

MEMORANDUM

TO: Council, AP and SSC Members

FROM: Clarence G. Pautzke
Executive Director



DATE: January 8, 1991

SUBJECT: Marine Mammals

ACTION REQUIRED

Receive status reports on Steller sea lions and NMFS-proposed amendments to the Marine Mammal Protection Act.

BACKGROUND

Steller Sea Lions

Last April NMFS published an emergency rule listing the Steller sea lion as threatened under the Endangered Species Act of 1973. The rule implemented protective measures including a ban on the discharge of firearms around sea lions, buffer zones around listed rookeries, and an incidental take quota of 675 animals in commercial fishing operations. The emergency rule expired December 3, 1990. On November 26, 1990, NMFS published a final rule to supplant the emergency rule. It has many of the same provisions and is under item C-3(a). A team is working on a recovery plan for the sea lion population and their report should be available for Council review in April.

Amendments to the Marine Mammal Protection Act

NMFS is developing a regime to govern the incidental taking of marine mammals in commercial fisheries after October 1, 1993, when the current five-year agreement, developed through amendment to the Marine Mammal Protection Act in 1988, will expire. The Marine Mammal Commission provided their recommendations to NMFS last summer. A full report was in your September 1990 notebooks. NMFS will have their proposed amendments drafted by early February. They will be accompanied by a draft environmental impact statement and will be available for Council review in April. The Secretary of Commerce must submit the recommended plan to Congress by January 1, 1992.

Steve Pennoyer will report on both of the above topics.

**Monday
November 26, 1990**

federal register

Part III

Department of Commerce

**National Oceanic and Atmospheric
Administration**

50 CFR Part 227

**Listing of Steller Sea Lions as
Threatened Under the Endangered
Species Act; Final Rule**

DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric
Administration
50 CFR Part 227

[Docket No. 900387-0292]

RIN 0648-AB13

Listing of Steller Sea Lions as
Threatened Under the Endangered
Species Act

AGENCY: National Marine Fisheries
 Service (NMFS), NOAA, Commerce.

ACTION: Final rule.

SUMMARY: NMFS is listing the Steller (northern) sea lion (*Eumetopias jubatus*) throughout its range as threatened under the Endangered Species Act of 1973, 16 U.S.C. 1531 *et seq.* (ESA) and is establishing protective measures similar to those contained in the previous emergency rule (April 5, 1990; 55 FR 12645). More comprehensive protective regulations and critical habitat designation are being considered in a separate, forthcoming rulemaking. NMFS adopted this dual rulemaking approach in order to expedite the final listing of the Steller sea lion. This listing decision is based on review and analysis of comments on the proposed listing (July 20, 1990; 55 FR 29793) and at public hearings. It is being taken because of significant declines in the Steller sea lion population. The number of Steller sea lions observed on certain rookeries in Alaska has declined by 63% since 1985 and by 82% since 1960. Declines are occurring in previously stable areas. Significant declines have also occurred on the Kuril Islands, USSR.

EFFECTIVE DATES: December 4, 1990.

ADDRESSES: The complete file for this rule is available for review at the Office of Protected Resources and Habitat Programs (F/PR) NMFS, 1335 East-West Highway, Silver Spring, MD 20910.

FOR FURTHER INFORMATION CONTACT: Mr. Herbert Kaufman, Protected Species Management Division, Silver Spring, MD, 301-427-2319.

SUPPLEMENTARY INFORMATION:
Background

On November 21, 1989, the Environmental Defense Fund and 17 other environmental organizations petitioned NMFS to publish an emergency rule listing the Steller sea lion as an endangered species and to initiate a rulemaking to make the listing permanent. Under section 4 of the ESA, NMFS determined that the petition presented substantial information indicating the action may be warranted and requested comments (February 22,

1990; 55 FR 6301). On April 5, 1990 (55 FR 12645), NMFS issued an emergency interim rule listing the Steller sea lion as threatened and requested comments. The emergency listing is effective for 240 days and expires on December 3, 1990.

In March 1990, NMFS appointed a Steller sea lion recovery team, which held its first meeting on April 27, 1990. The team is responsible for drafting a recovery plan and providing recommendations to NMFS on necessary protective regulations for the Steller sea lion.

NMFS also is conducting several research projects, including populations surveys, assessment of sea lion health and fitness, a stock identification study, analysis of fisheries data, and blood and tissue analyses.

NMFS proposed listing the Steller sea lion as a threatened species under the ESA on July 20, 1990 (55 FR 29793). The proposed rule contained protective regulation similar to those of the emergency rule. On July 20, 1990, NMFS also issued an advanced notice of proposed rulemaking (55 FR 29792), requesting public comments to assist NMFS in its efforts to develop separate, more comprehensive protective regulations and critical habitat designation.

NMFS has taken this dual-track rulemaking approach because it wants to avoid a lapse between the expiration of the emergency interim listing and the final listing. There is not sufficient time to issue a proposed rule with comprehensive protective regulations including a proposed critical habitat designation, solicit public comments, provide an opportunity for public hearings, conduct the required regulatory and economic analyses, and issue a final rule by December 3, 1990. Further, NMFS believes it is preferable to consider the information provided in the recovery plan prior to publishing comprehensive proposed protective regulations. Therefore, the Service is listing the Steller sea lion as a threatened species now with a limited set of protective measures and will propose more comprehensive protective regulations and critical habitat in a separate rulemaking.

Comments on the Proposed Rule

NMFS received 13 comments in response to the July 20, 1990 notice of proposed rulemaking: Four comments were received from environmental groups, four comments were received from state and local governments, two comments were received from Native Alaskan interest groups, one comment was received from a fishing industry group, one comment was received from

a private individual, and one comment was received from the Steller Sea Lion Recovery Team. Additional comments were received at public hearings held in Anchorage, Cordova, and Kodiak, Alaska. These comments, which are discussed below, address the following issues: Listing classification, buffer zones, incidental take, shooting prohibition, subsistence, enforcement, exceptions, additional protective measures, research/experimentation, and public hearings.

Listing Classification

Nearly half the commenters addressed the listing classification issue. Several commenters believed that the species should be listed as endangered rather than threatened based on the dramatic and continuing declines in abundance in Alaska. One commenter noted that the Alaska population of Steller sea lions declined by 86 percent over the last 29 years and 63 percent in the last 5 years. This commenter added that the evidence indicates that the decline is continuing and accelerating, resulting in extinction in several years. Another commenter stated that the most recent population data show that the geographic extent of the decline is increasing as well.

NMFS believes that a population decline is a sufficient basis for listing a species as threatened or endangered. In the case of the Steller sea lion, NMFS believes that the available information supports a threatened classification rather than an endangered classification. There is not sufficient information to consider animals in different geographic regions as separate populations; therefore the status of the entire species must be considered.

Total counts of sea lions at rookeries and haulout sites throughout most of Alaska and the USSR in 1989 were about 58,000, indicating a total population size in this area of at least one third more than this number. There are areas where Steller sea lion abundance is stable or not declining significantly. Furthermore, preliminary results from the 1990 Steller sea lion survey show that about 25,000 adult and juvenile sea lions were counted, similar to the 1989 count. These results indicate that the population has not declined further in areas where the decline had been significant, and that the 1989 counts were not anomalous. NMFS does not believe that the species currently is in danger of extinction throughout all or a significant portion of its range (i.e., endangered). NMFS will continue to monitor the Steller sea lion population. If the decline continues at the rate in the past decade and continues to spread,

NMFS will reconsider the listing classification.

Two commenters concurred with the "threatened" listing but stated that this classification should be extended to the entire range of the species, including California populations of the Steller sea lion. One of these commenters referred to the comment on the emergency listing that documented a decline of 90 percent in the species' population in California.

The emergency interim rule applied to the entire range of the Steller sea lion, as does the final rule. Although the California populations are included, specific protective measures for Steller sea lions in California (such as buffer areas) are not. NMFS and the Recovery Team are reviewing the status of the species throughout its range and the need for additional protective measures. In a separate rulemaking, NMFS will propose more comprehensive protective regulations and critical habitat.

One commenter expressed concern about classifying the Steller sea lion as threatened before identifying the reason for the population decline. The commenter suggested that NMFS conduct additional research on the probable causes of the decline prior to reclassification of the species.

The available data support a listing of threatened throughout the range of the Steller sea lion. NMFS believes that a demonstrated decline can justify a listing of species and that precise knowledge of the reasons for the decline is not a prerequisite. Each of the five factors described in section 4(a)(1) of the ESA, which can cause a species to be threatened or endangered, is discussed in detail below. NMFS has determined that the Steller sea lion is a threatened species and that it is likely that this condition is caused by a combination of the factors specified under section 4(a)(1) of the ESA. NMFS is sponsoring research projects to determine the cause of the population decline. The results of this research will be considered when NMFS proposes comprehensive protective regulations and critical habitat designation.

Buffer Zones

NMFS received eight comments on buffer zones. One commenter concurred with the list of the buffer zones designated in the proposed rule. Six commenters indicated that the buffer zones should be designated in other areas not covered in the emergency rule. Two of these commenters stated that buffer zones should be established around all rookeries in the species' range and that the size should be increased to include surrounding feeding areas (i.e., up to 60 miles (96.6

kilometers) from a rookery). One of these commenters also stated that NMFS should prohibit overflights over all buffer zones. Two other commenters requested that buffer zones be established around major rookeries off the California coast, including Farallon Island National Wildlife Refuge and Ano Nuevo Island. The last two commenters recommended that additional rookeries, not yet showing population declines, be protected by 0.5-nautical mile (0.9 kilometers) buffer zones. One of these commenters recommended that NMFS consider issuing prohibitions or guidelines on aircraft activity near rookeries. Of the six commenters that supported strengthening of the buffer zone provisions, two commenters stated that buffer zones should be established for all haulouts. A third commenter wants NMFS to establish buffer zones for haulouts when Steller sea lions are on them.

