REPORT TO THE BOARD OF FISHERIES,

YAKUTAT SCALLOP FISHERY

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INTRODUCTION

Scallop Registration Area D (Yakutat) includes Registration Area D (Yakutat) and District 16 of Southeast Alaska. Commercial dredging for the weathervane scallop *Pactinopectin caurinus* in the Yakutat area (Registration Area D) occurs in open coastal waters between Cape Fairweather and Cape Suckling. Known offshore beds are extensive and overlap state and federal Exclusive Economic Zone (EEZ) waters. Harvestable populations also occur in Yakutat Bay, but scallop dredging in the bay is prohibited by regulation.

Scallop dredging in Southeast Alaska is limited by regulation to District 16, with the exception of Lituya Bay in District 16 which is closed. The known offshore beds in District 16 are small in comparison to those historically fished elsewhere in Alaska and overlap state and EEZ waters. Many of the productive beds are discontinuous or dispersed between foul ground.

The fishery is managed by the State of Alaska according to guidelines in the Alaska Scallop Management Plan (ASMP), adopted in 1993. The major features of the plan are conservative guideline harvests ranges and a requirement for complete observer coverage on all participating vessels.

The determination of the number of vessels allowed to participate in the statewide fishery is under the jurisdiction of the North Pacific Fishery Management Council. That body set the maximum number of vessels as 9 in 1999, and identified the permitted vessels at that time. Most vessels working in this fishery are very seaworthy, in excess of 70 feet, and based in Kodiak, Seward, and ports in other states. The fleet is highly mobile. Most vessels fish New Bedford-type dredges, approximately 12 to 15 feet in width, with one set off each side of the vessel. These dredges have heavy, rectangular steel frames supporting a mesh bag made from heavy steel rings. Ideally, the dredge skims the bottom just deeply enough to flip scallops into the mesh bag without plowing into the substrate.

Scallop fishing, processing, and marketing operations are more vertically integrated than most other fisheries in Alaska. The same company that owns or operates the vessel also warehouses, transships, brokers, and sells the product to consumers.

The primary product is the major adductor muscle, with most processing, and freezing or icing, conducted aboard the harvester vessel on the fishing grounds. The current guideline harvest range (GHR) is zero to 250,000 pounds in Registration Area D and zero to 35,000 pounds in District 16. Landed product weight is reported in pounds of frozen or iced meat, which comprises 6 to 11% of the live whole weight. The average price in 1998 was about $6.36/pound.

FISHERY DEVELOPMENT AND HISTORY

Registration Area D

The first reports of scallop harvests in the Yakutat area were in 1968. Since then, harvests have varied widely (Table 9.1). The roller coaster highs and lows in the harvest reflect a largely unregulated fishery, driven by economics and market forces before adoption of the ASMP in 1993. Since scallops live for many years after reaching harvestable size and worldwide demand has generally outstripped supply, the recurring crashes in the historical harvest record were strong circumstantial evidence that exploitation rates during some years had been too high. There was little consideration for long-term reproductive viability. Combined with sporadic recruitment, heavy harvests did not leave enough scallops on the grounds to carry the fishery over poor years.

The earliest years of the fishery were very productive. Virgin biomass supported harvests of over 900,000 pounds in 1968 (Yakutat Annual Report, 1968) and 800,000 pounds in 1969, by up to 14 vessels (Table 9.1). These years were followed by two decades of reduced effort and harvests. A statewide trend in increasing interest and participation in scallop fisheries in the early 1990s culminated in a peak harvest of over one million pounds in Area D in 1992. In response, the department developed an interim management plan in 1993 under the High Impact Emerging Fishery regulation (5 AAC 39.210). The Alaska Board of Fisheries subsequently adopted plan (the ASMP) into regulation. Harvests in Yakutat have been constrained to approximately 250,000 pounds under the ASMP.

District 16

The fishery in Southeast Alaska started in the early 1980s as stocks in the Yakutat Area to the north and west were fished down. Interest and harvests have been generally low and intermittent. District 16 stocks have been spared much of the roller coaster highs and lows prior to implementation of the Alaska Scallop Management Plan in 1993. Only a few vessels fished in most seasons, with a maximum of nine vessels in 1994, and one to nine vessels in each of the other 14 years of record. The peak harvest of 148,624 pounds occurred in 1990, with an overall historical average of about 33,000 pounds (Table 9.2). Most of the effort in Southeast Alaska has occurred in District 16, although a few landings were reported during the 1982 season from three other districts around the outer coasts of southeast Alaska before limitation of the fishery to District 16 in 1993. Due to the low numbers of participants and landings, historical data for much of this fishery is confidential.

In recent seasons the harvest has usually been taken after the Yakutat fishery closed. The general pattern has been for vessels displaced by competition or closure from the more productive grounds in Alaska to prospect for product in Southeast Alaska.

