7,058
7	-	-	-	-	-					731
8	-	-	-	-	-					0
9	-	-	-	-	37,047					61,930
10	-	-	-	-	-					12,564
11	-	-	-	-	-					8,315
12	-	-	-	-	-					0
13	-	-	-	-	-					4,958
14	-	-	-	-	-					465
15	-	-	-	-	-					1,870
16	-	-	-	-	-					55,749
17	-	-	-	-	-					0
Totals	73,996	50,687	39,513	53,148	37,047		4,325	8,122	3,818	535,516
Percent of GHL	104%	114%	145%	100%	87%		154%	98%	112%	113%

Notes: "cf" designates confidential data. Totals include all data. Dates for Ketchikan areas shown in Table 2. Regional totals include data shown in Table 2.

Table 7.—2004-2005 Season ADEC geoduck clam PSP test results by management area and date.

Stat Week	KETCHIKAN MANAGEMENT AREA															SITKA MANAGEMENT AREA				
	Sample Date	Foggy Bay	Cat and Dog Island	Slate Island	East San Fernando Island	Port Alice, Cone Bay	Turn Point	Little Steamboat Bay	Ulitka Bay	Palisades Islands	Blanquial Islands	North Lulu Island	Cone Island North	Cone Island South	Port Santa Cruz	Northwest Dall Island	Sample Date	Symonds Bay	Biorca/Legma Islands	Taigud/Kolosh Islands
43	Oct 23,24	72	114	77	76	51	42	39	49	82	78	154	446	253	89	177				
44	Oct 30,31	97	51	90	185	108	53	157	140	-	45	-	-	-	42	-				
45	Nov 6,7	39	132	55	-	43	80	50	57	68	47	81	-	-	63	-				
46	Nov 13,14	43	43	-	-	227	124	181	50	114		78	-	-	95	-	Nov 12	-	NDT	NDT
47	Nov 20,21	50	258	-	-	-	-	-	56	45		42	-	-	41	-	Nov 18	-	43	38
48	Nov 27,28	104	66	-	-	-	-	-	-	52		75	-	-	51	-	Nov 24	-	54	48
49	Dec 4,5	195	230	239	36	-	-	188	-	106		140	518	97	244	274	Nov 30	-	55	
50	Dec 11,12	-	-	-	216	-	-	-	-	108		-	-	54	-	-	Dec 8	-	62	
51	Dec 18,19	-	-	-	76	-	-	186	96	57		259	167	57	93	213	Dec 15	-	45	
52	Dec 25,26	-	361	256	45	-	-	188	57	-		67	68	-	48	66	Dec 22	-	68	
53	Jan 1,2	-	-	-	155	76	32	64	174	42	35	82	166	82	140	177	Dec 29	57		
2	Jan 8,9	-	-	-	-	91	-	65	-	-		79	-	-	-	-	Jan 5	33		
3	Jan 15,16	-	174	75	-	-	-	32	48	-		44	41		69	58				
4	Jan 22,23	-	-	145	-	235	79	91	82	-		-	59		67	80				
5	Jan 29,30,31	-	64	54	-	53	56	-	40	-		-	-		-	58				
6	Feb 5,6	-	82	113	-	-	-	-	48	-		-	-		-	129				
7	Feb 12,13	-	69	50	-	40	-	-	124	-		-	-		-	49				
8	Feb 19,20	-	67	65	-	49	-	-	41	-		-	-		58					
9	Feb 26,27	-	151	-	-	65	-	-	59	-		-	-		-					
10	Mar 5,6	-	173	-	-	58	-	-	117	-		-	-		-					
11	Mar 12,13	-	-	-	-	-	-	-	70	-		-	-		-					
12	Mar 19,20	-	79	-	-	-	-	-	57	-		-	-		-					
13	Mar 26,27	-	186	-	-	-	-	-	51	-		-	-		-					
14	Apr 2,3,4	-	47	-	-	-	-	-	33	-		-	-		-					
15	Apr 9,10	-	49	-	-	-	-	-	36	-		-	-		-					
16	Apr 16,17	-	-	-	-	-	-	-	33	-		-	-		-					

Note: “ NDT” indicates no detectable toxin. Bold data indicates >80 ug/100g, did not pass for live sale. “ - ” indicates not sampled for that stat week.

Table 8.—2004-2005 Season geoduck opening dates and hours by statistical week for Foggy Bay, Cat and Dog Islands, Slate Island, East San Fernando Island, Port Alice and Cone Bay, Turn Point, Little Steamboat Bay, Ulitka Bay, Palisades Islands, and Blanquizar Islands.

KETCHIKAN AREAS		Foggy Bay	Cat & Dog Island	Slate Island	East San Fernando	Port Alice Cone Bay	Turn Point	Little Steamboat	Ulitka Bay	Palisades Islands	Blanquizar Islands
STAT	SUB DIST	101-23-001	101-(23/41)-005	101-23-004	103-60-001	103-90-002	103-90-003	103-70-002	103-70-001	103-70-006	103-70-005
WEEK	Dates Open-Ketchikan	Hours Open									
45	November 2,3	-	-	-	-	-	5	-	-	-	6
46	November 9,10	-	-	-	-	-	-	-	-	-	6
47	November 16,17	12	-	-	-	-	-	-	12	-	-
48	November 23,24	10	-	-	-	-	-	-	12	-	-
49	Nov 30	-	-	-	-	-	-	-	-	6	-
50	-	-	-	-	-	-	-	-	-	-	-
51	-	-	-	-	-	-	-	-	-	-	-
52	December 21	-	-	-	-	-	-	-	-	-	-
53	December 28,29	-	-	-	4	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-
3	January 11,12	-	-	-	-	-	-	12	-	-	-
4	January 20	-	-	-	-	-	-	7	-	-	-
5	January 25,26	-	-	-	-	-	-	-	-	-	-
6	February 2	-	-	-	-	-	6	-	-	-	-
7	February 8,9,10	-	-	-	-	-	-	-	18	-	-
8	-	-	-	-	-	-	-	-	-	-	-
9	February 23,24	-	12	12	-	14	-	-	-	-	-
10	March 1,2,3	-	-	-	-	12	-	-	18	-	-
11	March 8, 9	-	-	-	-	12	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-
13	March 22,23,24	-	-	-	-	-	-	-	18	-	-
14	March 30,31 Apr 1	-	-	-	-	-	-	-	18	-	-
15	Apr 5,6,7	-	-	-	-	-	-	-	54 ^a	-	-
16	Apr 12,13,14	-	12	-	-	-	-	-	54 ^a	-	-
17	Apr 19,20,21	-	-	-	-	-	-	-	54 ^a	-	-
Total		22	24	12	4	38	11	19	258	6	12

^a Ulitka Bay opened from 9 am Tuesday through 3 pm Thursday for this stat week.

Table 9.—2004-2005 Season geoduck opening dates and hours by statistical week for St. Nicholas and North Lulu Island, Cone Island North, Cone Island South and Paloma, Port Santa Cruz, Northwest Dall Island, Symonds Bay, Biorka Island, and Taigud and Kolosh Islands and regionwide days per week.

KETCHIKAN AREAS	St. Nicholas	Cone Is. North	Cone Is. S. Paloma	Port Santa Cruz	NW. Dall Island	SITKA AREAS	Symonds Bay	Biorka Island	Taigud/ Kolosh I.	TOTAL CALENDAR
	103-70- 007	103-50- 005	(103-50/104- 35)-006	104-30- 002	104-(20/30)- 003		113-31-002	113-31-003	113-31/41- 004	DAYS BY WEEK
STAT WEEK	Hours Open					Dates Open- Sitka	Hours Open			
45	-	-	-	-	-					2
46	-	-	-	12	-					2
47	-	-	-	-	-	20-Nov	6	6	6	3
48	12	-	-	-	-	Nov 21,27	12	12	12	4
49	2	-	-	4	-	Nov 28, Dec 4	12	12	6	3
50	-	-	-	-	-	Dec 5,11	12	12		2
51	-	-	-	-	-	Dec 12,18	12	12		2
52	-	-	6	-	-	Dec 19,25	12	12		3
53	-	-	-	-	-	Dec 26	6	6		3
2	-	-	-	-	-	2-Jan	6			1
3	-	-	-	-	-	9-Jan	5			3
4	1.5	-	-	-	-					1
5		10	-	6	-					2
6					-					1
7					-					3
8					-					0
9					8					2
10										3
11										2
12										0
13										3
14										3
15										3
16										3
17										3
Total	16	10	6	22	8		83	72	24	57

Note: Dates of Ketchikan openings are shown in prior table.

Table 10.—2004–2005 Season geoduck effort as number of divers for each open area and date for Foggy Bay, Cat and Dog Islands, Slate Island, East San Fernando Island, Port Alice and Cone Bay, Turn Point, Little Steamboat Bay, Ulitka Bay, Palisades Islands, and Blanquizal Islands.

KETCHIKAN AREAS		Foggy Bay	Cat & Dog Island	Slate Island	East San Fernando	Port Alice Cone Bay	Turn Point	Little Steamboat	Ulitka Bay	Palisades Islands	Blanquizal Islands
STAT	SUB DIST	101-23-001	101-(23/41)-005	101-23-004	103-60-001	103-90-002	103-90-003	103-70-002	103-70-001	103-70-006	103-70-005
WEEK	Dates Open-Ktn.	Number of Divers									
45	November 2,3	-	-	-	-	-	8	-	-	-	18
46	November 9,10	-	-	-	-	-	-	-	-	-	8
47	November 16,17	30	-	-	-	-	-	-	0	-	-
48	November 23,24	5	-	-	-	-	-	-	0	-	-
49	Nov 30	-	-	-	-	-	-	-	-	38	-
50	-	-	-	-	-	-	-	-	-	-	-
51	-	-	-	-	-	-	-	-	-	-	-
52	December 21	-	-	-	-	-	-	-	-	-	-
53	December 28,29	-	-	-	26	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-
3	January 11,12	-	-	-	-	-	-	26	-	-	-
4	January 20	-	-	-	-	-	-	19	-	-	-
5	January 25,26	-	-	-	-	-	-	-	-	-	-
6	February 2	-	-	-	-	-	15	-	-	-	-
7	February 8,9,10	-	-	-	-	-	-	-	3	-	-
8	-	-	-	-	-	-	-	-	-	-	-
9	February 23,24	-	0	13	-	12	-	-	-	-	-
10	March 1,2,3	-	-	-	-	15	-	-	3	-	-
11	March 8,9	-	-	-	-	10	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-
13	March 22,23,24	-	-	-	-	-	-	-	5	-	-
14	March 30,31 Apr 1	-	-	-	-	-	-	-	cf	-	-
15	Apr 5,6,7	-	-	-	-	-	-	-	cf	-	-
16	Apr 12,13,14	-	19	-	-	-	-	-	5	-	-
17	Apr 19,20,21	-	-	-	-	-	-	-	0	-	-
Total		35	19	13	26	37	23	45	20	38	26

Note: "cf" designates confidential data. Totals include all data for season.

Table 11.—2004–2005 Season geoduck effort as number of divers for each open area and date for St. Nicholas and N. Lulu Is, Cone Island North, Cone Island South and Paloma, Port Santa Cruz, Northwest Dall Island, Symonds Bay, Biorka Island, and Taigud and Kolosh Islands and regional totals by week.

STAT WEEK	KETCHIKAN AREAS					SITKA AREAS			REGIONAL	
	St. Nicholas N. Lulu	Cone Is. North	Cone Is. S. Paloma	Port Santa Cruz	NW. Dall Island	Symonds Bay	Biorka Island	Taigud/ Kolosh I.	TOTALS	
	103-70-007	103-50-005	(103-50/104-35)-006	104-30-002	104-(20/30)-003	113-31-002	113-31-003	113-31/41-004	BY WEEK	
	Number of Divers					Dates Open-	Number of Divers			
45	-	-	-	-	-	-	-	-	26	
46	-	-	-	39	-	-	-	-	47	
47	-	-	-	-	-	20-Nov	0	3	6	
48	38	-	-	-	-	Nov 21,27	0	5	cf	
49	cf	-	-	cf	-	Nov 28, Dec 4	cf	0	3	
50	-	-	-	-	-	Dec 5,11	0	7	-	
51	-	-	-	-	-	Dec 12,18	0	0	-	
52	-	-	37	-	-	Dec 19,25	0	0	-	
53	-	-	-	-	-	Dec 26	0	4	-	
2	-	-	-	-	-	2-Jan	6	-	-	
3	-	-	-	-	-	9-Jan	7	-	-	
4	16	-	-	-	-					
5		41		19						
6										
7										
8										
9					29					
10										
11										
12										
13										
14										
15										
16										
17										
Total	56	41	37	59	29		15	19	11	549

Note: "cf" designates confidential data. Area totals do not include confidential data. Regional totals include all data for season.

Table 12.—2005–2006 Season geoduck harvest in pounds by opening date for Lord and Sitklan Islands, Cape Fox, Kelp Island, North Kirk Point, Percy Islands, Vegas and Hotspur Islands, Nehenta Bay, Middle Gravina Island, Vallenar bay and Kaigani Strait.