NMFS believes that additional buffer zones may be needed to provide adequate protection to the Steller sea lion until more comprehensive regulations are in place. Because the area of major decline continues westward beyond Kiska Island, and includes sea lion rookeries on Buldir, Agattu, and Attu Islands, NMFS adds rookeries located on those islands to the list of locations where 3 mile (4.8 kilometers) (at-sea and 0.5 mile (0.8 kilometers) on-land buffer zones are in effect. Additional modifications to the buffer zone provisions will be considered when NMFS proposes more comprehensive protective regulations and critical habitat after considering the recommendations of the Recovery Team, the Marine Mammal Commission and the public.

One commenter requested that NMFS reduce the size of the buffer zone on Adak Island. This commenter claimed that the rookery is smaller than listed and that small vessels do not have an adverse impact on Steller sea lions even at 1 nautical mile (1.8 kilometers).

The NMFS believes keeping the three nautical mile (5.5 kilometers) buffer zone around the rookery on Adak Island will be necessary to provide protection to the Steller sea lion without having significant effects on marine user groups. If current research indicates that modifications to the listed buffer zones are warranted, NMFS will implement such changes. Individuals may obtain exemptions where an "activity will not have any significant adverse effect on Steller sea lions, the activity has been conducted historically or traditionally in the buffer zones, and there is no readily

available or acceptable alternative to or site for the activity."

Incidental Takings

Five commenters recommended that the incidental take quota be reduced. Two of the commenters stated that the quota should be based on biological considerations and suggested that the quota be set at 1 percent of the index count of Steller sea lions (not including pups) in a region. One of these commenters recommended that this formula also apply to Alaskan waters east of 141° W longitude and to waters off of Washington, Oregon, and California, regions not covered by the proposed rule. Another commenter, noting that the proposed quota was more than 2.5 times higher than the worst-case estimate of the actual incidental take, stated that the proposed quota was meaningless and should be reduced. This commenter added that the incidental take in non-fishing activities (e.g., oil exploration) should be prohibited. One commenter stated that the incidental take quota should be reduced to zero, that the quota should be apportioned geographically, and that the quota should take into account the age and sex structures of the takes. Two of the commenters suggested that NMFS investigate mechanisms to reduce the incidental take in fisheries.

NOAA scientists currently are evaluating methods for establishing and monitoring incidental take quotas for Steller sea lions. This effort is one component of the long-range management strategy that is anticipated to be implemented when the Marine Mammal Exemption Program expires in 1993. NMFS also will determine whether fishing practices or gear can be used to reduce or eliminate incidental takes associated with fishing. NMFS will address fishing gear and practices in the forthcoming rulemaking dealing with comprehensive protective regulations. As part of the rulemaking process for the comprehensive conservation program, NMFS will consider modifications of the quota including location, age and sex.

Shooting Prohibition

All five commenters that addressed the shooting prohibition concurred with NMFS's proposal. Two of the commenters, however, recommended that the prohibition be extended to harbor seals and California sea lions; one of the commenters recommended that the prohibition be extended to harbor seals only. The commenters argue that the extension is necessary to prevent inadvertent shooting of Steller

sea lions because the three species are similar in appearance and often swim in the same areas. One of the commenters added that the prohibition would be easier to enforce if it were extended to the other two species.

NMFS agrees that the inadvertent shooting of Steller sea lions is a potential problem and will examine the extension of the shooting prohibition to California sea lions and harbor seals when it proposes comprehensive protective regulations.

One commenter stated that the regulatory language regarding the shooting prohibition was unclear, claiming that "within 100 yards" (91.4 meters) could be interpreted to mean either that the individual firing a weapon could not be within 100 yards (91.4 meters) of a Steller sea lion or that the projectile could land within 100 yards (91.4 meters) of a Steller sea lion.

NMFS believes that the intent of the regulatory language regarding the shooting prohibition is clear. To prevent misinterpretation of the regulation, NMFS issues the following clarification: 50 CFR 227.12(a)(1) prohibits the discharge of a firearm where the projectile will strike or land within 100 yards (91.4 meters) of a Steller sea lion. NMFS believes that this clarification is sufficient and that no change in the regulatory language is required.

Two commenters recommended that NMFS develop non-lethal deterrents and evaluate their effectiveness at reducing damage to fishing catch and gear and their possible impacts on animals.

NMFS agrees with the commenters that non-lethal deterrents should be developed for use by fishery vessel operators and crews. At this time, however, NMFS is not aware of any methods that have been proven to be effective at deterring marine mammals from interacting with fishing activities.

Subsistence

Five commenters addressed the taking of Steller sea lions for subsistence purposes. Two commenters stated that subsistence harvesting is a minimal contributor to the population decline of sea lions. One of these commenters expressed concern that the traditions and livelihood of Native Alaskans would be adversely affected if subsistence harvesting were regulated. One commenter disagreed with the subsistence exception in the proposed rule, recommending that the subsistence take be included in an overall quota that would include incidental takes and that NMFS regulate the subsistence harvest.

NMFS agrees that the subsistence harvest is minimal and probably has not contributed to the population decline of

Steller sea lions. Although the actual level of the subsistence harvest is unknown, it is estimated to be fewer than 100 animals annually. Based on the available information NMFS believes that it would be more appropriate to address the regulation of subsistence harvesting when NMFS develops the comprehensive protective regulations.

One commenter expressed concern that the creation of buffer zones could threaten traditional subsistence harvest activities because a number of traditional harvest sites are located within the boundaries of buffer zones. This commenter noted that exemptions could be difficult to obtain and feared that the burden of proof would be placed on Alaskan Natives. The commenter recommends that NMFS establish clear criteria for providing for subsistence harvesting in buffer zones. In the long run, the commenter suggests that NMFS establish a more flexible regulatory structure that provides protection for Steller sea lions without placing undue restrictions on subsistence harvest activities.

NMFS recognizes the possible adverse impacts of the listing on traditional activities that are not contributing to the decline of Steller sea lions. This rule includes an exception to the shooting prohibition for subsistence harvesting and an exemption process for traditional activities in buffer zones. Conflicts between buffer zones and traditional hunting sites will be handled on a case-by-case basis through the exemption process. Because subsistence hunting is a traditional activity, hunters have to demonstrate that no alternative sites are readily available and that the hunting will not adversely affect the rookery. The regulation, however, does not include a blanket exemption for subsistence because NMFS believes that alternative hunting sites may be available in some cases and that it is necessary to minimize avoidable human contact at and near rookeries. NMFS will further consider the interrelationship between buffer zones and subsistence harvesting when it develops comprehensive protective regulations.

Another commenter concurred with the regulatory exception for subsistence harvesting but requested NMFS to examine the subsistence harvest and determine whether the harvest is being conducted in a non-wasteful manner.

NMFS agrees that subsistence harvesting of Steller sea lions should be conducted in a non-wasteful manner. Examination of this issue, however, could not be addressed in the final listing without delaying its publication.

Enforcement

Three commenters expressed concern that enforcement of the provisions in the emergency interim rule was inadequate. Two of these commenters specifically addressed enforcement of the shooting prohibition while the other commenter addressed incidental takes and enforcement of buffer zones. One commenter recommended that intentional kills should be a priority for the observer program. Another commenter suggested that NMFS expand the observer program for incidental takes.

NMFS agrees that enforcement is a critical component of these regulations and retains the expanded observer program established under the emergency listing. Foreign processors and domestic groundfish vessels 125 feet (38 meters) or more in length now carry observers during all of their operations in the Exclusive Economic Zone (EEZ) of the Bering Sea and in the Gulf of Alaska. Groundfish vessels of 60 to 124 feet (18 to 38 meters) in length carry observers during 30 percent of their operations in each quarter. Three additional fisheries in Alaska that are classified as Category I under the MMPA, Prince William Sound set and drift gillnet for salmon and South Unimak (Unimak and False Passes) drift gillnet for salmon, had observer coverage during the 1990 fishing season and are scheduled to have coverage in the 1991 fishing season contingent upon final publication of the Revised List of Fisheries. NMFS also is retaining the observer authority of the emergency rule by allowing the NMFS Alaska Regional Director to place an observer on any fishing vessel. If additional information indicates that the current observer program requires modification, such modification could be implemented under the authority of this rule. NMFS also is evaluating the observer program as part of the development of a long-range management strategy for implementation of the Marine Mammal Protection Act Amendments of 1988.

Exceptions

Three commenters addressed the exceptions provided under the proposed rule. One of these commenters stated that the criteria for several of the exceptions were vague and/or unjustified and that the lack of specificity could pose enforcement problems. The commenter expressed concern over the following exception provisions: Taking for the protection of the animal or public health or the lethal removal of a nuisance animal.

entrance into buffer zones by governmental agencies for national defense or the conduct of other legitimate activities, emergency situations, and exemptions. In addition, the commenter recommended that NMFS modify the exemption application procedure to include public comments, to place the burden of proof on the applicant, and increase the stringency of the adverse impact criterion from "will not have a *significant* adverse impact" to "will not have *any* adverse impact."