REGULATION DEVELOPMENT

The weathervane scallop fishery evolved from a wide-open, almost unregulated fishery through the 1992 season into one of the most stringently controlled and managed fisheries in the state in little more than a single season. The speed of emergency order implementation of the statewide ASMP, the scope of regulations, and the stringent harvest conditions were unprecedented.

Guideline Harvest Ranges

A guideline harvest range (GHR) of zero to 250,000 pounds for Registration Area D and zero to 35,000 pounds for District 16 was established by the ASMP in 1993. The ceilings are the approximate long-term average annual harvests for each area up to 1992. Until a longer time series of data from the fisheries are available for analysis, these fisheries will probably be managed toward the upper end of these ranges, which are considered conservative.

Gear Restrictions

Scallops mature at approximately three inches, based on research conducted by department biologists from 1968 through 1972. Four-inch minimum ring diameters for scallop dredges, permitting the escape of juvenile and smaller sexually mature scallops, was the primary passive management tool from 1969 through 1992, and continues to be used as a conservation measure to the present time. Since 1993, the width or horizontal front opening of scallop dredge gear has been limited to 15 feet and use of any chaffing gear or device that would tend to restrict the size of the rings has been prohibited.

To further discourage the entry of ever larger vessels into the fishery, regulations adopted as part of the ASMP in 1993 restricted the number of dredges that may be deployed at any time from a scallop vessel to two. Daily production per vessel was limited by restricting crew size to a total complement of 12, excluding the observer. Mechanical or automated shuckers were prohibited. With the exception of experimental dredges operating under stringent permit conditions, only dredges as defined and restricted by regulation are legal gear.

Registration Area D

For much of its history, this fishery has been open all year, with no closures during sensitive spawning periods. In late spring of 1991, Yakutat Bay was closed to commercial scallop dredging by the Board of Fisheries. Closure of the bay alleviated conflicts with commercial and subsistence salmon fishers, Dungeness and shrimp pot fishers, and other miscellaneous interests. Season closures went into effect in 1993, with the winter fishery managed for a harvest of about 125,000 pounds. The opening lasted from January 1 through February 28. The ASMP, with its observer requirement and new regulations, went into effect before the summer fishery, which opened on July 1 and closed on July 11, 1993. The next season opened on January 10, 1994. The delay was due to problems in scheduling training and certification for observers. The season lasted eight days, closing on January 18, 1994. The summer season opened on July 1 and closed on July 12, 1994. The opening date for the winter fishery was formally changed by the Board of Fisheries in late 1994 from January 1 to January 10, and from a split season to a single winter season. The single winter season lasted through 1997.

In 1995, the season opened January 10 and closed on February 2. The season was shorter in 1996, opening on January 10 and closing on January 25. The last year for the winter fishery was in 1997 where the season opened on January 10 and closed on February 24. In 1998, the season opened on July 1 and closed July 29. In 1999 the season was July 1 to September 1.

District 16

Prior to 1993, this fishery was open all year, with an accounting period of January 1 through December 31. Starting in 1993, the statewide management plan was implemented. For Southeast Alaska, it specified a split season, with a winter fishery starting on January 1 and a summer fishery starting on July 1. In 1994, because of high anticipated effort and catch levels, the winter season opened and closed after a one-day fishery on January 20. The following summer season, opened by regulation on July 1 and closed by emergency order on October 31, was not as intense because productive areas in other parts of the state were also open concurrently.

In 1995, there was only a winter fishery which opened January 10 and closed on February 13. There were 2 seasons in 1996. The first one opened in state waters only on January 10 and closed on January 20. The summer fishery opened in federal waters on August 1 and continued through the fall to November 29. In 1997, there was a winter fishery lasting from January 10 and closing on February 24. At the Board of Fisheries meeting in 1997 regulations changed so that the season was opened on July 1 and extended to February 15. There was not a summer fishery in 1997, as the annual allocation had been taken in the winter. The next season began in 1998, opening July 1 and closed on October 6. In 1999, the season was shorter, opening July 1 and extending to September 1.

Size Restrictions

There are no size restrictions on scallops. Any scallop that is retained by four inch minimum-diameter, legal gear may be possessed and processed. In the past, a high percentage of the smaller scallops retained by this gear could not be economically hand-processed and were returned to the sea. These smaller scallops can now be processed and profitably marketed. Management assumes that adherence to the current GHR will be sufficient to insure overall stock viability despite retention of a larger percentage of smaller scallops.

Observer Program

Mandatory observers are required on each vessel fishing for scallops. The observer program has two main goals: to monitor bycatch and to collect biological and commercial fishing information about the weathervane scallop. There has been concern about the bycatch of crab and other important commercial species. The results from sampling from 1996-1998 show that there is minimal bycatch of crab and other species in Yakutat Registration Area D and District 16, especially when compared statewide.

The sampling of the scallop catch and of the scallops that are thrown back gives an idea of the composition of the stock. Shells are collected and aged to find out more about the age structure and population dynamics of the scallop populations.