	Ketchikan Management Area	Lord & Sitklan Islands	Cape Fox	Kelp Island	North Kirk Point	Percy Islands	Vegas & Hotspur	Nehenta Bay	Middle Gravina	Vallenar Bay	Kaigani Strait
	SUBDISTRICT	101-11- 002	101-11- 003	101-21- 001	101-23-003	101-25- 002	101-25-003	101-29- 001	101-29- 002	101-29-004	103-30-001
STAT	GHL	13,300	15,500	21,700	15,200	29,800	23,500	15,700	31,200	27,800	47,000
WEEK	Dates Open-Ktn.	Harvest in Pounds									
45	Nov 2,3	-	-	-	-	-	-	-	-	-	45,204
46	Nov 9,10	-	-	29,068	9,575	-	-	-	-	-	-
47	Nov 16,17	0	cf	-	cf	32,768	-	-	-	-	-
48	- ^a	-	-	-	-	-	-	-	-	-	-
49	Nov 30	-	-	-	-	-	-	-	-	-	-
50	Dec 7	7,761	-	-	5,233	-	-	-	-	-	-
51	Dec 15	-	-	-	-	-	-	-	-	-	-
52	Dec 21,22	0	0	-	-	-	-	-	-	-	-
53											
1	Jan 4,5		5,474								
2											
3											
4											
5	Feb 1		8,457								
6	Feb 8,9										
7	Feb 15,16										
8											
9											
10											
11	Mar15						23,814				
19	May 10,11 ^b							20,263	31,758	32,414	
	Harvest in Pounds	7,761	14,975	29,068	16,719	32,768	23,814	20,263	31,758	32,414	45,204
	Percent of GHL	58%	97%	134%	110%	110%	101%	129%	102%	117%	96%

Note: “cf” designates confidential data that cannot be reported. Totals include all data.

^a PSP samples not taken Nov 19–20 so no fisheries in Ketchikan Nov 23–24.

^b Geoducks harvested on May 10 and May 11 were processed, did not pass PSP.

Table 13.—2005–2006 Season geoduck harvest in pounds by opening date for Bucarelli Bay, Port Real Marina, Portillo Channel, Steamboat Bay, Symonds Bay, Biorka and Legma Islands, Taigud and Kolosh Islands and Elovoi, Golf, and Gornoi Islands and Regionwide weekly total harvests.

Ketchikan Management Area	Bucarelli Bay	Port Real Marina	Portillo Channel	Steamboat Bay	Sitka Management Area	Symonds Bay	Biorka Legma	Taigud Kolosh	Elovoi,Golf Gornoi	REGIONAL TOTAL
	103-50-003	103-50-007	103-50-008	103-70-003	SUB DIST	113-31-002	113-13-003	113-31/41-004	113-31-005	GHL
STAT	14,200	13,600	72,100	41,300	GHL	3,100	10,200	3,600	5,000	403,800
WEEK	Pounds				Dates Open-Sitka	Pounds				Total LBS
45 ^a	-	3,780	-	5,086	-	-	-	-	-	54,070
46 ^a	-	11,799	-	-	-	-	-	-	-	50,442
47	-	-	38,611	2,739	Nov 19	-	0	0	0	77,073
48 ^b	-	-	-	-	Nov 20	-	0	0	0	0
49	-	-	26,554	-	Dec 3	0	0	0	0	26,554
50	-	-	-	-	Dec 4	0	0	cf	0	13,291
51	-	-	2,931 ³	-	Dec 12,13,17	cf	cf	934	cf	4,426
52	-	-	-	-	Dec 18	-	cf	cf	cf	1,017
53	-	-	-	-	Dec 26,27	-	cf	cf	0	773
1	-	-	-	8,866	Jan 2,3,7	0	1,337	1,231	cf	17,737
2	-	-	-	-	Jan 8,14	0	1,149	cf	cf	2,232
3	-	-	-	-	Jan 15,21	0	0	-	0	0
4	-	-	-	-	Jan 24,28	cf	538	-	cf	1,484
5	-	-	-	-	Jan 29, Feb 4	-	cf	-	-	8,853
6	36,402	-	-	-	Feb 5	-	0	-	0	36,402
7	-	-	-	22,653	Feb 13,14,15,18	0	1,784	-	1,066	25,503
8	-	-	-	-	Feb 25	cf	1,302	-	cf	2,559
9	-	-	-	-	Feb 26, Mar 4	1,163	2,225	-	cf	3,632
10	-	-	-	-	Mar 5	cf	cf	-	cf	1,743
11	-	-	-	-						23,814
19	-	-	-	-						84,435
Total harvest	36,402	15,579	68,096	39,344		3,106	10,054	3,626	5,089	436,040
% of GHL	256%	115%	94%	95%		100%	99%	101%	102%	108%

Note: “cf” designates confidential data that cannot be reported. Totals include all data.

^a Sitka area water quality samples not taken so openings delayed until week 47.

^b PSP samples not taken Nov 19-20 so no fisheries in Ketchikan Nov 23-24. ³ Portillo fishery on December 15 had 350 lb trip limit.

Table 14.—2005-2006 Season ADEC geoduck clam PSP test results by area and date.

Stat Week	Sample Date	Ketchikan Management Areas													Sitka Management Areas					
		Lord & Sitklan Is.	Cape Fox	Kelp Island	North Kirk Point	Percy Islands	Vegas & Hotspur	Nehenta Bay	Middle Gravina	Vallenar Bay	Kaigani Straight	Bucareli Bay	Port Real Marina	Portillo Channel	Steamboat Bay	Sample Date	Symonds Bay	Biorka, Legma	Taigud, Kolosh	Elovoi,Golf, Gornoi
45	Oct 29,30	421	131	250	88	184	155	-	-	-	<u>69</u>	72	46	91	58	Nov 2,3 ¹	-	-	-	-
46	Nov 5,6	277	328	<u>69</u>	67	85	309	444	237	778	254	<u>46</u>	150	185	Nov 9,10 ¹	-	-	-	-	
47	Nov 12,13	36	53		53	<u>59</u>	137	521	498	338	303		57	68	Nov 17	89	51	35	41	
48	Nov 19,20 ^b	-	-		-		-	-	-	-	-		-	-	Nov 23,24 ²	-	-	-	-	
49	Nov 26,27	307	194		469		371	327	385	302	443		64	189	Dec 1	NDT	67	42	54	
50	Dec 3,4	66	125		<u>39</u>		355	455	394	206	327		-	226	Dec 8	82	179	43	45	
51	Dec 10,11	264	623				589	225	207	883	188		<u>67</u>	81	Dec 14	36	54	40	44	
52	Dec 17,18	<u>69</u>	74				341	221	418	378	259			325	Dec 22	-	NDT	NDT	NDT	
53	Dec 24,25		-				-	-	-	-	310			301	Dec 29	NDT	49	74	66	
1	Dec 31/Jan 1		51				251		466		540			43	Jan 5	123	64	73	115	
2	Jan 7,8		<u>119</u>				220	269	391	246	459			90	Jan 11	55	72	<u>NDT</u>	59	
3	Jan 15,16						393	458	280	553	404			82	Jan 18	36	86		106	
4	Jan 21,22						-	-	-	-	271			107	Jan 25	NDT	40		48	
5	Jan 28,29						115	256	743	289	176			178	Feb 1,2	-	-		-	
6	Feb 4,5						136	-	-	-	<u>60</u>			95	Feb 8	NDT	50		156	
7	Feb 11,12						127	227	235	304				74	Feb 14	-	-		63	
8	Feb 18,19						165	-	-	-				<u>65</u>	Feb 22	NDT	44		38	
9	Feb 25,26						90	179	196	470					Mar 1	<u>NDT</u>	<u>39</u>		<u>53</u>	
10	Mar 4,5						89	120	134	142										
11	Mar 11,12						<u>54</u>	401	300	302										
13	Mar 25,26							108	372	387										
14	Apr 1,2						136	143	273											
15	Apr 8,9						190	317	207											
16	Apr 15,16						132	228	149											
17	Apr 22,23						106	458	266											
18	Apr 29,30						153	392	352											
19	May 6,7						<u>223</u>	<u>490</u>	<u>279</u>											

Notes: NDT=no detectable toxin. Bold data >80ug/100g, did not pass for live sale. “-” no sample taken. Underline data GHIL taken this week & fishery closed.

^a PSP sampling for Sitka areas delayed until November 17 since area water quality samples were not done.

^b PSP sampling not conducted this week.

Table 15.—2005–2006 Season geoduck opening dates and number of hours by statistical week and fishing area for Lord and Sitklan Islands, Cape Fox, Kelp Island, North Kirk Point, Percy Islands, Vegas and Hotspur Islands, Nehenta Bay, Middle Gravina Island, Vallenar Bay and Kaigani Strait.

	Ketchikan	Lord &	Cape	Kelp	North Kirk	Percy	Vegas &	Nehenta	Middle	Vallenar	Kaigani
	Management	Sitklan	Fox	Island	Point	Islands	Hotspur	Bay	Gravina	Bay	Strait
	Area	Islands									
STAT	SUB DIST	101-11-002	101-11-003	101-21-001	101-23-003	101-25-002	101-25-003	101-29-001	101-29-002	101-29-004	103-30-001
WEEK	Dates Open-Ktn	Hours Open									
45	Nov 2,3	-	-	-	-	-	-	-	-	-	9
46	Nov 9,10	-	-	10	12	-	-	-	-	-	-
47	Nov 16,17	12	12		10	7	-	-	-	-	-
48	^a	-	-		-		-	-	-	-	-
49	30-Nov	-	-		-		-	-	-	-	-
50	7-Dec	4	-		2		-	-	-	-	-
51	Dec 15	-	-				-	-	-	-	-
52	Dec 21,22	6	12				-	-	-	-	-
53	-		-				-	-	-	-	-
1	Jan 4,5		11				-	-	-	-	-
2	-		-				-	-	-	-	-
3	-		-				-	-	-	-	-
4	-		-				-	-	-	-	-
5	1-Feb		12				-	-	-	-	-
6	Feb 8,9						-	-	-	-	-
7	Feb 15,16						-	-	-	-	-
8	-						-	-	-	-	-
9	-						-	-	-	-	-
10	-						-	-	-	-	-
11	Mar15						6	-	-	-	-
19	May 10,11 ^b							6	12	9	-
Total		22	47	10	24	7	6	6	12	9	9

^a PSP samples not taken in the Ketchikan area for November 19,20 so no fishery November 23-24.

^b Clams harvested on May 10–11 did not PSP so harvested for sale on the processed clam market.

Table 16.—2005–2006 Season geoduck opening dates and number of hours by statistical week and fishing area for Bucareli Bay, Port Real Marina, Portillo Channel, Steamboat Bay, Symonds Bay, Biorka and Legma Islands, Taigud and Kolosh Islands, and Elovoi, Golf and Gornoi Islands and showing calendar days open by statistical week.

KETCHIKAN MANAGEMENT AREAS					SITKA MANAGEMENT AREAS					TOTAL CALENDAR DAYS OPEN BY STAT WEEK
Bucareli Bay	Port Real Marina	Portillo Channel	Steamboat Bay	Sitka Management Area	Symonds Bay	Biorka Legma	Taigud Kolosh	Elovoi,Golf Gornoi		
STAT WEEK	103-50-003	103-50-007	103-50-008	103-70-003	113-31-002		113-13-003	113-31/41-004	113-31-005	
	Hours Open				Dates Open-Sitka	Hours Open				
45	-	10	-	12	-	-	-	-	-	2
46	-	10	-	-	-	-	-	-	-	2
47	-		12	12	Nov 19	-	6	6	6	3
48	-		-	-	Nov 20	-	6	6	6	1
49	-		6	-	Dec 3	6	6	6	6	2
50	-		-	-	Dec 4	6	6	6	6	2
51	-		6 ^a	-	Dec 12,13,17	4	6	18	18	4
52	-		-	-	Dec 18	-	6	6	6	3
53	-		-	-	Dec 26,27	-	12	12	12	2
1	-		-	12	Jan 2,3,7	4	18	18	12	5
2	-		-	-	Jan 8,14	4	12	6	6	2
3	-		-	-	Jan 15,21	4	6		6	2
4	-		-	-	Jan 24,28	12	6		6	2
5	-		-	-	Jan 29, Feb 4	6	12		12	4
6	12		-	-	Feb 5	-	6		6	3
7			-	12	Feb 13,14,18	6	12		12	5
8			-	-	Feb 25	6	6		6	1
9			-	-	Feb 26, Mar 4	6	12		6	2
10			-	-	Mar 5	6	6		6	1
11			-	-						1
19			-	-						2
Total	12	20	24	48		70	144	84	138	51

^a Portillo Channel open for a harvest limit of 350 pounds on December 15.

Table 17.—2005–2006 Season geoduck effort as number of divers for each open area and date for Lord and Sitklan Islands, Cape Fox, Kelp Island, North Kirk Point, Percy Islands, Vegas and Hotspur Islands, Nehenta Bay, Middle Gravina Island, Vallenar Bay and kaigani Strait.

STAT	Ketchikan	Lord &	Cape	Kelp	North Kirk	Percy	Vegas &	Nehenta	Middle	Vallenar	Kaigani
	Management Area	Sitklan	Fox	Island	Point	Islands	Hotspur	Bay	Gravina	Bay	Strait
WEEK	SUB DISTRICT	101-11-002	101-11-003	101-21-001	101-23-003	101-25-002	101-25-003	101-29-001	101-29-002	101-29-004	103-30-001
	Dates Open	Number of Divers									
45	Nov 2,3	-	-	-	-	-	-	-	-	-	35
46	Nov 9,10	-	-	12	7	-	-	-	-	-	-
47	Nov 16,17	0	cf		cf	14	-	-	-	-	-
48	-	-	-		-	-	-	-	-	-	-
49	Nov 30	-	-		-	-	-	-	-	-	-
50	Dec 7	6	-		14	-	-	-	-	-	-
51	Dec 15	-	-			-	-	-	-	-	-
52	Dec 21,22	0	0			-	-	-	-	-	-
53	-		-			-	-	-	-	-	-
1	Jan 4,5		4			-	-	-	-	-	-
2	-		-			-	-	-	-	-	-
3	-		-			-	-	-	-	-	-
4	-		-			-	-	-	-	-	-
5	Feb 1		7			-	-	-	-	-	-
6	Feb 8,9					-	-	-	-	-	-
7	Feb 15,16					-	-	-	-	-	-
8	-					-	-	-	-	-	-
9	-					-	-	-	-	-	-
10	-					-	-	-	-	-	-
11	Mar15						22	-	-	-	-
19	May 10,11							14	18	19	
Total		6	13	12	22	14	22	14	18	19	35

Note: "cf" designates that the data is confidential and cannot be reported.