NMFS believes that the exceptions established in 50 CFR 227.12(b) paragraph (1) through (4) are appropriate, necessary, and well defined. The first provision parallels section 109(h) of the Marine Mammal Protection Act, 16 U.S.C. 1361 *et seq.* (MMPA), which, among other things, allows the taking of beached and stranded animals for rehabilitation purposes, an activity that may benefit the species. NMFS believes that local officials need the authority to protect the safety of their citizens when necessary. Only a very small number of animals are likely to be taken for the protection of the public health and welfare or by the non-lethal removal of "nuisance animals," and this provision is not likely to have any effect on the population. NMFS believes the second provision is necessary to allow government functions, such as Coast Guard activities, NOAA's nautical charting responsibilities and wildlife surveys, to continue. None of these activities is expected to significantly affect the sea lion population. Further, Federal agencies must consult under section 7(a)(2) of the ESA on any action that may affect Steller sea lions to ensure that the action is not likely to jeopardize its continued existence.

NMFS believes that the exemption criteria and process established by this rulemaking will adequately protect the designated rookeries. NMFS does not expect many exemptions and believes that exemptions are necessary to account for unforeseen circumstances. Furthermore, the criteria narrowly define conditions under which NMFS can grant an exemption. Since the emergency listing became effective on April 5, 1990, NMFS has acted on two exemption applications. In one case the exemption was granted because the applicant very clearly met all three criteria: The activity has been on-going since 1930, disturbance of the rookery has not been a problem, and there are no reasonable or feasible alternatives to the site. In the other case, in which a tourist lodge's application for entry into the Marmot Island buffer zone to view

and photograph Steller sea lions was denied, NMFS ruled that alternative sites and alternative "wilderness experience" activities were available. These examples demonstrate that the exemption procedure is unlikely to reduce the protection afforded by the establishment of buffer zones.

Two commenters expressed concern that vessels would not have access to safe anchorages located in buffer zones during storms.

NMFS shares the commenters' concern that vessels have access to safe anchorage during storms. NMFS notes that both the proposed and final rules contain an exception to the buffer zone entry prohibition in case of emergency situations: 50 CFR 227.12(b)(4) states that approach restrictions into buffer zones does not apply when "compliance with that provision presents a threat to the health, safety, or life of a person or presents a significant threat to the vessel or property." The emergency situation provision would permit a vessel operator to enter a buffer zone for the purpose of securing the vessel at a safe anchorage during a storm.

Additional Protective Measures

Over half of the commenters believed that additional protective regulations are needed and that the interim protective measures under the emergency rule are inadequate. Most of these commenters implicated trawl fisheries as a major contributor to the decline in the Steller sea lion population by depleting the Steller sea lion's prey species. Additional recommendations included limiting trawling to daylight hours, prohibiting the use of gill nets around rookeries, prohibiting fishing for pollock when they are carrying roe, and reducing the overall quota of groundfish. One commenter added that the rapid decline in the Steller sea lion population required immediate action and that NMFS should develop an interim management and conservation plan in the absence of final comprehensive protective regulations.

NMFS agrees with the commenters that more comprehensive protective measures may be required. However, NMFS does not want to delay the listing of the species while proposed protective regulations are being developed and evaluated. NMFS will, therefore, propose more comprehensive protective regulations and critical habitat in a separate rulemaking as indicated in the preamble to the proposed rule. This rule includes the limited protective regulations specified in the proposed rule. NMFS, however, believes that these limited regulations (e.g., buffer

zones, shooting prohibition) will be adequate in the near-term.

Research/Experimentation

Six commenters recommended that NMFS sponsor research to determine the cause of the Steller sea lion's population decline and to develop appropriate conservation measures and a management plan. Several of the commenters suggested that NMFS focus on the relationship between fishery practices and the Steller sea lion population. Another commenter supported research to assess the impact of toxic pollutants on the population decline. One commenter recommended that NMFS implement experimental conservation measures that test hypotheses on the causes of the population decline.

NMFS agrees that more information is needed to determine the cause(s) of the decline. NMFS is undertaking research to determine important feeding locations by using satellite monitored tags attached to female sea lions. These studies also should provide information on locations of at-sea mortalities. Studies to determine stock differentiation will continue. Resource surveys on the density of sea lion prey species are proposed. Satellite linked telemetry will be used to determine sea lion feeding areas for comparison to the findings from these surveys. The behavior of sea lions in relation to commercial fishing activities and the association between feeding sea lions and principal fishing areas will be examined. NMFS also will evaluate the impact of the protective measures (i.e., shooting prohibition, buffer zones) established by this rule.

Public Hearings

Two commenters requested that NMFS hold public hearings on the rulemaking. One of the commenters stated that public hearings were necessary because many affected individuals were unlikely to submit written comments in response to the publication of the proposed listing in the Federal Register. The other commenter indicated that public hearings were justified given the importance of fisheries to the local economy and the importance of the Steller sea lion to the community.

NMFS agreed with the commenters that the public hearings were appropriate given the importance of the rulemaking to the community. In response, NMFS held three public hearings: One on October 16, 1990 in Anchorage and, on October 18, 1990,

hearings were held in Kodiak and Cordova, Alaska.

Summary of the Status of the Species

The Steller (northern) sea lion, *Eumetopias jubatus*, ranges from Hokkaido, Japan, through the Kuril Islands and Okhotsk Sea, Aleutian Islands and central Bering Sea, Gulf of Alaska, southeast Alaska, and south to central California. There is not sufficient information to consider animals in different geographic regions as separate populations. The centers of abundance and distribution are the Gulf of Alaska and Aleutian Islands, respectively. Rookeries (breeding colonies) are found from the central Kuril Islands (46°N latitude) to Ano Nuevo Island, California (37°N latitude); most large rookeries are in the Gulf of Alaska and Aleutian Islands. More than 50 Steller sea lion rookeries and a greater number of haulout sites have been identified.

During the 1985 breeding season, 68,000 animals were counted on Alaska rookeries from Kenai Peninsula to Kiska Island, compared to 140,000 counted in 1956-60. A 1988 Status Report concluded that the population size in 1985 was probably below 50 percent of the historic population size in 1956-60 and below the lower bound of its optimum sustainable population level under the MMPA. A comparable survey conducted in 1989 showed that the number observed on rookeries from Kenai to Kiska declined to 25,000 animals. This indicates a decline of about 82 percent from 1956-60 to 1989 in this area. Preliminary results from the 1990 Steller sea lion survey show that about 25,000 adult and juvenile sea lions were counted, similar to the 1989 count. These results indicate that the population has not declined further in areas where the decline had been significant, and that the 1989 counts were not anomalous. The counts are not an estimate of total numbers of animals but include only those animals on the beach (excluding pups) at the time of the survey. As such, they can be used to indicate trends in abundance, rather than to estimate total species abundance. Copies of the 1988 Status Report and a 1989 Update are available (see ADDRESSES).

Species abundance estimates during the late 1970's ranged from 245-290,000 adult and juvenile animals. A current total population estimate is not available. However, counts at rookeries and haulout sites throughout most of Alaska and the USSR in 1989, plus estimates from surveys conducted in recent years at locations not counted in 1989, provide a minimum number for the species during 1989. The summaries of these counts and estimates are:

Alaska.....	53,000
WA, OR and CA	4,000
British Columbia.....	6,000
USSR.....	3,000
	66,000

Summary of Factors Affecting the Species

An endangered species is any species in danger of extinction throughout all or a significant portion of its range and a threatened species is any species likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. Species may be determined to be endangered or threatened due to one or more of the five factors described in section 4(a)(1) of the ESA. These factors as they apply to Steller sea lions are discussed below.

A. The present or threatened destruction, modification, or curtailment of its habitat or range. Steller sea lions breed on islands in the North Pacific Ocean, generally far from human habitations. There is no evidence that the availability of rookery space is a limiting factor for this species. As the number of animals continues to decline, rookeries are being abandoned and available rookery space is increasing. However, activities that result in disturbance, prey availability or other factors may be affecting the suitability of the available habitat.

The feeding habitat of Steller sea lions in Alaska may have changed. State of Alaska biologists found that populations in the Gulf of Alaska during the 1980's had slower growth rates, poorer physical fitness (lower weights, smaller girth), and lowered birth rates. Some data show a high negative correlation between the amount of walleye pollock caught and sea lion abundance trends in the eastern Aleutians and central Gulf of Alaska. It is possible that a reduction in availability of pollock, the most important prey species in most areas, is a contributing factor in the decline in the number of Steller sea lions in western and central Alaska.

B. Over-utilization for commercial, recreational, scientific, or educational purposes. Between 1963-72, over 45,000 Steller sea lion pups were commercially harvested in the eastern Aleutian Islands and Gulf of Alaska. This harvest may explain the declines in these areas through the 1970's. The actual level of subsistence harvest of Steller sea lions is unknown, but is probably less than 100 animals annually, primarily at St. Paul Island in the Pribilofs during fall and winter months. This taking is not of sufficient magnitude to contribute to the overall decline. A small number have

also been taken for public display and scientific research purposes.

C. Disease or predation. Sharks, killer whales and brown bears are known to prey on Steller sea lion pups. Mortality from sharks and bears is not believed to be significant. When sea lion abundance was high, the level of mortality from killer whales was probably not significant, but as sea lion numbers decline, this mortality may exacerbate the decline in certain areas.

Disease resulting in reproductive failure or death could be a source of increased mortality in Steller sea lion populations, but it probably does not explain the massive declines in numbers. Antibodies to two types of pathological bacteria (*Leptospira* and *Chlamydia*), a marine calicivirus (San Miguel Sea Lion Virus), and seal herpesvirus were found in the blood of Steller sea lions in Alaska. Leptospirae and San Miguel sea lion viruses may be associated with reproductive failures and deaths in California sea lions and North Pacific fur seals. *Chlamydia* has not been studied previously in sea lions, but is known from studies of Pribilof Island fur seals. None of these agents is thought to be a significant cause of mortality in Steller sea lions.