Permits and Registration

Regulations specific to the Yakutat area date back to 1960. Between 1960 and 1969, the definition of legal gear was very broad; any device capable of being dragged on the ocean floor and taking scallops was legal, including longlines, trawls, and dredges. Declining harvest during the mid-1970s led to deletion of longlines as legal gear in 1976, and of trawls in 1981. Permits were required of scallop dredgers from 1979 to 1985. The first closure of Yakutat Bay by regulation occurred in 1992.

In 1995, all of Registration Area D and District 16 in Registration Area A were combined into Scallop Registration Area D to expedite scallop management. Before the areas were combined into a single registration area, vessel operators had to return to Yakutat, deliver scallops caught in an area, void their registration, and register for the new area before they could fish in it. With Registration Area D and District 16 combined into a single scallop registration area, vessels can fish in either area after reporting their intentions by radio to the management office in Yakutat.

1997 SEASON SYNOPSIS

Registration Area D

In 1997, the season started on January 10 and closed February 18. There were four vessels participating and eight total landings. The total catch for the season was 243,810 pounds just short of the 250,000 pound GHL. There were an average of 30,476 pounds per landing which is the second highest since the beginning of the fishery in 1969. This was a high catch per unit effort for this area.

District 16

The District 16 fishery began on January 10 and closed on February 23, 1997. The entire GHL was taken by a fleet of four vessels reporting a catch of 22,020 pounds of shucked meat and landings averaged 5,505 pounds.

1998 SEASON SYNOPSIS

Registration Area D

In 1998, the fishery was switched to one season beginning in the summer. The fishery was opened July 1 and closed July 29. Seven vessels harvested 250,785 pounds of shucked meat, very close to the GHL. There were 55 landings with an average of 4,560 pounds per landing. This is less than half of the average from 1969 to 1999.

District 16

The District 16 fishery opened on July 1 and was closed by emergency order on October 6, 1999 when the GHL was achieved. Because fewer than three vessels participated in the fishery the information on catch and number of landings is confidential.

1999 SEASON SYNOPSIS

Registration Area D

In 1999, the Registration Area D fishery was opened July 1 and closed by emergency order on September 1. There were three vessels that took 268,786 pounds. This was the farthest the catch had gone over the GHL since the ASMP was implemented. There were 25 landings with an average of 10,781 pounds per landing.

District 16

The District 16 fishery was open July 1 and was closed by emergency order on September 1, 1999. Because fewer than three vessels participated in the fishery the information on catch and number of landings is confidential.

Table 9.1. Registration Area D (Yakutat) historic commercial harvest and effort for weathervane scallops.

Season	Harvest (lbs. shucked meat)	Number of Permits	Number of Landings	Average lbs. per Landing
1969	837,087	14	59	14,187
1970	*	2	*	*
1971	84,948	3	10	8,494
1972	128,241	4	6	21,373
1973	173,700	4	4	43,425
1974	*	2	15	*
1975	139,022	6	11	12,638
1976	189,543	6	15	12,636
1977	*	2	3	*
1979	*	1	1	*
1980	255,667	8	22	11,621
1981	455,858	12	36	12,662
1982	168,353	7	24	7,014
1984	74,010	3	15	4,934
1985	*	2	14	*
1986	98,513	3	19	5,255
1987	*	1	14	*
1988	*	2	10	*
1989	*	2	7	*
1990	442,310	9	49	9,026
1991	402,571	5	55	7,319
1992	1,020,968	8	67	15,238
1993	264,193	10	16	16,512
1994	253,060	12	18	14,058
1995	242,491	10	18	13,471
1996	238,736	5	15	15,916
1997	243,810	4	8	30,476
1998	250,785	7	55	4,560
1999[a]	268,786	3	25	10,751
Average[b]	236,003	5	21	12,213

* Asterisks indicate confidential information where fewer than three permits were fished.

[a] Most recent year's data should be considered preliminary.

[b] Averages are calculated only from years where landings were reported. Differences between confidential and non-confidential data are insignificant.

Table 9.2. Southeast Alaska (District 16 only), historic commercial catch and effort for weathervane scallops.

Season	Harvest (lbs. shucked meat)	Number of Permits	Number of Landings	Average lbs. per Landing
1980	*	2	2	*
1981	*	1	1	*
1982	*	2	3	*
1983	*	1	1	*
1984				
1985				
1986				
1987				
1988				
1989				
1990	148,624	5	8	18,578
1991	39,817	3	9	4,424
1992	*	*	1	*
1993	*	*	9	*
1994	27,613	9	10	2,761
1995	33,302	7	8	4,162
1996	*	*	4	*
1997	22,020	4	4	5,505
1998	*	*	5	*
1999[a]	*	*	5	*
Average[b]	29,643	3	5	5,598

* Asterisks indicate confidential information where fewer than three permits were fished.

[a] Most recent year's data should be considered preliminary.

[b] Averages are calculated only from years where landings were reported.