Table 18.—2005–2006 Season geoduck effort as number of divers for each open area and date for Bucareli Bay, Port Real Marina, Portillo Channel, Steamboat Bay, Symonds Bay, Biorka and Legma Islands, Taigud and Kolosh Islands, and Elovoi, Golf and Gornoi Islands and showing regional total effort by week.

STAT WEEK	KETCHIKAN MANAGEMENT AREA				SITKA MANAGEMENT AREA					REGIONAL TOTALS BY WEEK
	Bucareli Bay	Port Real Marina	Portillo Channel	Steamboat Bay	Sitka Management Area	Symonds Bay*	Biorka Legma*	Taigud Kolosh*	Elovoi,Golf Gornoi*	
	103-50-003	103-50-007	103-50-008	103-70-003	Dates Open	113-31-002	113-13-003	113-31/41-004	113-31-005	
45	-	5	-	8						48
46	-	20	-	-						39
47	-		30	4	Nov 19	-	0	0	0	51
48	-		-	-	Nov 20	-	0	0	0	0
49	-		31	-	Dec 3	0	0	0	0	31
50	-		-	-	Dec 4	-	0	cf	0	21
51	-		9	-	Dec 12,13,17	cf	cf	4	cf	19
52	-		-	-	Dec 18	-	cf	cf	cf	5
53	-		-	-	Dec 26,27	-	cf	cf	0	4
1	-			10	Jan 2,3,7	0	4	5	cf	25
2	-			-	Jan 8,14	0	4	cf	cf	7
3	-			-	Jan 15,21	0	0		0	0
4	-			-	Jan 24,28	cf	3		cf	6
5	-			-	Jan 29, Feb 4	0	cf		0	9
6	19			-	Feb 5	-	0		0	19
7				18	Feb 13,14,15,18	0	6		4	28
8					Feb 25	cf	3		cf	5
9					Feb 26, Mar 4	4	5		cf	10
10					Mar 5	cf	cf		cf	5
11										22
19										51
Total	19	25	70	40		11	34	15	16	405

Note: "cf" designates that the data is confidential and cannot be reported.

Note: Regional data includes data on Table 17 in addition to data reported on this table. Regional totals include entire fishery.

Table 19.–2006–2007 Season Geoduck Harvest in Pounds by Opening Date for Foggy Bay, Cat and Dog Island, East San Fernando Island, Port Alice, Palisades Islands, Blanquizal Islands, St. Nicholas/North Lulu Islands, and Cone Island North.

	Ketchikan Management Area	Foggy Bay	Cat & Dog Island	East San Fernando	Port Alice Cone Bay	Palisades Islands	Blanquizal Islands	St. Nicholas N. Lulu	Cone Is. North
	SUB DIST	101-23-001	101-(23/41)-005	103-60-001	103-90-002	103-70-006	103-70-005	103-70-007	103-50-005
STAT	GHL	50,100	42,700	14,100	23,400	38,400	19,000	147,700	106,900
WEEK	Dates Open-Ktn.	Pounds Harvested							
40	October 5	7,143	19,552	4,361	-	3,796	-	-	-
41	October 12	17,033	16,022	-	-	-	-	-	-
42	October 19	15,571	3,949	-	-	26,179	-	-	-
43	October 26	7,417	2,619	-	-	-	4,008	-	-
44	November 2			24,800	-	-	7,946	-	-
45	November 9				-	-		-	-
46	November 16				-	-		29,046	cf
48	November 29, 30				-	-		-	-
49	December 6,7				-	-		-	-
50	December 13,14				6,889	-		-	-
51	-								
1	January 4,5				-	8,209		58,659	cf
2	January 11,12				-			92,855	-
3	January 18,19				-				-
4	January 25,26				-				-
5	Jan 31, Feb 1				cf				48,439
6	February 8				-				34,277
7	February 15				cf				11,576
8	February 22				5,702				11,760
9	Feb 29, March 1				8,880				
Total	Harvest in Pounds	47,164	42,142	29,161	23,624	38,184	11,954	180,560	108,210
	Percent of GHL	94%	99%	207%	101%	99%	63%	122%	101%

Note: “cf” indicates data is confidential and cannot be reported.

Note: Totals include entire catch.

Table 20.—2006-2007 Season Geoduck Harvest in Pounds by Opening Date for Cone Is. S./ Paloma, Port Santa Cruz, NW. Dall Is., Symonds Bay, Biorka/Legma Is., and Taigud/Kolosh Is, and showing Regional Total Harvest by Week.

STAT	Ketchikan Management Area	Cone Is. S. Paloma	Port Santa Cruz	NW. Dall Island	Sitka Management Area	Symonds Bay	Biorka Legma	Taigud Kolosh	REGIONAL TOTAL
	SUB DIST	(103-50/104-35)-006	104-30-002	104-(20/30)-003	SUB DIST	113-31-002	113-31-003	113-(31/41)-004	GHL
WEEK	Dates Open-Ktn.	Pounds			Dates Open-Sitka	Pounds			TOTAL LBS
40	October 5	-	3,164	-	-	-	-	-	38,016
41	October 12	-	-	-	-	-	-	-	33,055
42	October 19	-	2,230	-	-	-	-	-	47,929
43	October 26	30,941	3,193	-	-	-	-	-	48,178
44	November 2	-	16,092	-	-	-	-	-	48,838
45	November 9	52,869	-	-	-	-	-	-	52,869
46	November 16	24,207	-	-	-	-	-	-	54,966
48	November 29,30	-	26,193	-	December 2	cf	cf	-	27,031
49	December 6,7	27,014	-	44,755	December 3,9	cf	1,089	-	73,004
50	December 13,14	-	-	-	December 10,16	270	907	-	8,066
51	-	-	-	-	December 17	-	-	-	0
1	January 4,5	-	-	-	January 6	0	-	-	67,313
2	January 11,12	-	-	-	January 7,13	480	-	-	93,335
3	January 18,19	-	-	-	January 14,20	925	1,299	-	2,224
4	January 25,26	-	-	-	January 21,27	0	550	1,210	1,760
5	Jan 31, Feb 1	-	-	-	Jan. 28, Feb. 3	984	1,329	-	52,259
6	February 8	-	-	-	February 4,10	1,498	cf	-	37,097
7	February 15	-	-	-	February 11	-	2,361	-	14,583
8	February 22	-	-	-	-	-	-	-	17,462
9	Feb 29, March 1	-	-	-	-	-	-	-	8,880
Harvest in Pounds		135,031	50,872	44,755	4,487		9,511	1,210	726,865
Percent of GHL		101%	96%	105%	100%		100%	101%	106%

Note: "cf" indicates data is confidential and cannot be reported. Totals include entire catch.

Note: Regional totals include data presented in Table 19 in addition to this table.

Table 21.—2006–2007 season ADEC geoduck clam PSP test results by area and date.

Stat Week	Ktn. Sample Date	Ketchikan Management Areas											Sitka Management Areas			
		Foggy Bay	Cat/Dog Is.	East San Fern. Is.	Port Alice/Cone Bay	Palisades Is.	Blanquizar Is.	St. Nich./N. Lulu Is.	Cone Island North	Cone Island South	Port Santa Cruz	Northwest Dall Is.	Sitka Sample Date	Biorka/Legma Is.	Symonds Bay	Taugud/Kolosh Is.
39	Sept 30	37	NDT	73	191	55	67	88	98	129	56	110				
40	Oct 7	NDT	35	-	-	-	-	-	-	-	-	-				
41	Oct 14	NDT	NDT	135	-	51	70	-	-	-	69	-				
42	Oct 21	<u>NDT</u>	<u>41</u>	<u>52</u>	-	85	38	100	81	70	44	-				
43	Oct 28				-	-	<u>52</u>	201	244	103	67	-				
44	Nov 4				-	251		95	166	53	126	-				
45	Nov 11				-	102		49	72	45	81	-				
46	Nov 18 ^a				-	-		-	-	-	-	-				
47	Nov 25				-	-		103	145	110	<u>49</u>	-				
48	Dec 2				-	122		-	166	<u>40</u>		<u>73</u>	29-Nov	40	38	
49	Dec 9				58			156	442				6-Dec	34	34	
50	Dec 16 ¹												13-Dec	31	51	
51	Dec 23 ¹													-	-	
52	Dec 30				42	<u>44</u>		69	41				27-Dec	204	227	
1	Jan 6				-			<u>39</u>	130				3-Jan	116	33	
2	Jan 13				-				-				10-Jan	33	31	
3	Jan 20				190				163				17-Jan	32	38	
4	Jan 27				-				-				24-Jan	34	33	<u>33</u>
5	Feb 3				-				73				31-Jan	30	30	
6	Feb 10				39				57				7-Feb	<u>33</u>	<u>33</u>	
8	Feb 18				53				<u>55</u>							
9	Feb 25				50											

Note: Data shown are from ADEC, PSP testing results. Please refer to ADEC for official test data.

Note: NDT indicates No Detectable Toxin.

Note: Bolded test results designate PSP levels are over 80 ug/100 g and therefore fishery not approved for live sale.

Note: Bold underlines indicate fishery reached GHL this week and no further testing occurred.

^a No samples taken On November 18, December 16, and December 23 for the holiday break.

Table 22.—2006–2007 Season geoduck opening dates and hours by statistical week and area for Foggy Bay, Cat and Dog Island, East San Fernando Island, Port Alice and Cone Bay, Pallasades Islands, Blanquizal Islands, St. Nicholas/North Lulu Islands, and Cone Island North.

	Ketchikan Area Managed	Foggy Bay	Cat & Dog Island	East San Fernando	Port Alice Cone Bay	Palisades Islands	Blanquizal Islands	St. Nicholas N. Lulu	Cone Is. North
STAT	SUB DIST	101-23-001	101-(23/41)-005	103-60-001	103-90-002	103-70-006	103-70-005	103-70-007	103-50-005
WEEK	Dates Open-Ktn.	Hours Open							
40	October 5	6	6	6	-	6	6	-	-
41	October 12	6	5	-	-	-	-	-	-
42	October 19	6	4	-	-	6	6	-	-
43	October 26	6	4	-	-	6	6	-	-
44	November 2			4	-	-	4	-	-
45	November 9				-	-		-	-
46	November 16				-	-		6	6
48	November 29,30				-	-		-	-
49	December 6,7				-	-		-	-
50	December 13,14				12	-		-	-
51	-								
1	January 4,5				12	4		12	12
2	January 11,12				-			12	-
3	January 18,19				-				-
4	January 25,26				-				-
5	Jan 31, Feb 1				12				12
6	February 8				-				8
7	February 15				6				6
8	February 22				12				6
9	Feb 29, March 1				12				
Total		24	19	10	66	22	22	30	50

Table 23.—2006–2007 Season geoduck opening dates and hours by statistical week and area for Cone Island/Paloma, Port Santa Cruz, NW. Dall Island, Symonds Bay, Biorka Island, and Taigud/Kolosh Islands and showing regionwide days open by stat week.

KETCHIKAN MANAGEMENT AREA					SITKA MANAGEMENT AREA			REGIONAL OPENING IN CALENDAR DAYS BY STAT WEEK
Area Managed	Cone Is. S. Paloma (103-50/104-35)- 006	Port Santa Cruz 104-30-002	NW. Dall Island 104-(20/30)-003	Symonds Bay 113-31-002	Biorka Legma 113-31-003	Taigud Kolosh 113-(31/41)-004		
STAT WEEK	SUB DIST Dates Open- Ketchikan	Hours Open		Dates Open-Sitka	Hours Open			
40	October 5	-	6	-	-	-	1	
41	October 12	-	-	-	-	-	1	
42	October 19	-	6	-	-	-	1	
43	October 26	6	6	-	-	-	1	
44	November 2	-	6	-	-	-	1	
45	November 9	6	-	-	-	-	1	
46	November 16	6	-	-	-	-	1	
48	November 29,30	-	6	December 2	6	6	3	
49	December 6,7	11	-	December 3,9	12	12	4	
50	December 13,14	-	-	December 10,16	12	12	4	
51	-	-	-	December 17	-	6	1	
1	January 4,5	-	-	January 6	12	-	3	
2	January 11,12	-	-	January 7,13	12	6	4	
3	January 18,19	-	-	January 14,20	12	12	2	
4	January 25,26	-	-	January 21,27	-	12	2	
5	Jan 31, Feb 1	-	-	Jan. 28, Feb. 3	12	12	4	
6	February 8	-	-	February 4,10	12	12	3	
7	February 15	-	-	February 11	6	6	2	
8	February 22	-	-	-	-	-	1	
9	Feb 29, March 1	-	-	-	-	-	2	
Total		29	30	10	96	96	6	42

Note: Regionwide total days open includes data presented in Table 4 in addition to this table.

Table 24.—2006–2007 Season geoduck effort as number of divers for each open area and date for Foggy Bay, Cat and Dog Islands, East San Fernando Islands, Port Alice and Cone Bay, Pallisades Isalnds, Blanquizal Islands, St. Nicholas/N. Lulu Islands and Cone Islands North.