D. The inadequacy of existing regulatory mechanisms. Some protection for the Steller sea lion is provided under the MMFA, which prohibits the taking of Steller sea lions, with certain exceptions, including an interim exemption for commercial fishing. Once 1,350 Steller sea lions have been killed incidental to commercial fishing, section 114 of the MMPA requires NMFS to prescribe emergency regulations to prevent, to the maximum extent practicable, any further taking. Intentional lethal takes are prohibited. In addition, section 114(g) of the MMPA provides that regulations may be prescribed to prevent taking of a marine mammal species in a commercial fishery if it is determined that such taking is having, or is likely to have, a significant adverse impact on that marine mammal population stock.

E. Other natural or manmade factors affecting its continued existence. Steller sea lions are taken incidental to commercial fishing operations in the Gulf of Alaska and the Bering Sea. Between 1973 and 1988, U.S. observers on foreign and joint venture vessels operating in these areas reported 3,661 marine mammals taken. Steller sea lions accounted for 90 percent of this observed total. Based on these observed takes and an extrapolation to unobserved fishing, the total number of Steller sea lions incidentally killed

the foreign and joint venture commercial trawl fisheries during 1973-1988 is estimated at 14,000. Since 1985, however, the level and rate of observed incidental take has decreased to the point where, by itself, it is not sufficient to account for the most recently observed declines.

Observer programs under the MMPA, and for the groundfish fisheries of Alaska under the Magnuson Fishery Conservation and Management Act of 1976, as amended, 16 U.S.C. 1801 *et seq.* (Magnuson Act), will assist NMFS in determining whether the incidental take of Steller sea lions during commercial fishing operations or other observable activities are factors in the decline in the number of these animals in Alaska.

There are reports of fishermen and other people shooting adult Steller sea lions at rookeries, haulout sites, and in the water near boats, but the magnitude of this mortality is unknown. These activities also have the potential for disruption of breeding activities and use of rookeries and haulout sites.

Determination

NMFS has determined that the available evidence indicates the Steller sea lion is likely to become an endangered species within the foreseeable future and that the threatened classification is appropriate. Although the precise causes of the decline have not been determined, it is likely that the current condition is caused by a combination of the factors specified under section 4(a)(1) of the ESA.

The number of Steller sea lions observed on certain rookeries in Alaska declined by 63 percent since 1985 and by 82 percent since 1960. The decline has spread from the eastern Aleutian Islands, where it began in the early 1970's, east to the Gulf of Alaska and west to the previously stable central Aleutian Islands. Declines are occurring in previously stable areas and on the Kuril Islands, USSR. Despite this well documented decline, NMFS does not believe that an endangered listing is appropriate at this time. Total counts of sea lions at rookeries and haulout sites throughout most of Alaska and the USSR in 1989 were about 56,000, which would indicate a total population size in this area of at least one-third more than this number. NMFS must consider the status of the entire species, including areas where Steller sea lion abundance is stable or not declining significantly, because there is not sufficient information to consider animals in different geographic regions as separate populations. Furthermore, preliminary results from the 1990 Steller sea lion

survey show that about 25,000 adult and juvenile sea lions were counted, similar to the 1989 count. These results indicate that the population has not declined further in areas where the decline had been significant, and that the 1989 counts were not anomalous. Therefore, NMFS does not believe that the species currently is in danger of extinction throughout all or a significant portion of its range (i.e., endangered), and is listing the species as threatened.

Final Protective Regulations

Until more comprehensive regulations are developed, NMFS is adopting protective measures similar to those in the emergency interim rule, as follows:

1. *Prohibit shooting near sea lions.* Although the NMPA prohibits intentional lethal take of Steller sea lions in the course of commercial fishing, fishermen have not been prohibited from harassing sea lions that are interfering with their gear or catch by shooting at or near them. Since these practices may result in inadvertent mortalities, NMFS is prohibiting the discharge of a firearm within 100 yards (91.4 meters) of a Steller sea lion.

Exceptions to the shooting provisions include: For activities authorized by a permit issued in accordance with the endangered species permit provisions of 50 CFR part 222, subpart C; for government officials taking Steller sea lions in a humane manner, if the taking is for the protection or welfare of the animal, the protection of the public health and welfare, or the nonlethal removal of nuisance animals; and for the taking of Steller sea lions for subsistence purposes under section 10(e) of the ESA.

2. *Establish Buffer Zones.* NMFS is establishing a buffer zone of 3 nautical miles (5.5 kilometers) around the principal Steller sea lion rookeries in the Gulf of Alaska and the Aleutian Islands. Rookeries in southeastern Alaska, east of 141° W longitude, have not experienced the declines reported in central and western Alaska and no buffer zones are established for these areas. No vessels will be allowed to operate within the 3-mile (5.5 kilometers) buffer zones, with certain exceptions. Similarly, no person will be allowed to approach on land closer than one-half (½) mile (0.8 kilometers) or within sight of a listed Steller sea lion rookery. On Marmot Island, no person will be allowed to approach on land closer than one and one-half (1½) miles (2.4 kilometers) from the eastern shore. Marmot Island was previously the largest Steller sea lion rookery in Alaska and the eastern beaches are used throughout the year by the sea lions.

The purposes of the buffer zones include: Restricting the opportunities for individuals to shoot at sea lions and facilitating enforcement of this restriction; reducing the likelihood of interactions with sea lions, such as accidents or incidental takings in these areas where concentrations of the animals are expected to be high; minimizing disturbances and interference with sea lion behavior, especially at pupping and breeding sites; and, avoiding or minimizing other related adverse effects.

Exceptions to the buffer zone restrictions include: activities authorized by permits issued in accordance with the endangered species permit provisions of 50 CFR part 222, subpart C; for government officials taking Steller sea lions in a humane manner, if the taking is for the protection or welfare of the animal, the protection of the public health and welfare, or the nonlethal removal of nuisance animals; for government officials conducting activities necessary for national defense or the performance of other legitimate governmental activities; and for emergency situations that present a threat to the health, safety or life of a person or a significant threat to a vessel or property. Further, a mechanism is provided to allow the Director, Alaska Region, NMFS to issue exemptions for traditional or historic activities that do not have a significant adverse effect on sea lions and for which there is no readily available and acceptable alternative. Notice of all such exemptions will be published in the Federal Register. There is no overall exception to the buffer zone restrictions for subsistence taking of Steller sea lions; and exemption issued by the Regional Director will be needed.

3. *Establish Incidental Kill Quota.* When the MMPA was amended in 1988 to require emergency regulations once 1,350 Steller sea lions were incidentally killed in any year, the population numbers were based, in part, on 1985 data. In four study areas in Alaska, Steller sea lions declined by an average of 63 percent from 1985 to 1989. Therefore, NMFS is prohibiting the incidental killing of more than 675 Steller sea lions on an annual basis in Alaskan waters and adjacent areas of the EEZ west of 141° W longitude. In association with the emergency rule, NMFS instituted a more efficient monitoring system. Foreign processors and domestic groundfish vessels 125 feet (38 meters) or more in length now carry observers during 100 percent of their operations in the EEZ of the Bering Sea and in the Gulf of Alaska. Groundfish

vessels of 60 to 124 feet (18 to 38 meters) in length carry observers during 30 percent of their operations in each quarter. Three additional fisheries in Alaska that are classified as Category I under the MMPA, the Prince William Sound set and drift gillnet fishery for salmon and the South Unimak (Unimak and False Passes) drift gillnet fishery for salmon, had coverage during the 1990 fishing season and are scheduled to have coverage during the 1991 season, if they remain in Category I in the 1991 Revised List of Fisheries. The total incidental take of sea lions will be estimated monthly during the course of the fishing season, based on the in-season observer reports. In order to continue to monitor this quota, NMFS is retaining the observer authority of the emergency rule by allowing the respective Regional Director to place an observer on any fishing vessel. If data indicate that the quota is being approached, the Assistant Administrator for Fisheries, NOAA, will issue emergency rules to close areas to fishing, allocate the remaining quota among fisheries, or take other action to ensure that commercial fishing operations do not exceed the quota.

Critical Habitat

The ESA requires that critical habitat be specified to the maximum extent prudent and determinable at the time the species is proposed for listing. NMFS intends to propose critical habitat at the earliest possible date as a part of the comprehensive protective regulations. NMFS will consider physical and biological factors essential to the conservation of the species that may require special management consideration or protection. These habitat requirements include breeding rookeries, haulout sites, feeding areas and nutritional requirements. In describing critical habitat, NMFS will take into consideration terrestrial habitats adjacent to rookeries and their need for protection from development and other uses, such as logging or mining.

Additional Conservation Measures

In addition to protective regulations, conservation measures for species that are listed as endangered or threatened under the ESA include recognition, recovery actions, designation and protection of critical habitat, and Federal agency consultation. NMFS has established a Recovery Team to assist in developing a Recovery Plan for the Steller sea lion. This plan will help guide

the recovery efforts of NMFS and other agencies and organizations.

Section 7(a)(2) of the ESA requires that each Federal agency insure that any action authorized, funded, or carried out by the agency is not likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of its critical habitat. Federal actions most likely to affect the Steller sea lion include approval and implementation of fishery management plans and regulations under the Magnuson Act; permitted activities on land near rookeries and haulout sites, such as timber, mineral and oil development; and, leasing activities associated with offshore oil and gas exploration and development on the Outer Continental Shelf.