	Ketchikan Area Managed	Foggy Bay	Cat & Dog Island	East San Fernando	Port Alice Cone Bay	Palisades Islands	Blanquizal Islands	St. Nicholas N. Lulu	Cone Is. North
STAT	SUB DISTRICT	101-23-001	101-(23/41)-005	103-60-001	103-90-002	103-70-006	103-70-005	103-70-007	103-50-005
WEEK	Dates Open-Ktn.	Divers							
40	October 5	7	23	3	-	3	-	-	-
41	October 12	16	23	-	-	-	-	-	-
42	October 19	16	5	-	-	22	-	-	-
43	October 26	8	3	-	-	-	5	-	-
44	November 2			26	-	-	8	-	-
45	November 9				-	-		-	-
46	November 16				-	-		25	cf
48	November 29,30				-	-		-	-
49	December 6,7				-	-		-	-
50	December 13,14				19	-		-	-
51	-								
1	January 4,5				-	7		38	cf
2	January 11,12				-			45	-
3	January 18,19				-				-
4	January 25,26				-				-
5	Jan 31, Feb 1				cf				35
6	February 8				-				23
7	February 15				cf				14
8	February 22				12				12
9	Feb 29, March 1				12				
Total		47	54	29	46	32	13	108	87

Note: "cf" designates confidential data that cannot be reported.

Table 25.—2006–2007 Season geoduck effort as number of divers for each open area and date for Cone /S. Paloma Is, Port Santa Cruz, NW. Dall Island, Symonds Bay, Biorka/Legman Is, and Taigud/Kalosh Is, and regionwide effort by statistical week.

STAT	Ketchikan Management Area				Sitka Management Area			Regional	
	Area Managed	Cone Is. S. Paloma	Port Santa Cruz	NW. Dall Island	Symonds Bay	Biorka Legma	Taigud Kolosh	Total Divers	
	SUB DIST	(103-50/104-35)-006	104-30-002	104-(20/30)-003	113-31-002	113-31-003	113-(31/41)-004	By Stat Week	
WEEK	Dates Open-Ktn.	Divers			Dates Open-Sitka	Divers		Week	
40	October 5	-	cf	-	-	-	-	38	
41	October 12	-	-	-	-	-	-	39	
42	October 19	-	3	-	-	-	-	46	
43	October 26	28	5	-	-	-	-	49	
44	November 2	-	15	-	-	-	-	49	
45	November 9	46	-	-	-	-	-	46	
46	November 16	22	-	-	-	-	-	49	
48	November 29,30	-	31	-	December 2	cf	cf	34	
49	December 6,7	24	-	34	December 3,9	cf	4	63	
50	December 13,14	-	-	-	December 10,16	3	7	29	
51	-	-	-	-	December 17	-	-	0	
1	January 4,5	-	-	-	January 6	0	-	46	
2	January 11,12	-	-	-	January 7,13	4	-	49	
3	January 18,19	-	-	-	January 14,20	3	4	7	
4	January 25,26	-	-	-	January 21,27	0	3	5	
5	Jan 31, Feb 1	-	-	-	Jan. 28, Feb. 3	5	5	47	
6	February 8	-	-	-	February 4,10	3	cf	28	
7	February 15	-	-	-	February 11	-	5	20	
8	February 22	-	-	-	-	-	-	24	
9	Feb 29, March 1	-	-	-	-	-	-	12	
Total		120	56	34		20	32	cf	680

Note: "cf" designates confidential data that cannot be reported.

Note: Regional data includes data on Table 6 in addition to data reported on this table. Regional totals include entire fishery.

Table 26.–2004–2005 Season red sea cucumber harvest in pounds by week and area for subdistricts 101–103.

STAT	SUB DIST GHL	Willard and Fillmore Inlets	Revillagigedo Channel and Felice Strait	George Inlet, Bold Island and Carrol Inlet	North Behm Canal	Clarence Strait and Dixon Entrance	Cholmondeley Sound	Central Clarence Strait	Lower Cordova Bay	Bucareli Bay and Port Real Marina
		101-11-004 47,900	101-23 136,800	101-40, 44, 45, 46 and 48 99,800	101-80 57,500	102-10, 15 56,600	102-40 188,700	102-50 89,600	103-11,15 97,700	103-50 43,300
WEEK	Dates Open	Pounds Harvested								
41	October 4,5	cf	81,338	16,835	0	0	28,144	0	7,439	10,040
42	October 11,12	cf	50,996	20,336	9,003	0	44,716	6,400	12,982	7,262
43	October 18,19	28,002		7,795	17,249	5,079	37,150	37,972	13,640	8,055
44	October 25,26	15,800		27,454	24,295	0	18,167	33,382	8,271	15,590
45	November 1,2			28,085		5,002	18,904	0	13,678	
46	November 8,9					24,461	15,719	3,503	50,463	
47	November 15,16					5,218	16,956	8,622		
48	November 21,22					32,164				
49	November 29,30									
-	Overages	117	283	91	-	-	90	38	-	268
Totals	GHL TAKEN	49,073	132,617	100,596	50,547	71,924	179,846	89,917	106,473	41,215
	Percent of GHL	102%	97%	101%	88%	127%	95%	100%	109%	95%

Note: "cf" indicates data is confidential and cannot be reported. Zeros indicate area was open but no one fished.

Table 27.—2004–2005 Season red sea cucumber harvest in pounds by week and area, for subdistricts 106 to 113, showing regional total pounds harvested by week.

Area		Northern Clarence Strait	Southern Lynn Canal, East Mansfield Peninsula, and Auke Bay	Chatham Strait, Wilson Cove, Whitewater Bay and Chaik Bay	Freshwater Bay and Chatham Strait	Howard Bays and Couverden Island area	Sitka Sound, Krestof Sound, and Nakwasina Sound	Hoonah Sound	Districts 106 to 113
SUB DIST		106-10, 20, 22, and 25	111-50	112-18, 19, 80 and 90	112-12, 13 and 50	112-15, 112 -61, and 114-25	113-40, 42 and 43	113-55, 56, 57 and 58	All Subdistricts
STAT	GHL	270,300	19,200	23,600	95,200	17,200	99,400	38,400	1,381,200
WEEK	Dates Open	Pounds Harvested by Week							
41	October 4,5	19,843	0	cf	6,902	0	32,142	8,332	217,344
42	October 11,12	45,190	0	0	7,510	0	37,745	12,439	256,790
43	October 18,19	58,277	0	0	9,321	0	29,797	6,131	258,468
44	October 25,26	71,965	0	0	15,708	cf		13,082	245,787
45	November 1,2	73,269	cf	0	8,254	0			147,616
46	November 8,9		cf	9,652	30,156	cf			135,574
47	November 15,16		cf	cf	9,471	1,400			46,754
48	November 21,22		4,910	cf		cf			45,121
49	November 29,30		11,824			8,367			20,191
Overages		-	-	-	-	-	-	-	887
Totals	GHL TAKEN	268,544	22,445	18,287	87,322	16,058	99,684	39,984	1,374,532
	Percent of GHL	99%	117%	77%	92%	93%	100%	104%	100%

Note: "cf" indicates data is confidential and cannot be reported. Zeros indicate area was open but no one fished. Total column includes data from Table 2.

Table 28.–2004–2005 Season red sea cucumber effort as numbers of divers by statistical week and area for subdistricts 101–103.

Area		Willard and Fillmore Inlets	Revillagigedo Channel and Felice Strait	George Inlet, Bold Island and Carrol Inlet	North Behm Canal	Clarence Strait and Dixon Entrance	Cholmondeley Sound	Central Clarence Strait	Lower Cordova Bay	Bucareli Bay and Port Real Marina
STAT	SUB DIST	101-11-004	101-23	101-40, 44, 45, 46 and 48	101-80	102-10, 15	102-40	102-50	103-11,15	103-50
WEEK	Dates Open	Number of Divers								
41	October 4,5	cf	51	17	0	0	23	0	4	11
42	October 11,12	cf	38	29	6	0	29	6	7	7
43	October 18,19	15		11	9	3	27	23	7	7
44	October 25,26	8		25	16	0	14	20	5	11
45	November 1,2			23		4	14	0	12	
46	November 8,9					18	19	5	42	
47	November 15,16					5	15	8		
48	November 21,22					34				
49	November 29,30									
Total		28	89	105	31	64	141	62	77	36

Note: “cf” indicates data is confidential and cannot be reported. Zeros indicate area was open but no one fished.

Table 29.—2004–2005 Season red sea cucumber effort as numbers of divers by statistical week and area, for subdistricts 106 to 113, showing regional totals by week and season.

Area		Northern Clarence Strait	Southern Lynn Canal, East Mansfield Peninsula, and Auks Bay	Chatham Strait, Wilson Cove, Whitewater Bay and Chaik Bay	Freshwater Bay and Chatham Strait	Howard Bays and Couverden Island area	Sitka Sound, Krestof Sound, and Nakwasina Sound	Hoonah Sound	Total Number of Divers by Opening and Season
STAT	SUB DIST	106-10, 20, 22, and 25	111-50	112-18, 19,80 and 90	112-12, 13 and 50	112-15 and 61 and 114-25	113-40,42 and 43	113-55. 56, 57 and 58	Districts 106 to 113
WEEK	Dates Open	Number of Divers							
41	October 4,5	15	0	cf	5	0	24	7	161
42	October 11,12	29	0	0	5	0	27	8	194
43	October 18,19	34	0	0	6	0	21	4	167
44	October 25,26	40	0	0	11	cf		13	165
45	November 1,2	48	cf	0	5	0			107
46	November 8,9		cf	8	18	cf			114
47	November 15,16		cf	cf	9	3			44
48	November 21,22		4	cf		cf			44
49	November 29,30		9			6			15
Total		166	19	15	59	15	72	32	194

Note: "cf" indicates data is confidential and cannot be reported. Zeros indicate area was open but no one fished. Total column includes data from Table 4.

Table 30.–2004–2005 Season red sea cucumber dates and hours open by statistical week and area for subdistricts 101–103.

Area		Willard and Fillmore Inlets	Revillagigedo Channel and Felice Strait	George Inlet, Bold Island and Carrol Inlet	North Behm Canal	Clarence Strait and Dixon Entrance	Cholmondeley Sound	Central Clarence Strait	Lower Cordova Bay	Bucareli Bay and Port Real Marina
STAT	SUB DIST	101-11-004	101-23	101-40, 44, 45, 46 and 48	101-80	102-10, 15	102-40	102-50	103-11,15	103-50
WEEK	Dates Open	Hours Open								
41	October 4,5	11	11	11	11	11	11	11	11	11
42	October 11,12	11	7	11	11	11	11	11	11	11
43	October 18,19	11		7	11	11	11	11	11	11
44	October 25,26	7		11	11	11	11	11	11	11
45	November 1,2			9	4	11	11	4	11	
46	November 8,9					11	7	4	11	
47	November 15,16					7	7	4		
48	November 21,22					5				
49	November 29,30									
Total		40	18	49	48	78	69	56	66	44

Table 31.–2004–2005 Season red sea cucumber dates and hours open by statistical week and area, for subdistricts 106–113.

STAT	SUB DIST	Northern Clarence Strait	Southern Lynn Canal, East Mansfield Peninsula, and Auke Bay	Chatham Strait, Wilson Cove, Whitewater Bay and Chaik Bay	Freshwater Bay and Chatham Strait	Howard Bays and Couverden Island area	Sitka Sound, Krestof Sound, and Nakwasina Sound	Hoonah Sound
		106-10, 20, 22, and 25	111-50	112-18, 19,80 and 90	112-12, 13 and 50	112-15 and 61 and 114-25	113-40,42 and 43	113-55. 56, 57 and 58
WEEK	Dates Open	Hours Open						
41	October 4,5	11	11	11	11	11	11	11
42	October 11,12	11	11	11	11	11	11	11
43	October 18,19	11	11	11	11	11	10	11
44	October 25,26	11	11	11	11	11		7
45	November 1,2	11	11	11	11	11		
46	November 8,9		11	11	11	11		
47	November 15,16		11	11	7	11		
48	November 21,22		11	7		11		
49	November 29,30		11			11		
Total		55	99	84	73	99	32	40

Table 32.–2005–2006 Season red sea cucumber harvest in pounds by statistical week, dates open, and area for subdistricts 101–107-10.

Area	Gravina Island	Revilla Channel	West Behm	Moira Sound	Thorne Bay and Kasaan Peninsula	East Dall Island	Sea Otter Sound	West Dall Island	Southern Ernest Sound	
	101-29	101-43,41 and 53	101-80	102-30	102-70	103-40	103-90	104-10, 20 and 30	107-10	
STAT	GHL	35,500	43,900	20,800	95,400	55,600	267,800	201,700	110,300	86,700
WEEK	Dates Open	Pounds Harvested								
41	October 3,4	32,494	19,829	18,603	0	17,597	cf	21,795	11,965	
42	October 10,11		12,005		6,539	17,553	cf	9,542	20,904	
43	October 17,18		4,609		10,987	7,923	9,662	cf	19,712	
44	October 24,25		2,584		4,436	cf	14,032	cf	32,503	
45	Oct. 31, Nov.1				25,639	cf	70,042	cf		
46	November 7,8				10,105		74,691	12,879		
47	November 14,15				14,263		67,692	11,829		
48	November 20,21,22				16,546		24,464	11,417		
49	November 28,29				6,030			29,490		
50	December 5,6							13,962		
51	December 12,13									
	Overages	48	-	338	146	-	181	311	-	-
	GHL TAKEN	32,542	39,027	18,941	94,691	52,062	267,909	202,464	115,312	85,084
	% of GHL	92%	89%	91%	99%	94%	100%	100%	105%	98%

Note: “cf” indicates data is confidential and cannot be reported. Zero indicates area was open but no one fished.

Table 33.—2005–2006 Season red sea cucumber harvest in pounds by statistical week, dates open, and area for subdistricts 107-20–114, and showing regional totals by week.