Once the Steller sea lion is listed as threatened, it is, by definition, considered depleted under the MMPA, and additional restrictions apply under that Act, such as a prohibition on taking for public display purposes.

Classification

Section 4(b)(1) of the ESA restricts the information that may be considered when assessing species for listing. Based on this limitation and the opinion in *Pacific Legal Foundation v. Andrus*, 657 F. 2d 829 (6th cir., 1981), NMFS has categorically excluded all listing actions under the ESA from environmental assessment requirements of the National Environmental Policy Act (48 FR 4413; February 6, 1984).

As noted in the Conference report on the 1982 amendments to the ESA, economic considerations have no relevance to determinations regarding the listing status of species. Therefore, the economic analysis requirements of Executive Order 12291, the Regulatory Flexibility Act, and the Paperwork Reduction Act are not applicable to the listing process.

NMFS is waiving part of the 30-day delay between the publication of a final rule and its effective date under 5 U.S.C. 553(d). There will be very few new regulatory requirements applicable to the public as a result of this final rule because it is very similar to the emergency rule which has listed the Steller sea lion as a threatened species since April 10, 1990. Because that emergency rule expires on December 3, 1990, it would be contrary to the public interest to delay the effective date of this final rule beyond December 4; any such delay could be detrimental to the Steller sea lion because it would cause a hiatus in the protection of the species under the ESA. Therefore, NMFS finds

there is good cause to waive the 30-day delay in the effective date under section 553(d)(3), and is making this rule effective December 4, 1990.

List of Subjects in 50 CFR Part 227

Endangered and threatened wildlife.

For the reasons set out in the preamble, 50 CFR part 227 is amended as follows:

PART 227—THREATENED FISH AND WILDLIFE

1. The authority citation for part 227 continues to read as follows:

Authority: 16 U.S.C. 1531 *et seq.*

2. In § 227.4, a new paragraph (f) is added to read as follows:

§ 227.4 Enumeration of threatened species.

(f) Steller (northern) sea lion (*Eumetopias jubatus*).

3. In subpart B, a new section is added to read as follows:

§ 227.12 Steller sea lion.

(a) *Prohibitions*—(1) *No discharge of firearms*. Except as provided in paragraph (b) of this section, no person subject to the jurisdiction of the United States may discharge a firearm at or within 100 yards (91.4 meters) of a Steller sea lion. A firearm is any weapon, such as a pistol or rifle, capable of firing a missile using an explosive charge as a propellant.

(2) *No approach in buffer areas*. Except as provided in paragraph (b) of this section:

(i) No owner or operator of a vessel may allow the vessel to approach within 3 nautical miles (5.5 kilometers) of a Steller sea lion rookery site listed in paragraph (a)(3) of this section;

(ii) No person may approach on land not privately owned within one-half statutory miles (0.8 kilometers) or within sight of a Steller sea lion rookery site listed in paragraph (a)(3) of this section, whichever is greater, except on Marmot Island; and

(iii) No person may approach on land not privately owned within one and one-half statutory miles (2.4 kilometers) or within sight of the eastern shore of Marmot Island, including the Steller sea lion rookery site listed in paragraph (a)(3) of this section, whichever is greater.

(3) *Listed sea lion rookery sites*.

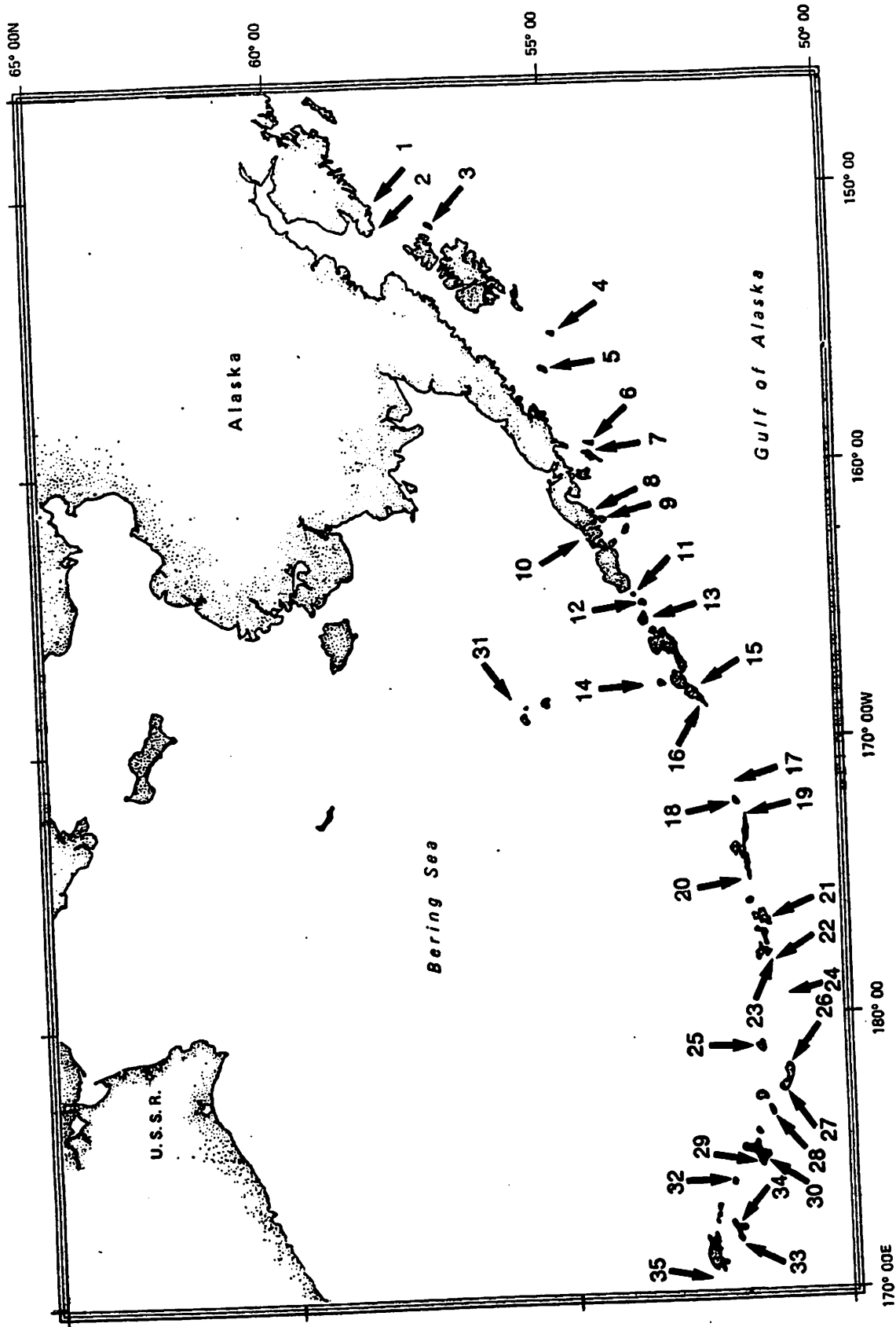
Listed Steller sea lion rookery sites consist of the rookeries in the Aleutian Islands and the Gulf of Alaska listed in Table 1.

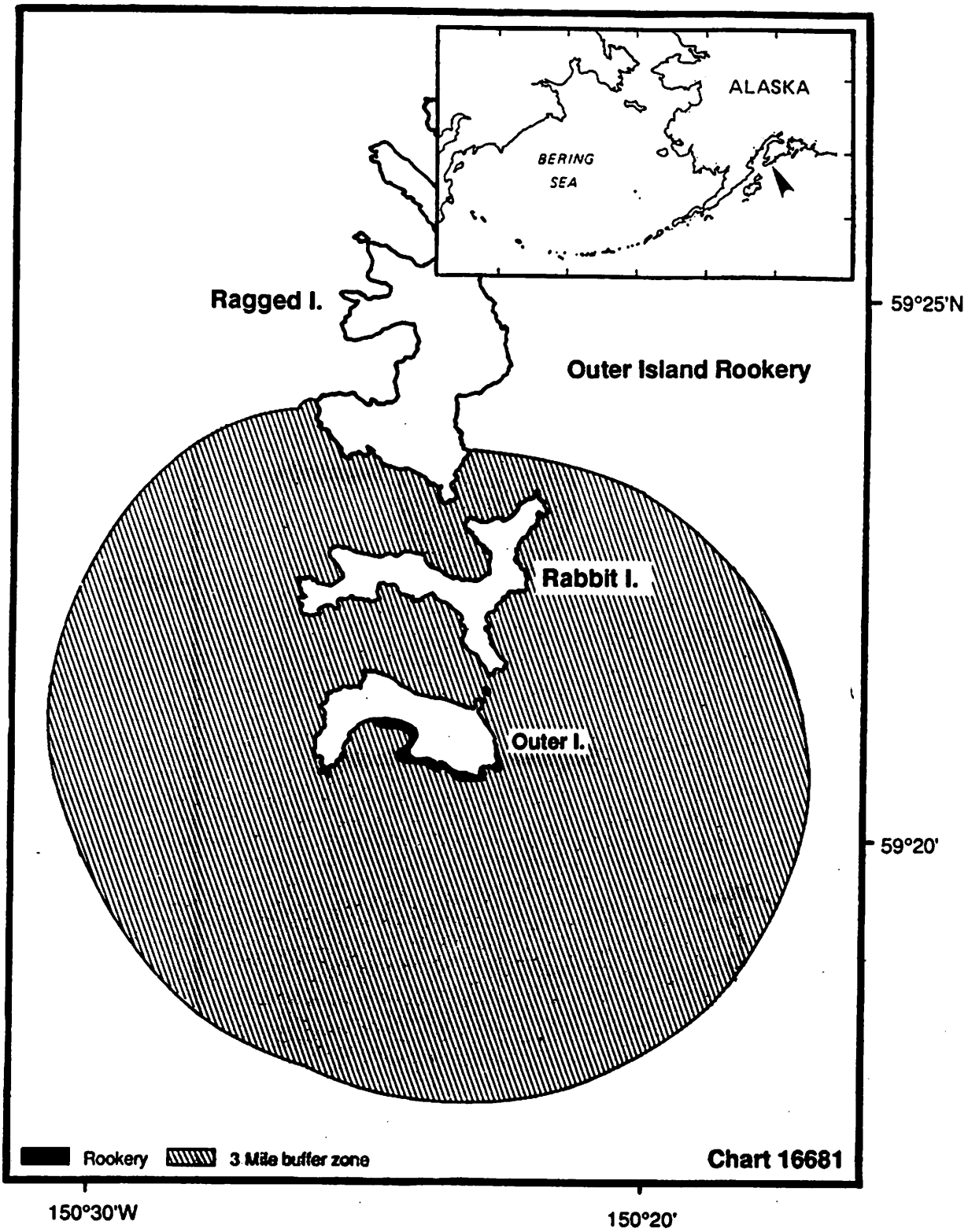
TABLE 1. LISTED STELLER SEA LION ROOKERY SITES ¹

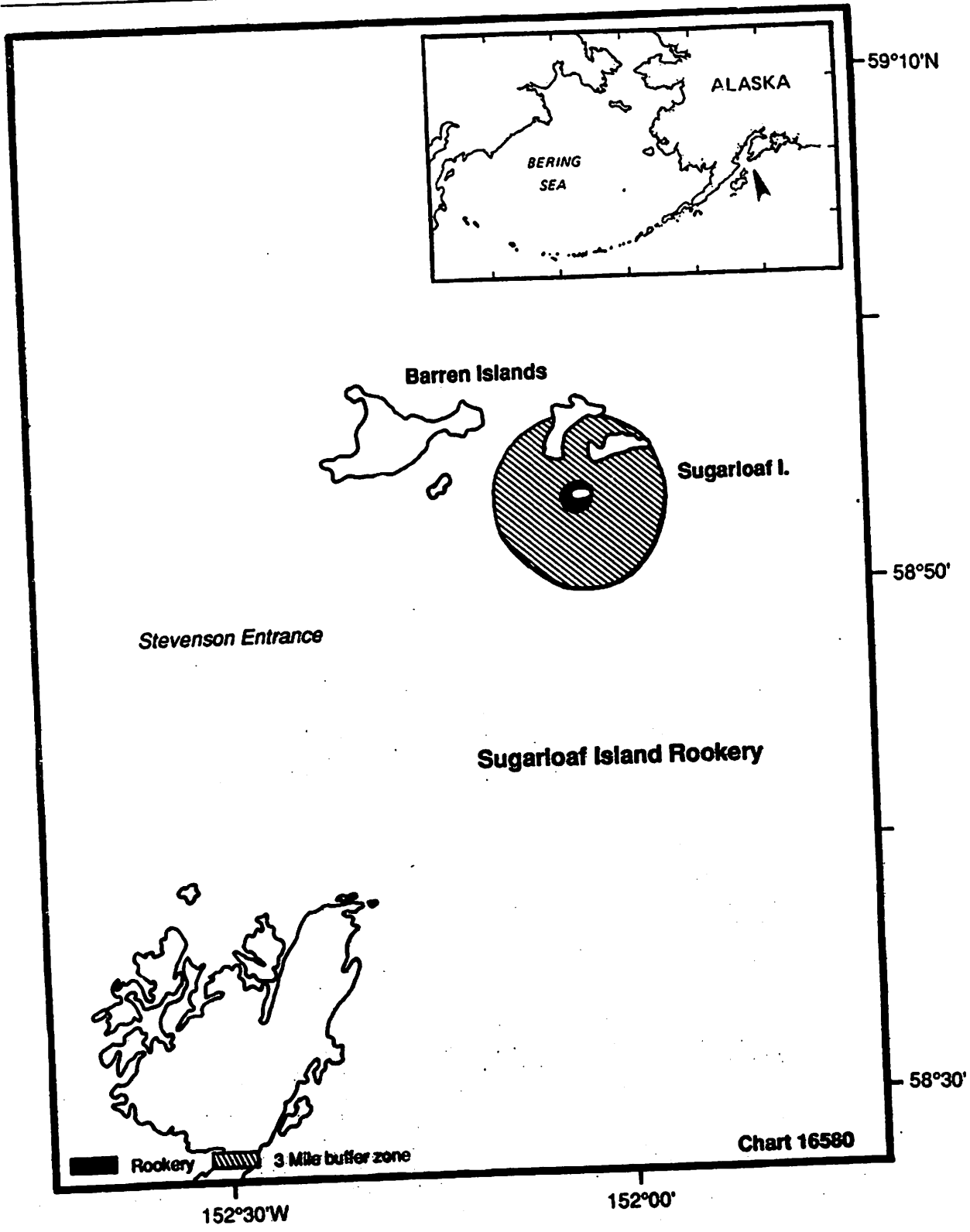
Island	From		To		NOAA chart	Notes
	Lat.	Long.	Lat.	Long.		
1. Outer I.	59°20.5 N	150°23.0 W	59°21.0 N	150°24.5 W	16681	S quadrant.
2. Sugarloaf I.	58°53.0 N	152°02.0 W			16580	Whole island.
3. Marmot I.	58°14.5 N	151°47.5 W	58°10.0 N	151°51.0 W	16580	SE quadrant.
4. Chirikof I.	55°46.5 N	155°39.5 W	55°48.5 N	155°43.0 W	16580	S quadrant.
5. Chowiet I.	56°00.5 N	156°41.5 W	56°00.5 N	156°42.0 W	16013	S quadrant.
6. Atkins I.	55°03.5 N	159°18.5 W			16540	Whole island.
7. Chernabura I.	54°47.5 N	159°31.0 W	54°45.5 N	159°33.5 W	16540	SE corner.
8. Pinnacle Rock	54°46.0 N	161°46.0 W			16540	Whole island.
9. Clubbing Rks (N)	54°43.0 N	162°26.5 W			16540	Whole island.
Clubbing Rks (S)	54°42.0 N	162°26.5 W			16540	Whole island.
10. Sea Lion Rks	55°28.0 N	163°12.0 W			16520	Whole island.
11. Ugamak I.	54°14.0 N	164°48.0 W	54°13.0 N	164°48.0 W	16520	E end of island.
12. Akun I.	54°17.5 N	165°34.0 W	54°18.0 N	165°31.0 W	16520	Billings Head Bight.
13. Akutan I.	54°03.5 N	166°00.0 W	54°05.5 N	166°05.0 W	16520	SW corner, Cape Morgan.
14. Bogoslof I.	53°56.0 N	168°02.0 W			16500	Whole island.
15. Ogchul I.	53°00.0 N	168°24.0 W			16500	Whole island.
16. Adagak I.	52°55.0 N	169°10.5 W			16500	Whole island.
17. Yunaska I.	52°42.0 N	170°38.5 W	52°41.0 N	170°34.5 W	16500	NE end.
18. Seguam I.	52°21.0 N	172°35.0 W	52°21.0 N	172°33.0 W	16480	N coast, Saddleridge Pt.
19. Agigadak I.	52°06.5 N	172°54.0 W			16480	Whole island.
20. Kasatochi I.	52°10.0 N	175°31.0 W	52°10.5 N	175°29.0 W	16480	N half of island.
21. Adak I.	51°36.5 N	176°58.5 W	51°38.0 N	176°59.5 W	16460	SW point, Lake Point.
22. Gramp rock	51°29.0 N	178°20.5 W			16460	Whole island.
23. Tag I.	51°33.5 N	178°34.5 W			16460	Whole island.
24. Ulak I.	51°20.0 N	178°57.0 W	51°18.5 N	178°59.5 W	16460	SE corner, Hasgox Pt.
25. Semisopchnoi	51°58.5 N	179°45.5 E	51°57.0 N	179°46.0 E	16440	E quadrant, Pochnoi Pt.
Semisopchnoi	52°01.5 N	179°37.5 E	52°01.5 N	179°39.0 E	16440	N quadrant, Petrel Pt.
26. Amchitka I.	51°22.5 N	179°28.0 E	51°22.0 N	179°25.0 E	16440	East Cape.
27. Amchitka I.	51°32.5 N	178°50.0 E			16440	Column Rocks.
28. Ayugadak Pt	51°45.5 N	178°24.5 E			16440	SE coast of Rat Island.
29. Kiska I.	51°57.5 N	177°21.0 E	51°56.5 N	177°20.0 E	16440	W central, Lief Cove.
30. Kiska I.	51°52.5 N	177°13.0 E	51°53.5 N	177°12.0 E	16440	Cape St. Stephen.
31. Walrus I.	57°11.0 N	169°56.0 W			16380	Whole island.
32. Buidir I.	52°20.5 N	175°57.0 E	52°23.5 N	175°51.0 E	16420	So point to NW point.
33. Agattu I.	52°24.0 N	173°21.5 E			16420	Gillon Point.
34. Agattu I.	52°23.5 N	173°43.5 E	52°22.0 N	173°41.0 E	16420	Cape Sabak.
35. Attu I.	52°57.5 N	172°31.5 E	52°54.5 N	172°28.5 E	16420	Cape Wrangell.