Area	Northern Ernest Sound	Zimovia Strait and Anita Bay	Stikine Strait and Chichagof Passage	Southeast Baranof	Northern Chatham	Sitka Sound	Baranof Island Shoreline	Peril Strait	Excursion Inlet and Homeshore	Total Pounds Harvested by Week	
	SUB DIST	107-20	107-30,35	108-10, 20 and 40	109-10	112-16, 17, 63 and 65	113-38, 41	113-31, 32 and 33	113-51, 52, 53, 54 and 59	114-25-002 and 114-80	
STAT	GHL	112,200	55,200	22,300	29,400	67,200	31,400	85,200	99,400	31,750 ^a	1,451,750
WEEK	Dates Open	Pounds Harvested									
41	October 3,4	7,084	11,075	6,281	0	cf	3,499	7,367	27,666	cf	223,887
42	October 10,11	21,814	22,473	4,363	0	cf	8,348	cf	13,185	cf	193,877
43	October 17,18	33,059	24,928	6,168	0	cf	cf	10,593	24,914	2,606	229,554
44	October 24,25	30,026		5,826	0	cf	cf	12,312	17,587	cf	176,966
45	Oct. 31, Nov.1	8,039			0	cf	3,099	13,413	14,174	4,657	149,717
46	November 7,8	11,601			0	cf	2,612	13,878		cf	131,520
47	November 14,15				0	0	6,274	7,576		cf	109,603
48	November 20,21,22				0	0	cf	cf		2,760	56,102
49	November 28,29				cf	10,000	cf	11,580		cf	79,297
50	December 5,6				cf	34,616		6,958		0	59,252
51	December 12,13					14,593				12,025	26,618
-	Overages	-	-	-	-	314	-	-	-	-	1,338
	GHL TAKEN	111,623	58,476	22,638	22,246	69,634	28,751	84,852	97,526	33,953	1,437,731
	% of GHL	99%	106%	102%	76%	104%	92%	100%	98%	107%	99%

Note: "cf" indicates confidential data. Zeros indicate area open but no one fished. Total column include data shown in previous table.

^a GHL was reduced from 55,800 pounds inseason after closure of those portions of the area surveyed within the Glacier Bay National Park.

Table 34.–2005–2006 Season red sea cucumber effort as numbers of divers by statistical week and area for subdistricts 101–107-10.

Area		Gravina Island	Revilla Channel	West Behm	Moira Sound	Thorne Bay and Kasaan Peninsula	East Dall Island	Sea Otter Sound	West Dall Island	Southern Ernest Sound
STAT	SUB DIST	101-29	101-43,41 and 53	101-80	102-30	102-70	103-40	103-90	104-10, 20 and 30	107-10
WEEK	Dates Open	Number of Divers								
41	October 3,4	29	22	20	0	16	cf	23	17	9
42	October 10,11		15		4	13	cf	31	8	14
43	October 17,18		9		12	8	7	40	cf	15
44	October 24,25		3		3	cf	12	40	cf	22
45	Oct. 31, Nov.1				28	cf	53		cf	
46	November 7,8				8		62		12	
47	November 14,15				11		55		9	
48	November 20,21,22				16		24		9	
49	November 28,29				7				25	
50	December 5,6								16	
51	December 12,13									
Total		29	49	20	89	43	216	134	101	60

Note: “cf” indicates confidential data. Zeros indicate area open but no one fished.

Table 35.—2005–2006 Season red sea cucumber effort as numbers of divers by statistical week and area for subdistricts 107-20–114, showing regional totals by week and season.

Area		Northern Ernest Sound	Zimovia Strait and Anita Bay	Stikine Strait and Chichagof Passage	Southeast Baranof	Northern Chatham	Sitka Sound	Baranof Island Shoreline	Peril Strait	Excursion Inlet and Homeshore	Total number of divers by opening and for season
STAT	SUB DIST	107-20	107-30,35	108-10, 20 and 40	109-10	112-16, 17, 63 and 65	113-38, 41	113-31, 32 and 33	113-51, 52, 53, 54 and 59	114-25-002 and 114-80	
WEEK	Dates Open	Number of Divers									
41	Oct 3,4	5	12	5	0	cf	4	6	25	cf	197
42	Oct 10,11	15	17	3	0	cf	13	cf	10	cf	151
43	Oct 17,18	22	15	5	0	cf	cf	9	19	3	169
44	Oct24,25	22		6	0	cf	cf	12	15	cf	142
45	Oct. 31, Nov.1	8			0	cf	3	10	8	4	122
46	Nov 7,8	11			0	cf	3	14		cf	114
47	Nov 14,15				0	0	9	7		cf	92
48	Nov 20,21,22				0	0	cf	cf		3	55
49	Nov 28,29				cf	4	cf	10		cf	57
50	Dec5,6				cf	16		10		0	44
51	Dec 12,13					14				12	26
Total		83	44	19	10	43	39	82	77	31	198

Note: "cf" indicates confidential data. Zeros indicate area open but no one fished. Totals column includes data from previous table.

Table 36.–2005–2006 Season red sea cucumber dates and hours open by statistical week and area for subdistricts 101–107-10.

STAT WEEK	Area SUB DIST Dates Open	Area								
		Gravina Island	Revilla Channel	West Behm	Moira Sound	Thorne Bay and Kasaan Peninsula	East Dall Island	Sea Otter Sound	West Dall Island	Southern Ernest Sound
		101-29	101-43,41 and 53	101-80	102-30	102-70	103-40	103-90	104-10, 20 and 30	107-10
		Hours Open								
41	October 3,4	6	11	11	11	11	11	11	11	11
42	October 10,11		9		11	11	11	11	11	11
43	October 17,18		7		11	7	11	11	11	11
44	October 24,25		7		11	7	11	9	11	11
45	Oct. 31, Nov.1				11	7	11		11	
46	November 7,8				11		11		11	
47	November 14,15				11		11		11	
48	November 20,21,22				11		7		11	
49	November 28,29				6				11	
50	December 5,6								5	
51	December 12,13									
	Total	6	34	11	94	43	84	42	104	44

Table 37.—2005–2006 Season red sea cucumber dates and hours open by statistical week and area for subdistricts 107-20–114.

Area		Northern Ernest Sound	Zimovia Strait and Anita Bay	Stikine Strait and Chichagof Passage	Southeast Baranof	Northern Chatham	Sitka Sound	Baranof Island Shoreline	Peril Strait	Excursion Inlet and Homeshore
STAT	SUB DIST	107-20	107-30,35	108-10, 20 and 40	109-10	112-16, 17, 63 and 65	113-38, 41	113-31, 32 and 33	113-51, 52, 53, 54 and 59	114-25-002 and 114-80
WEEK	Dates Open	Hours Open								
41	October 3,4	11	11	11	11	11	11	11	11	11
42	October 10,11	11	11	11	11	11	11	11	11	11
43	October 17,18	11	11	11	11	11	11	11	11	11
44	October 24,25	11		9	11	11	11	11	11	11
45	Oct. 31, Nov.1	7			11	11	14	14	11	11
46	November 7,8	7			11	11	14	14		11
47	November 14,15				11	14	14	14		14
48	November 20,21,22				14	14	7	14		14
49	November 28,29				14	14	7	14		14
50	December 5,6				14	14	7	11		14
51	December 12,13					7				11
Total		58	33	42	119	129	107	125	55	133

Table 38.–2006–2007 Season red sea cucumber harvest in pounds by statistical week, dates open, and area for subdistricts 101–103-70.

STAT	Area	Tree Point	Percy Islands	West Behm	Clarence Strait	Kasaan Bay and Skowl Arm	Cleveland Peninsula	Long Is. and Cordova Bay	Hetta and Nutkwa Inlet	San Christoval and Trocadero
		SUB DIST	101-10,11	101-25	101-90,95	102-20	102-60	102-80	103-21,30	103-23,25
WEEK	Dates Open	Pounds Harvested								
		141,900	72,300	70,300	46,000	333,800	27,400	169,900	159,700	77,500
40	October 2,3	0	79,647	5,403	0	65,421	5,686	cf	0	25,004
41	October 9,10	19,822		cf	cf	131,718	11,016	0	0	27,269
42	October 16,17	27,657		cf	cf	148,325	cf	0	0	26,674
43	October 23,24	41,615		15,475	5,106		cf	17,887	12,311	
44	October 30,31	40,872		12,428	11,013		cf	58,844	23,157	
45	November 6,7	22,587		8,704	0		cf	46,361	27,815	
46	November 13,14			17,966	5,235			37,423	22,213	
47	November 19,20				cf				21,940	
48	November 27,28				6,236				19,692	
49	December 4,5				8,350				17,156	
50	December 11,12								10,818	
51	December 18,19									
52	December 25,26									
	Overages and confiscations	875	630	269	613	2,330	105	-	-	28
	GHL TAKEN	153,428	80,277	65,770	44,463	347,794	26,993	163,916	155,102	78,975
	% of GHL	108%	111%	94%	97%	104%	99%	96%	97%	102%

Note: : “cf” indicates confidential data. Zeros indicate area open but no one fished.

Table 39.—2006–2007 Season red sea cucumber harvest in pounds by week and area for subdistricts 103-80–113, showing regional total pounds harvested by week.

STAT	Area	Boca de Finas and Tonowek	Snow Pass	Port Camden	Eliza Harbor and Herring Bay	Chatham and Kelp Bay	E. Tenakee Inlet	W. Tenakee Inlet	Salisbury and Peril Strait	Total Pounds Harvested by Week and Season
		103-80	106-30	109-43,105-32	109-30	112-11,21,22	112-41,42	112,43-48	113-62-66	
WEEK	Dates Open	Pounds Harvested								
		21,600	191,600	25,900	21,400	92,400	43,000	72,700	31,300	1,598,700
40	October 2,3	cf	2,663	0	0	7,718	10,221	5,852	7,991	231,019
41	October 9,10	10,275	13,915	0	0	4,947	12,422	6,738	9,640	348,703
42	October 16,17	cf	20,638	0	0	cf	cf	12,981	11,844	266,213
43	October 23,24	11,453	49,781	cf	0	0	11,213	16,528		184,640
44	October 30,31		43,581	0	0	0	cf	28,236		225,391
45	November 6,7		7,425	6,640	0	14,446				136,914
46	November 13,14		32,639	0	0	18,592				134,068
47	November 19,20			cf	cf	0				31,221
48	November 27,28			0	0	0				25,928
49	December 4,5			0	cf	cf				45,193
50	December 11,12			10,823		17,119				38,760
51	December 18,19					11,742				11,742
52	December 25,26					8,936				8,936
-	Overages and confiscations	-	-	15	-	27	-	-	-	4,961
	GHL TAKEN	26,456	80,642	20,344	20,552	89,890	42,875	70,335	29,475	1,597,287
	% of GHL	122%	94%	79%	96%	97%	100%	97%	94%	100%

Note: "cf" indicates confidential data. Zeros indicate area open but no one fished. Total column includes data from previous table.

Table 40.–2006–2007 Red sea cucumber effort as numbers of divers by statistical week and area for subdistricts 101–103-70.

STAT WEEK	Area	Tree Point	Percy Islands	West Behm	Clarence Strait	Kasaan Bay and Skowl Arm	Cleveland Peninsula	Long Is. and Cordova Bay	Hetta and Nutkwa Inlet	San Christoval and Trocadero
	SUB DIST	101-10,11	101-25	101-90,95	102-20	102-60	102-80	103-21,30	103-23,25	103-60,70
	Dates Open	Number of Divers								
40	October 2,3	0	42	4	0	36	3	cf	0	18
41	October 9,10	10		cf	cf	72	6	0	0	16
42	October 16,17	14		cf	cf	81	cf	0	0	16
43	October 23,24	21		15	5		cf	13	11	
44	October 30,31	21		9	6		cf	37	14	
45	November 6,7	16		8	0		cf	34	21	
46	November 13,14			15	4			28	16	
47	November 19,20				cf				17	
48	November 27,28				5				17	
49	December 4,5				7				17	
50	December 11,12								10	
51	December 18,19									
52	December 25,26									
Totals		82	42	56	32	189	15	114	123	50

Note: “cf” indicates confidential data. Zeros indicate area open but no one fished.

Table 41.—2006–2007 Season red sea cucumber effort as numbers of divers by statistical week and area for subdistricts 103-80–113, showing regional totals by week and season.

STAT	Area	Boca de Finas and Tonowek	Snow Pass	Port Camden	Eliza Harbor and Herring Bay	Chatham and Kelp Bay	E. Tenakee Inlet	W. Tenakee Inlet	Salisbury and Peril Strait	Total Numbers of Divers by Week and Season
	SUB DIST	103-80	106-30	109-43,105-32	109-30	112-11,21,22	112-41,42	112,43-48	113-62-66	
WEEK	Dates Open	Number of Divers								
40	October 2,3	cf	10	0	0	6	7	3	7	141
41	October 9,10	7	9	0	0	4	8	4	9	149
42	October 16,17	cf	14	0	0	cf	cf	7	9	154
43	October 23,24	10	31	cf	0	0	9	11		128
44	October 30,31		27	0	0	0	cf	17		135
45	November 6,7		8	5	0	12				106
46	November 13,14		23	0	0	16				102
47	November 19,20			cf	cf	0				22
48	November 27,28			0	0	0				22
49	December 4,5			0	cf	cf				35
50	December 11,12			6		9				25
51	December 18,19					10				10
52	December 25,26					5				5
Totals		22	122	13	11	67	29	42	25	174

Note: “cf” indicates confidential data. Zeros indicate area open but no one fished. Totals column includes data from previous table.

Table 42.–2006–2007 Season red sea cucumber dates and hours open by statistical week and area for subdistricts 101–103-70.

STAT WEEK	SUB DIST Dates Open	Area								
		Tree Point 101-10,11	Percy Islands 101-25	West Behm 101-90,95	Clarence Strait 102-20	Kasaan Bay and Skowl Arm 102-60	Cleveland Peninsula 102-80	Long Is. and Cordova Bay 103-21,30	Hetta and Nutkwa Inlet 103-23,25	San Christoval and Trocadero 103-60,70
		Hours Open								
40	October 2,3	11	11	11	11	11	11	11	11	11
41	October 9,10	11		11	11	11	11	11	11	11
42	October 16,17	11		11	11	11	11	11	11	11
43	October 23,24	11		11	11		11	11	11	
44	October 30,31	11		11	11		7	11	11	
45	November 6,7	7		11	11		7	11	11	
46	November 13,14			11	11			9	11	
47	November 19,20				7				11	
48	November 27,28				7				11	
49	December 4,5				11				14	
50	December 11,12								11	
51	December 18,19									
52	December 25,26									
Totals		62	11	77	102	33	58	75	124	33

Table 43.—2006–2007 Season red sea cucumber dates and hours open by statistical week and area for subdistricts 103-80 to 113-66.

STAT WEEK	Area	Boca de Finas and Tonowek	Snow Pass	Port Camden	Eliza Harbor and Herring Bay	Chatham and Kelp Bay	E. Tenakee Inlet	W. Tenakee Inlet	Salisbury and Peril Strait
	SUB DIST	103-80	106-30	109-43,105- 32	109-30	112- 11,21,22	112- 41,42	112,43- 48	113-62- 66
	Dates Open	Hours Open							
40	October 2,3	11	11	11	11	11	11	11	11
41	October 9,10	11	11	11	11	11	11	11	11
42	October 16,17	11	11	11	11	11	11	11	11
43	October 23,24	11	11	11	11	11	11	11	
44	October 30,31		11	11	11	11	4	11	
45	November 6,7		7	11	11	11			
46	November 13,14		9	11	11	11			
47	November 19,20			11	11	11			
48	November 27,28			11	11	11			
49	December 4,5			14	14	14			
50	December 11,12			14		14			
51	December 18,19					14			
52	December 25,26					14			
Totals		44	71	127	113	155	48	55	33

Table 44.—2004–2005 Season Red Sea Urchin GHLs, Harvest, Effort, and Closures by Area, for Districts 1 and 2.

District Subdistrict Area	District 1						District 2			
	101-11	101-21	101-22	101-23	101-25	101-29	102-20	102-50	102-70	102-80
	Foggy Pt. to Nakat	S.Duke Island	Bee Rocks	N. Duke Island - Foggy Bay	Percy Islands	West Gravina	Outside Moira	Clarence Strait	Thorne Bay Shoreline	Cleveland Pennisula
GHL	262,900	1,132,500	168,800	298,100	369,000	727,300	159,800	393,600	83,000	56,600
Harvest	cf	616,640	171,027	24,546	111,874	247,319	-	21,433	cf	24,442
Permits	cf	21	18	9	10	17	-	6	cf	3
Landings	cf	198	50	15	41	134	-	8	cf	8
% GHL harvested	cf	54%	101%	8%	30%	34%	-	6%	cf	9%
Closure Date	n/a	n/a	5/8/2005	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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Table 45.—2004–2005 Season Red Sea Urchin GHLs, Harvest, Effort, and Closures by Area, for Districts 3 and 4, and region total.

District Subdistrict Area	District 3		District 4					REGION TOTAL
	103-40	103-50	104-10	104-20	104-20	104-30	104-35	
	Tlevak Strait	Bucareli Bay	Cape Muzon	West Coast of Dall Island	Forrester Island	Meares Passage	West Baker Is.	
GHL	78,200	46,100	85,500	1,169,200	170,500	303,300	13,900	5,518,300
Harvest	76,189	45,822	-	319,964	11,733	103,024	-	1,801,893
Permits	7	9	-	18	3	15	-	33
Landings	20	20	-	101	6	41	-	651
% GHL harvested	97%	99%	-	27%	7%	34%	-	33%
Closure Date	n/a	9/12/2005	n/a	n/a	n/a	n/a	n/a	n/a

Note: cf = confidential data, n/a means there was no closing date for the season.

Table 46.—2005-2006 Season Red Sea Urchin GHLs, Harvest, Effort, and Closures by Area, for Districts 1 and 2.

District Subdistrict Area	District 1						District 2			
	101-11	101-21	101-22	101-23	101-25	101-29	102-20	102-50	102-70	102-80
	Foggy Pt. to Nakat	S.Duke Island	Bee Rocks	N. Duke Island - Foggy Bay	Percy Islands	West Gravina	Outside Moira	Clarence Strait	Thorne Bay Shoreline	Cleveland Pennisula
GHL	262,900	1,132,500	168,800	298,100	369,000	721,200	159,800	393,600	83,000	56,600
Harvest	cf	235,743	168,268	-	115,799	187,213	cf	33,618	cf	6,454
Permits	cf	13	8	-	7	12	cf	6	cf	3
Landings	cf	71	45	-	37	91	cf	12	cf	3
% GHL	cf	21%	100%	0%	31%	26%	cf	9%	cf	11%
Closure Date	n/a	n/a	6/2/2006	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Table 47.—2005–2006 Season Red Sea Urchin GHLs, Harvest, Effort, and Closures by Area, for Districts 3 and 4, and region total.

District Subdistrict Area	District 3	District 4				REGION
	103-40	104-10	104-20	104-20	104-30	TOTAL
	Tlevak Strait	SW Dall Island	West Coast of Dall Island	Forrester Island	Meares Passage	
GHL	103,500	42,000	1,409,000	170,500	382,600	5,753,100
Harvest	cf	-	137,463	-	56,794	1,024,282
Permits	cf	-	7	-	7	17
Landings	cf	-	42	-	19	354
% GHL harvested	cf	0%	10%	0%	15%	18%
Closure Date	n/a	n/a	n/a	n/a	n/a	n/a

Note: cf = confidential data, n/a means there was no closing date for the season.

Table 48.–2006–2007 Season Red Sea Urchin GHLs, Harvest, Effort, and Closures by Area, for districts 1 and 2.

District Subdistrict	District 1						District 2			
	101-11	101-21	101-22	101-23	101-25	101-29	102-20	102-50	102-70	102-80
Area	Foggy Pt. to Nakat	S.Duke Island	Bee Rocks	N. Duke Island - Foggy Bay	Percy Islands	West Gravina	Outside Moira	Clarence Strait	Thorne Bay Shoreline	Cleveland Pennisula
GHL	263,000	1,132,500	174,100	298,100	202,100		159,800	393,600	83,000	64,500
Harvest	cf	294,333	179,995	cf	49,878	45,409	-	cf	cf	cf
Permits	cf	7	7	cf	4	7	-	cf	cf	cf
Landings	cf	91	56	cf	17	24	-	cf	cf	cf
% GHL harvested	cf	26%	103%	cf	25%	6%	0%	cf	cf	cf
Closure Date	n/a	n/a	4/21/2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Table 49.–2006–2007 Season Red Sea Urchin GHLs, Harvest, Effort, and Closures by Area, for districts 3 and 4, and region total.

District Subdistrict	District 3	District 4				REGION
	103-40	104-10	104-20	104-20	104-30	TOTAL
Area	Tlevak Strait	SW Dall Island	West Coast of Dall Island	Forrester Island	Meares Passage	
GHL	103,500	42,000	1,409,000	170,500	382,600	5,599,500
Harvest	cf	-	11,059	-	cf	622,501
Permits	cf	-	3	-	cf	17
Landings	cf	-	3	-	cf	354
% GHL harvested	cf	0%	1%	0%	cf	11%
Closure Date	n/a	n/a	n/a	n/a	n/a	n/a

Note: cf = confidential data, n/a means there was no closing date for the season.

FIGURES

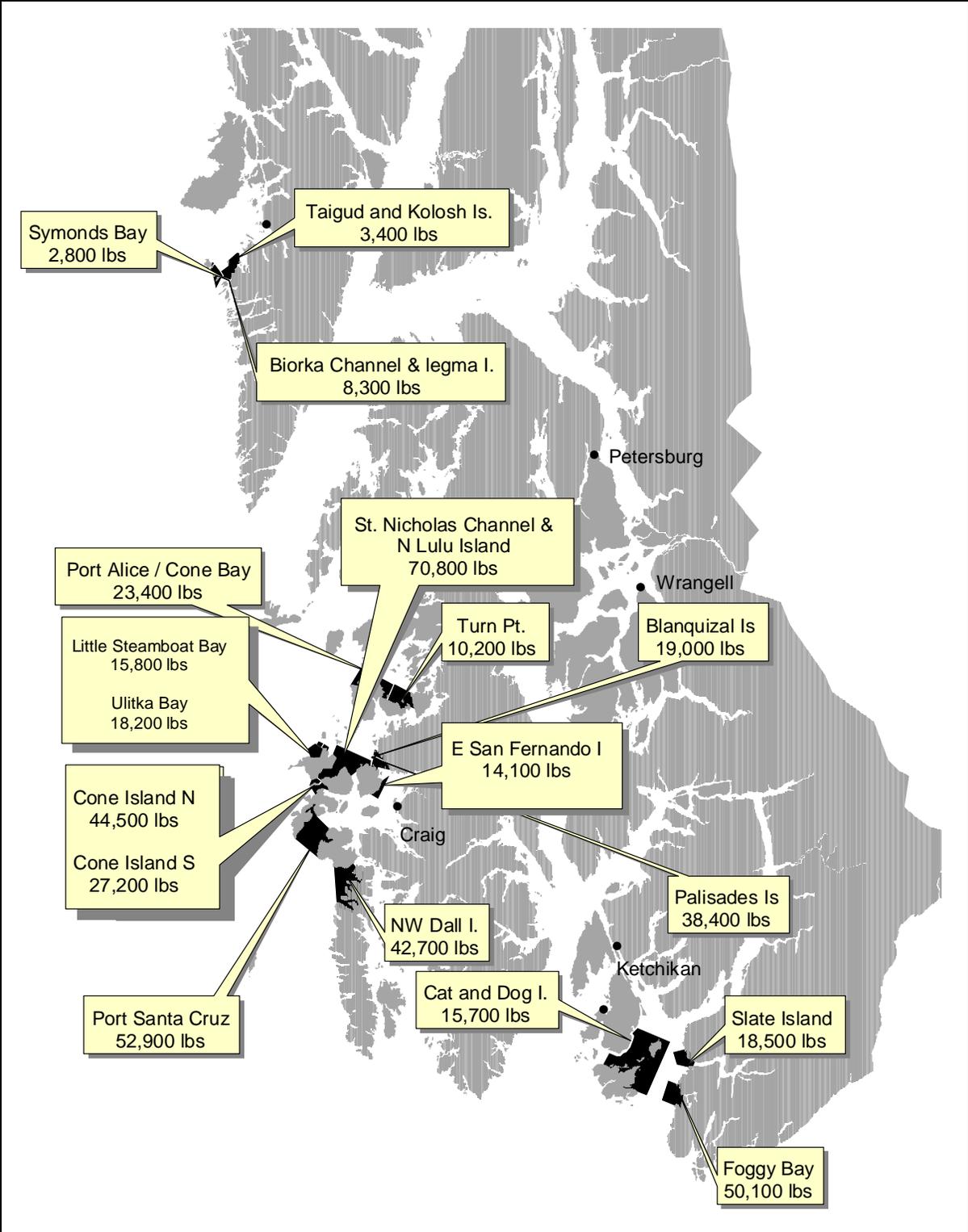


Figure 1.—2004–2005 Season geoduck open areas showing guideline harvest levels.

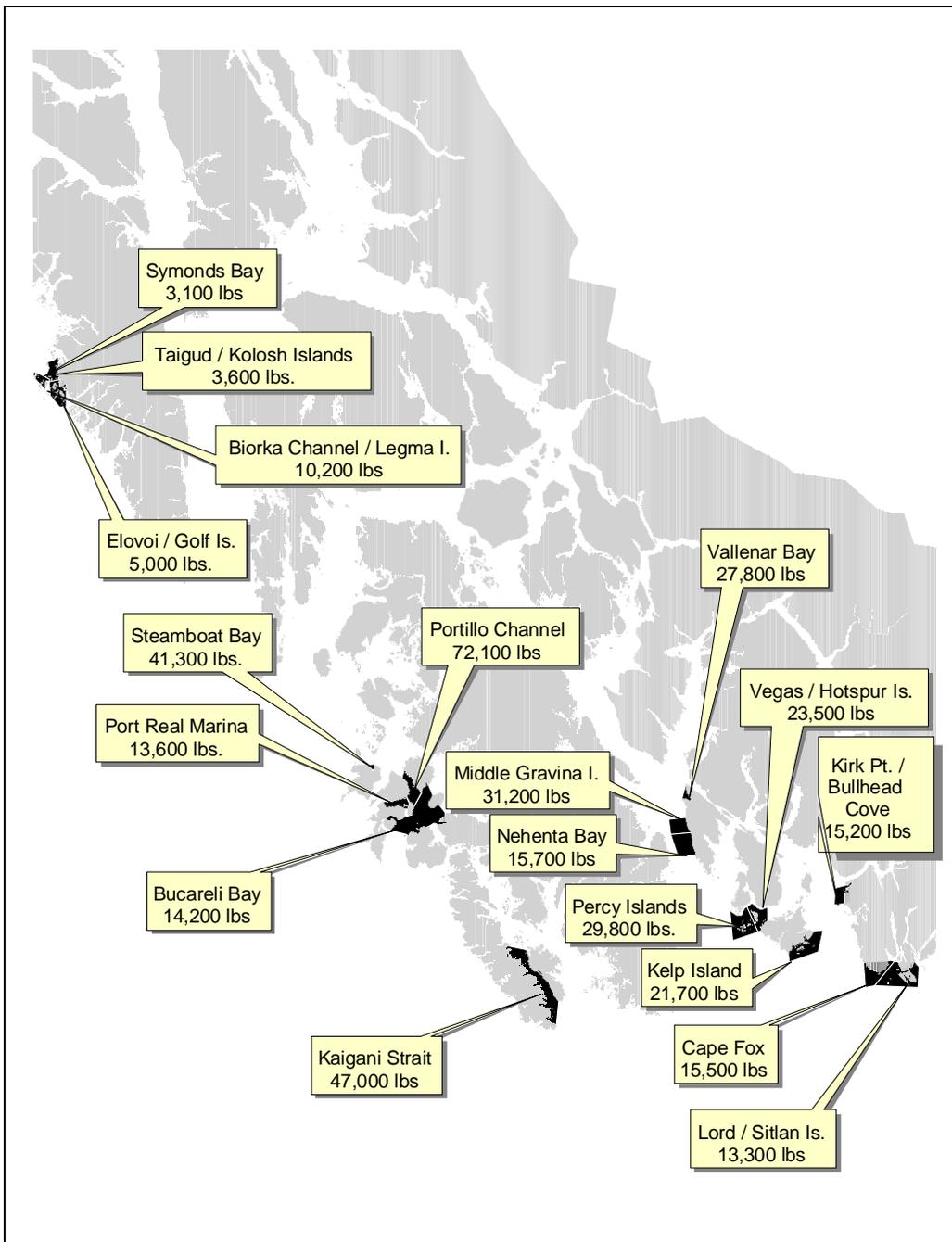


Figure 2.—2005–2006 Season geoduck areas showing guideline harvest levels.