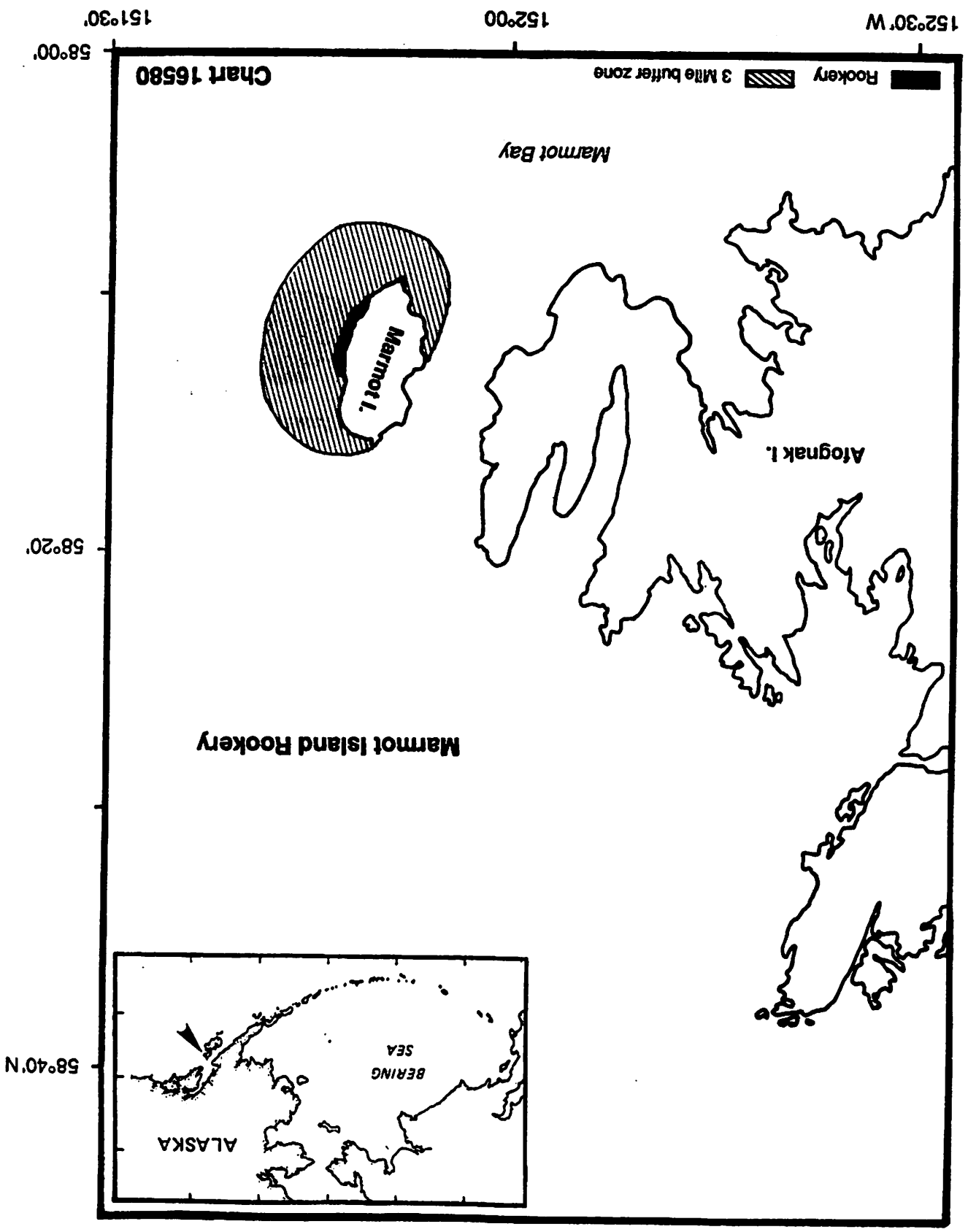
¹ Each site extends in a clockwise direction from the first set of geographic coordinates along the shoreline at mean lower low water to the second set of coordinates; or, if only one set of geographic coordinates is listed, the site extends around the entire shoreline of the island at mean lower low water.

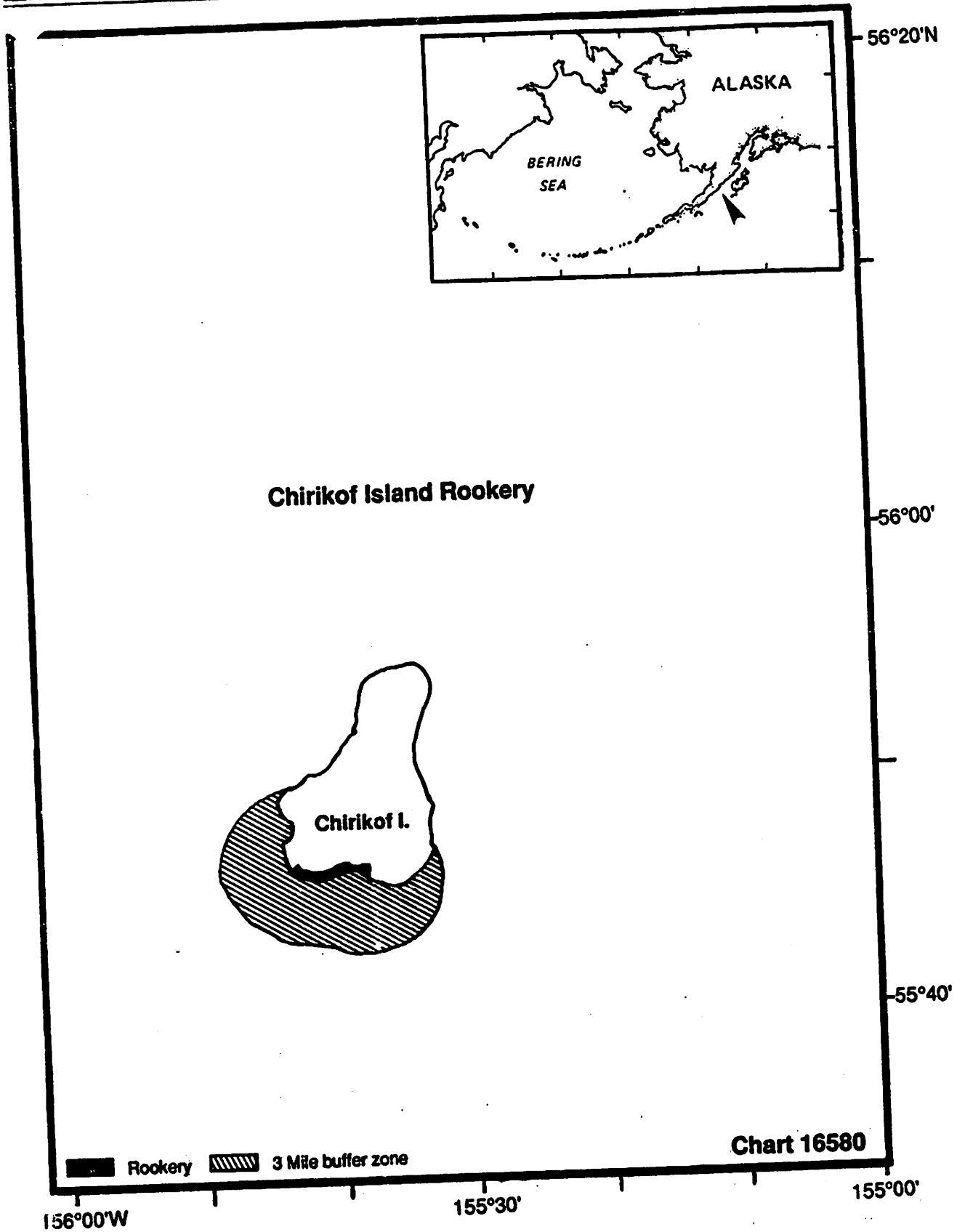
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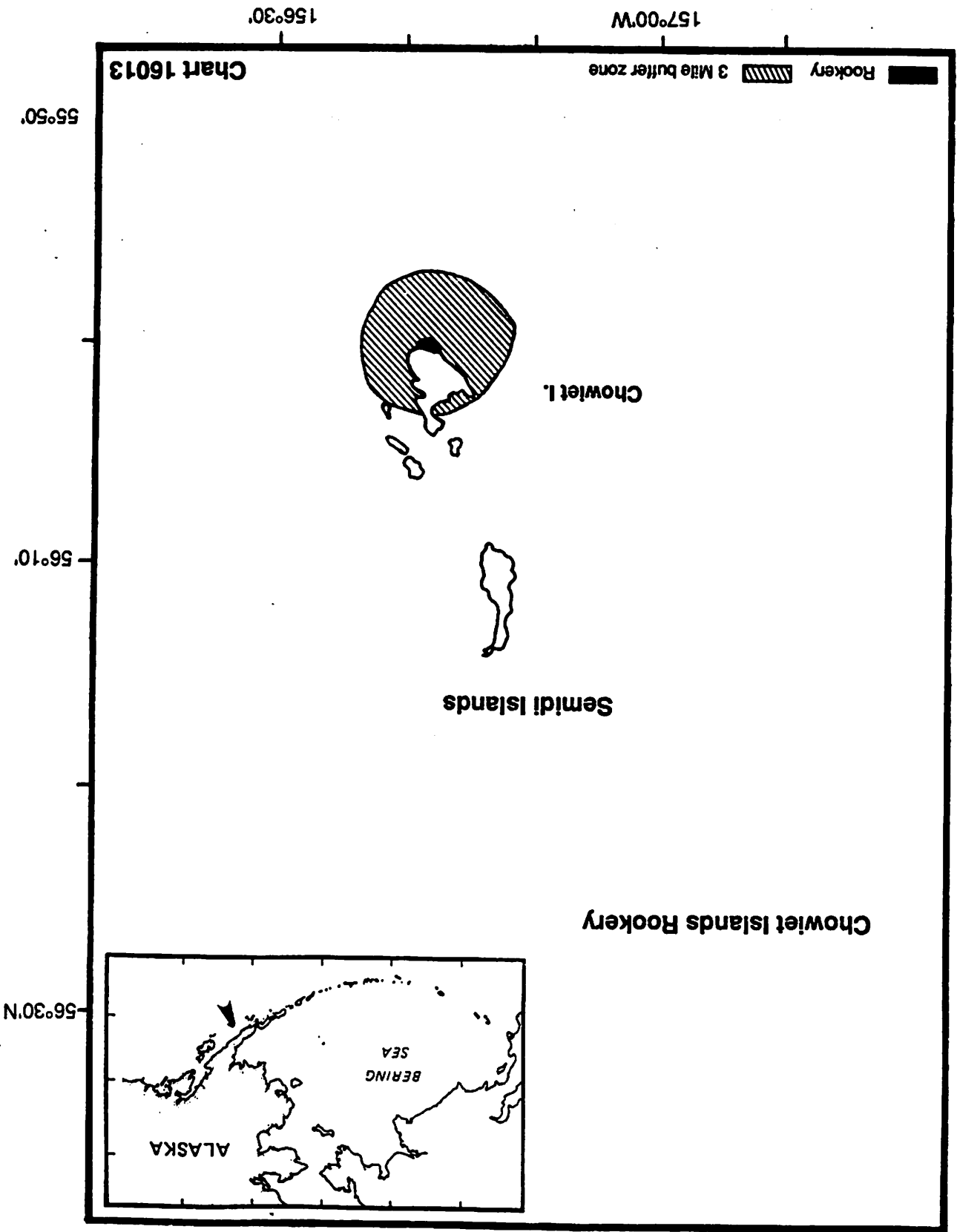