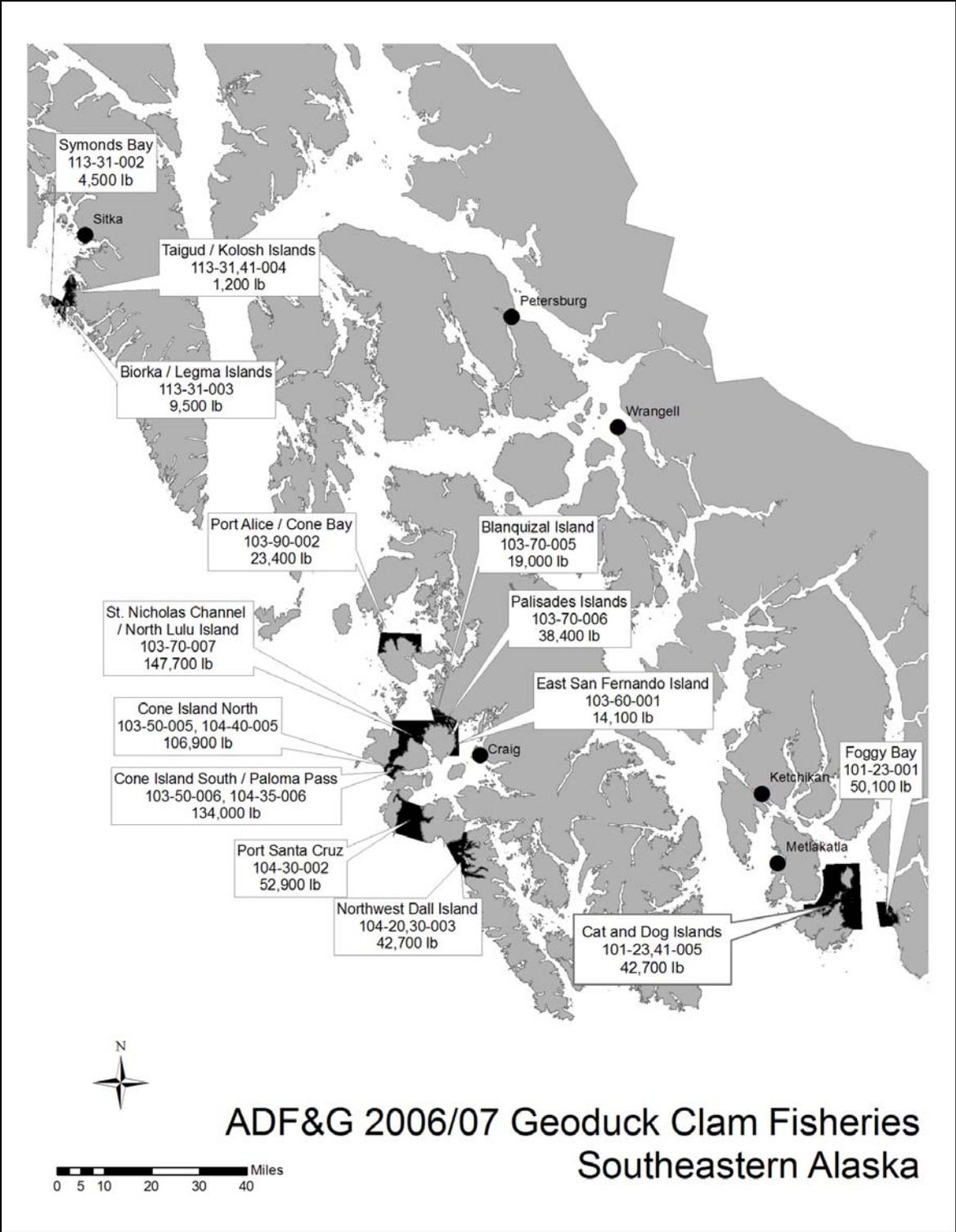


Figure 3.—2006–2007 Season geoduck open areas and guideline harvest levels.

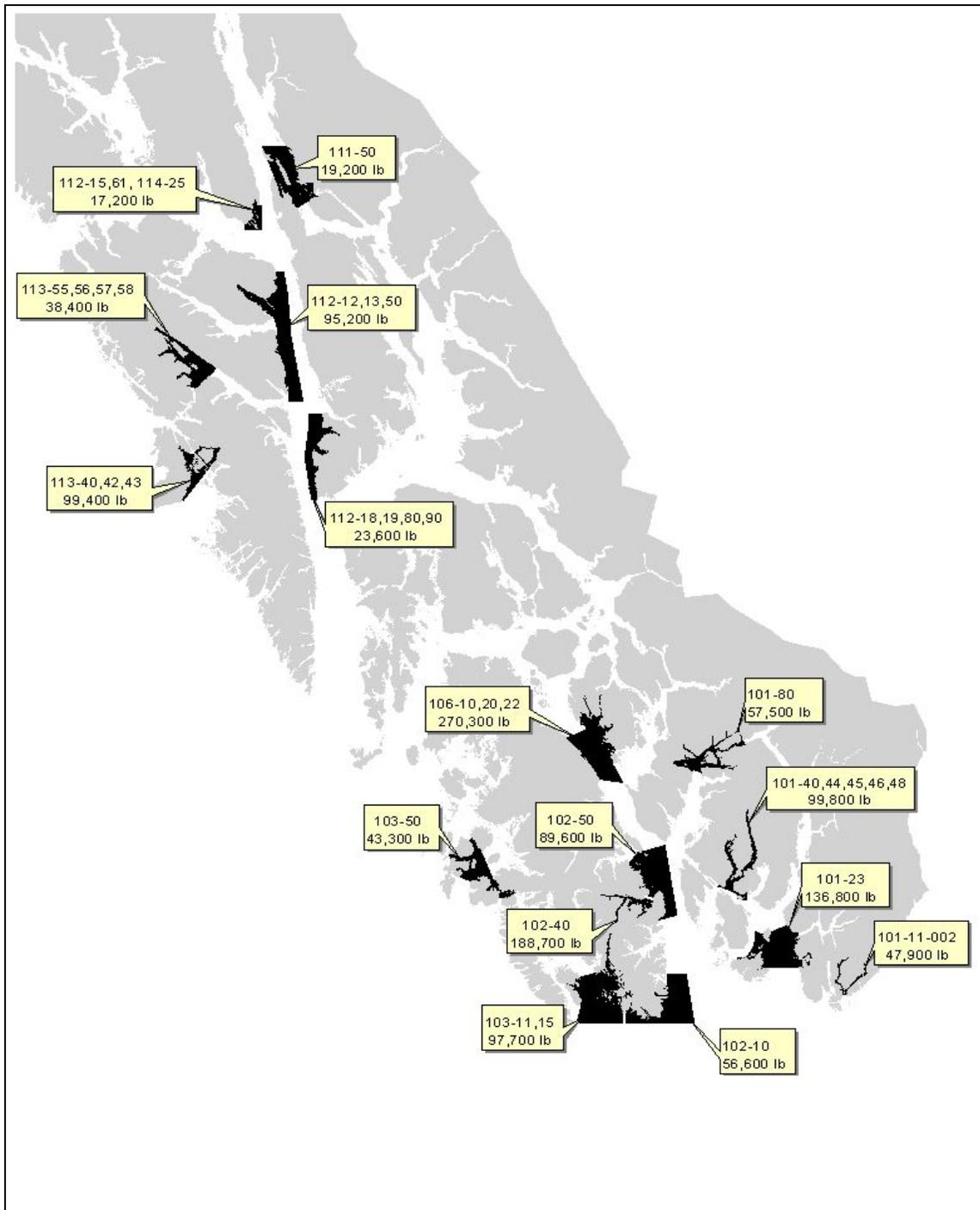


Figure 4.—Sea cucumber commercial harvest areas for the 2004–2005 season.

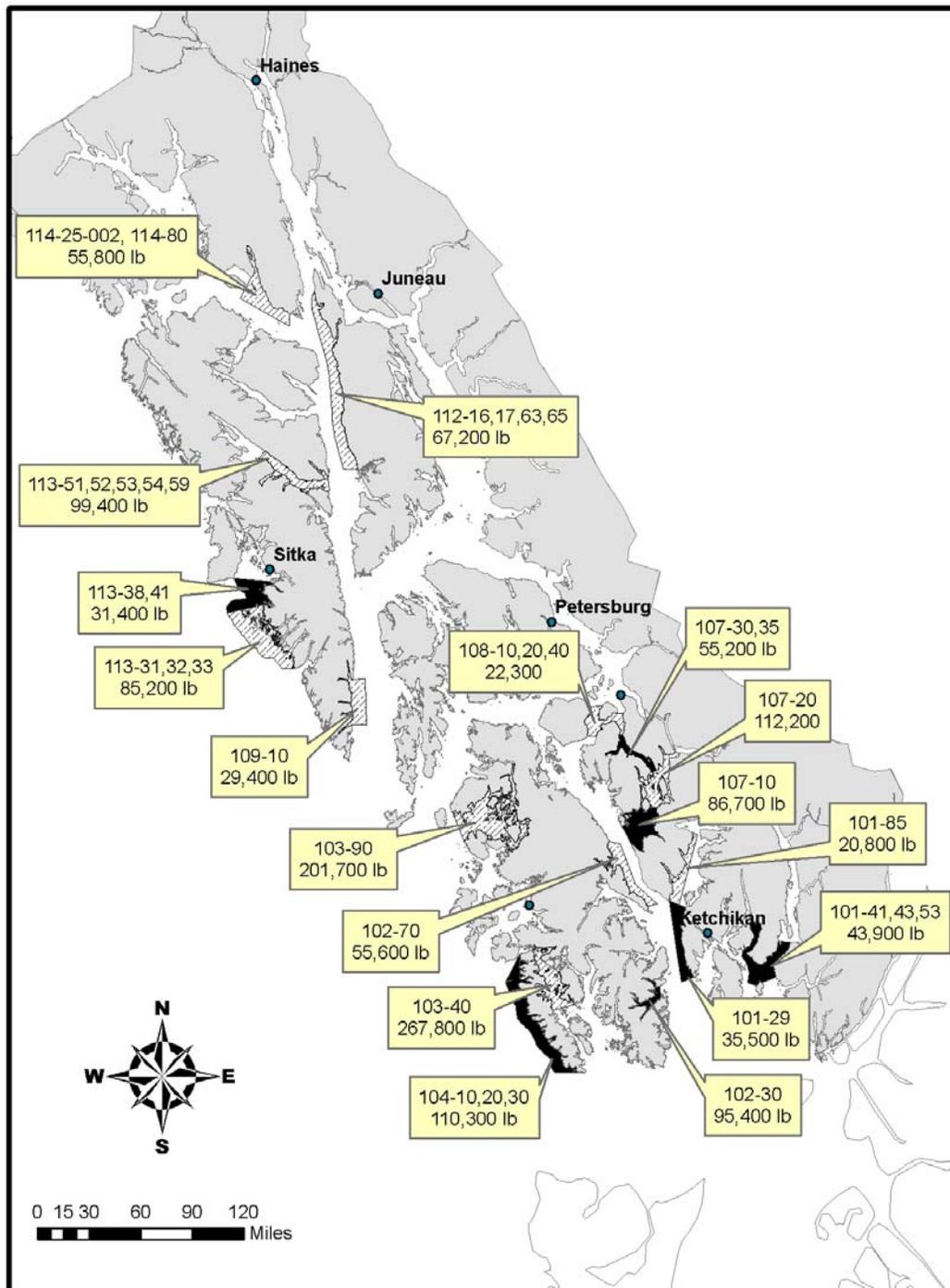


Figure 5.—Sea cucumber commercial harvest areas for the 2005–2006 season.

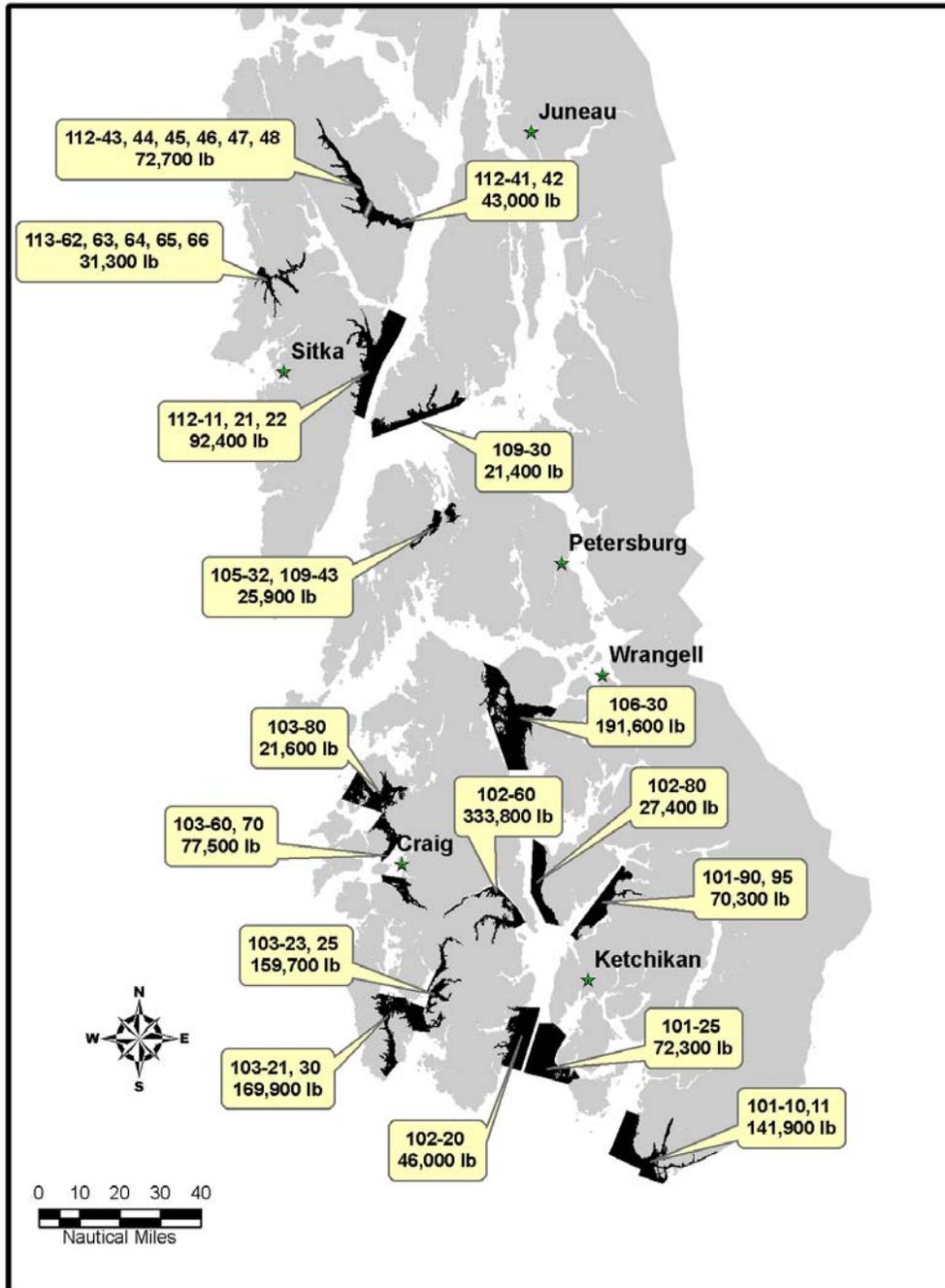


Figure 6.—Red sea cucumber harvest areas and guideline harvest levels for the 2006–2007 season.

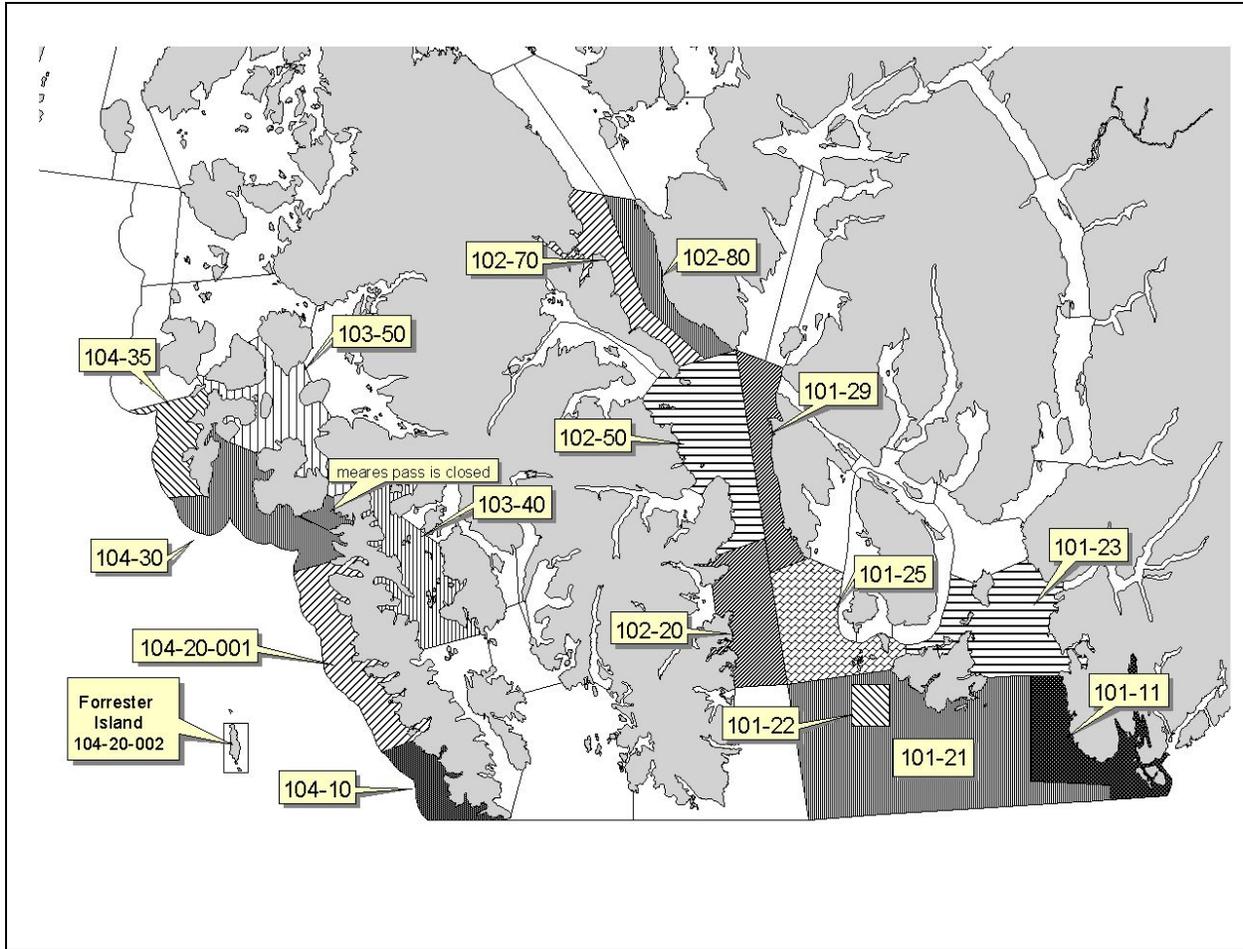


Figure 7.—2004–2005 Red sea urchin areas.

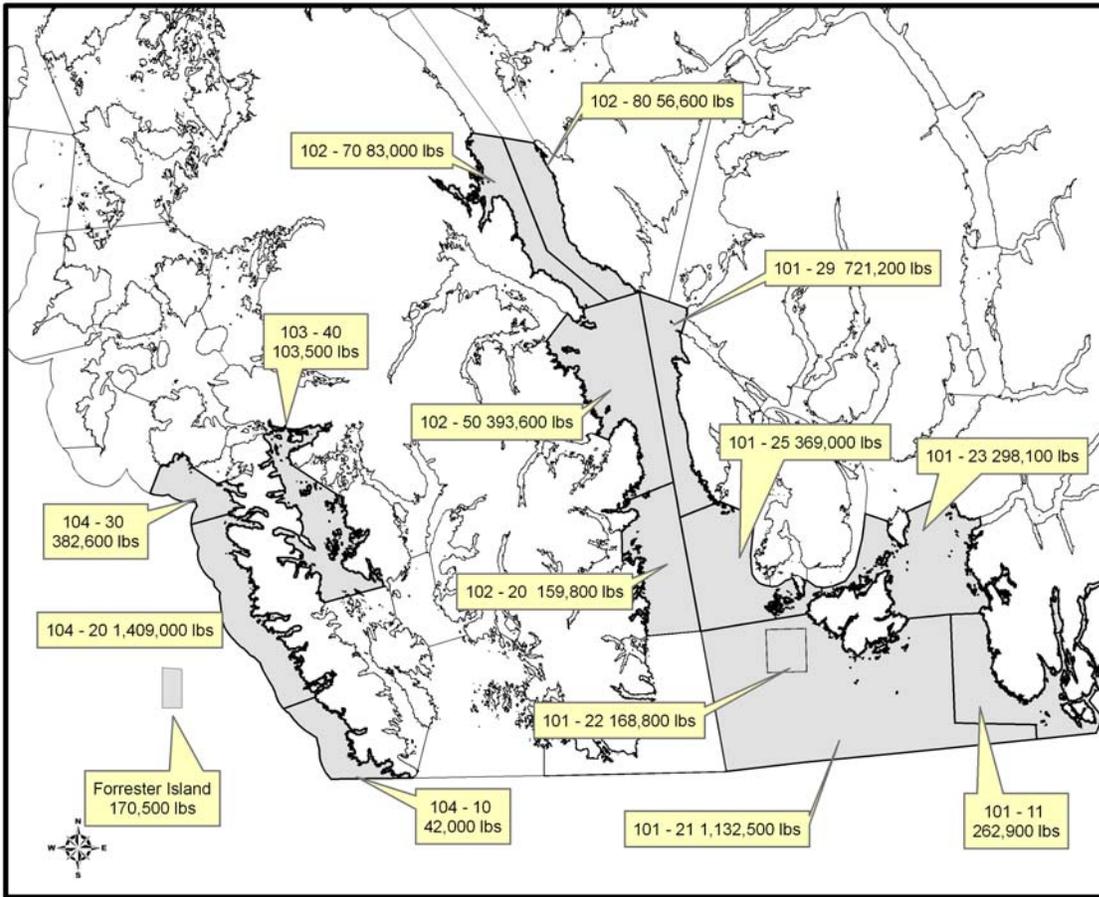


Figure 8.—2005–2006 Red sea urchin areas.

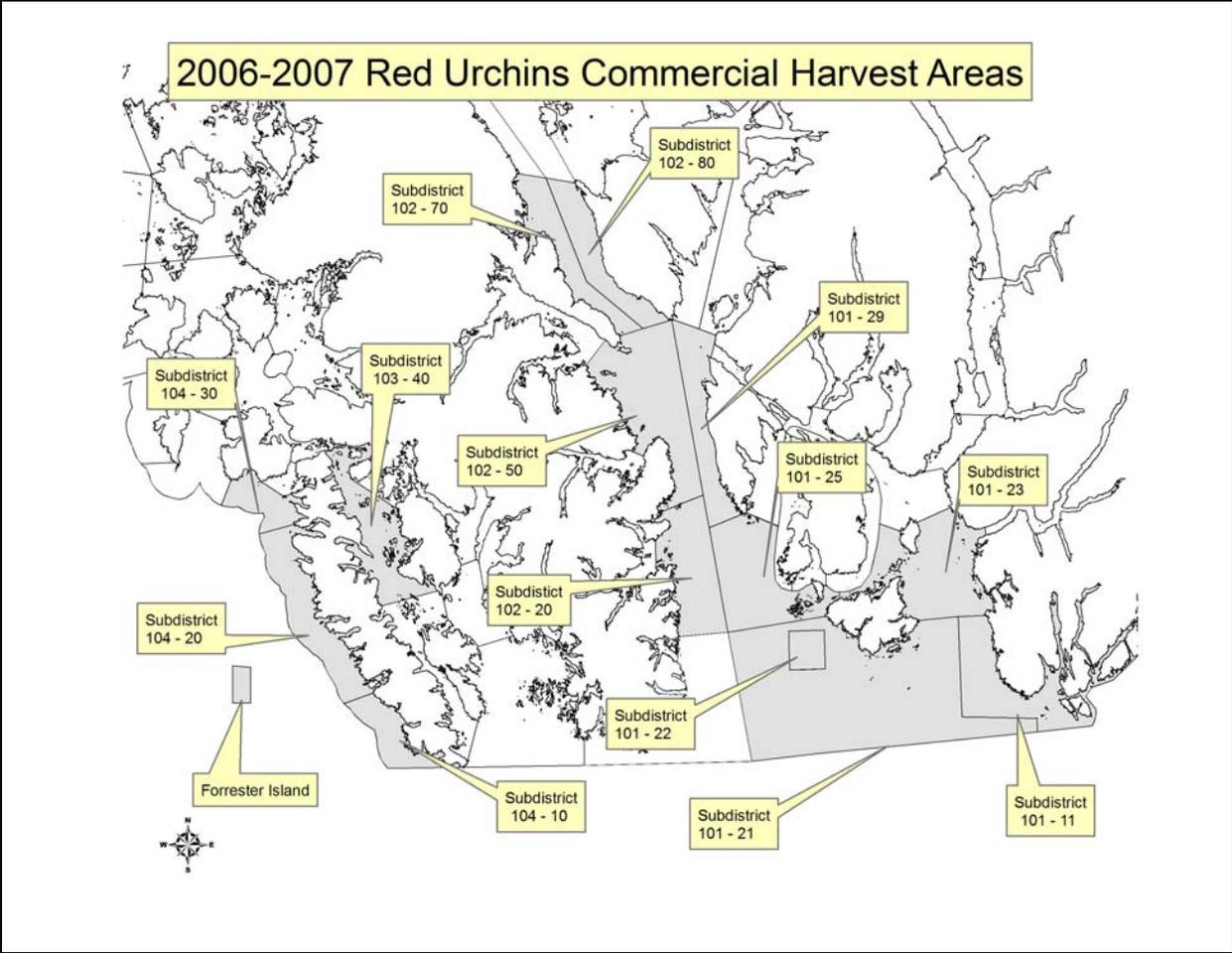


Figure 9.—2006–2007 Red sea urchin areas.