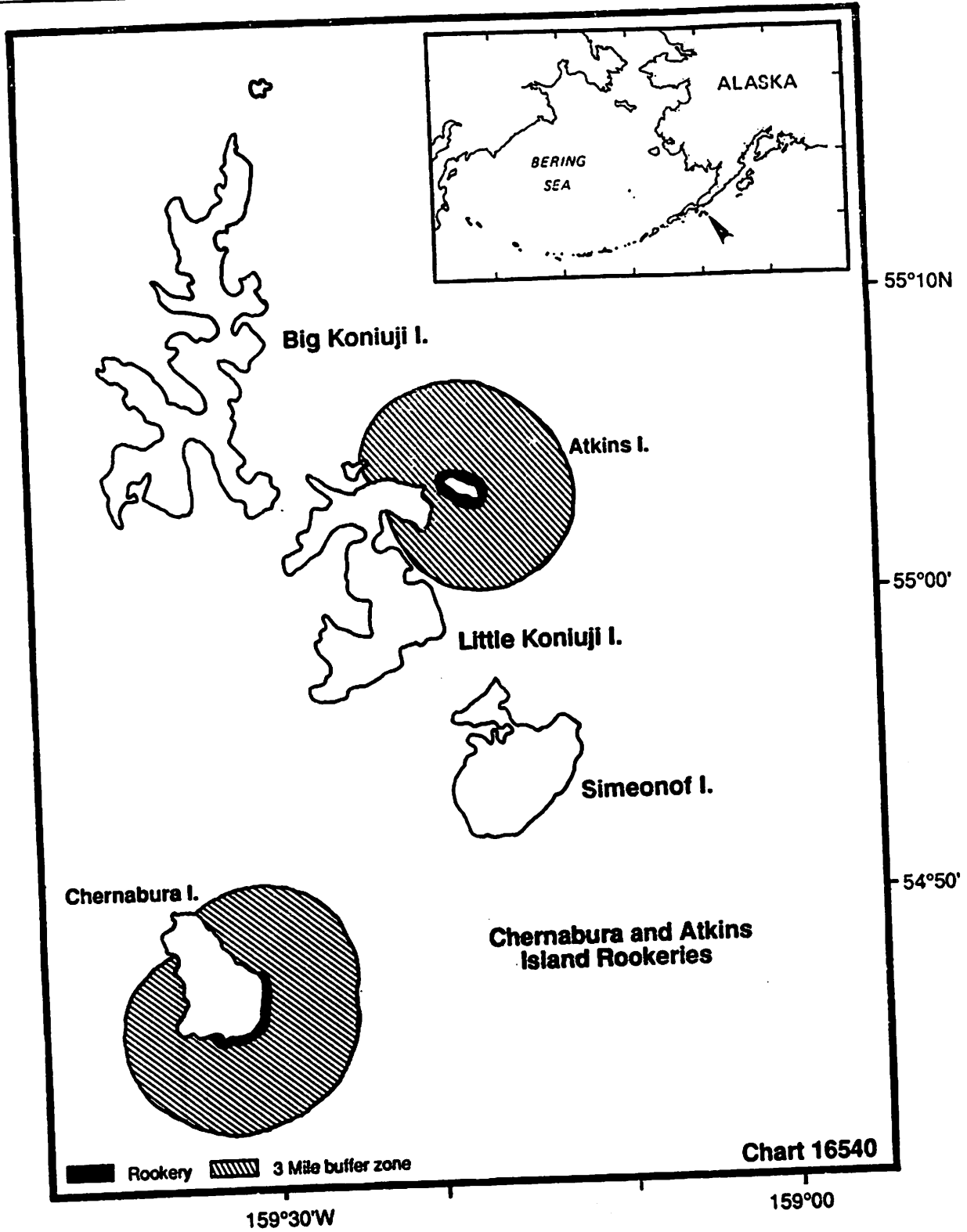


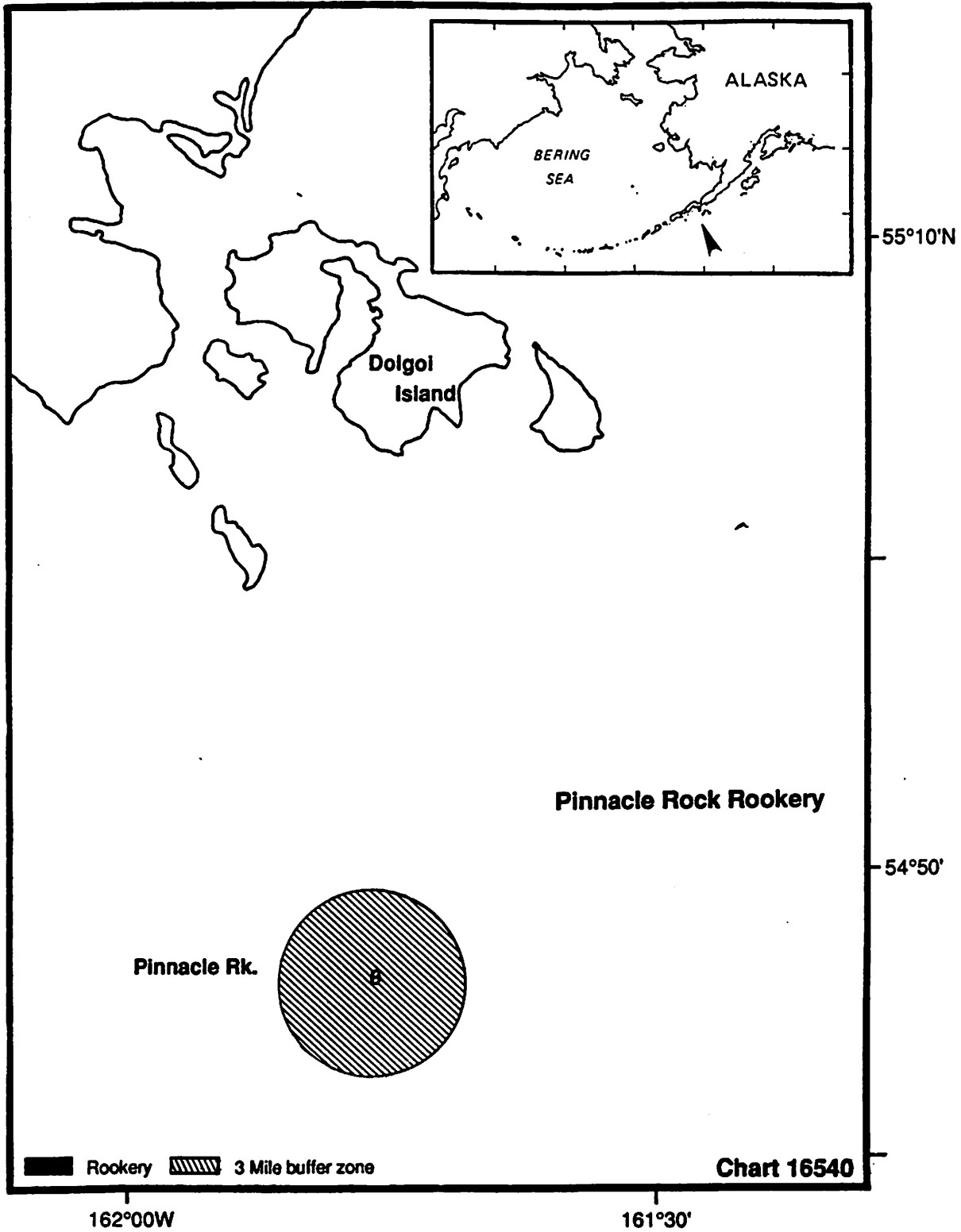


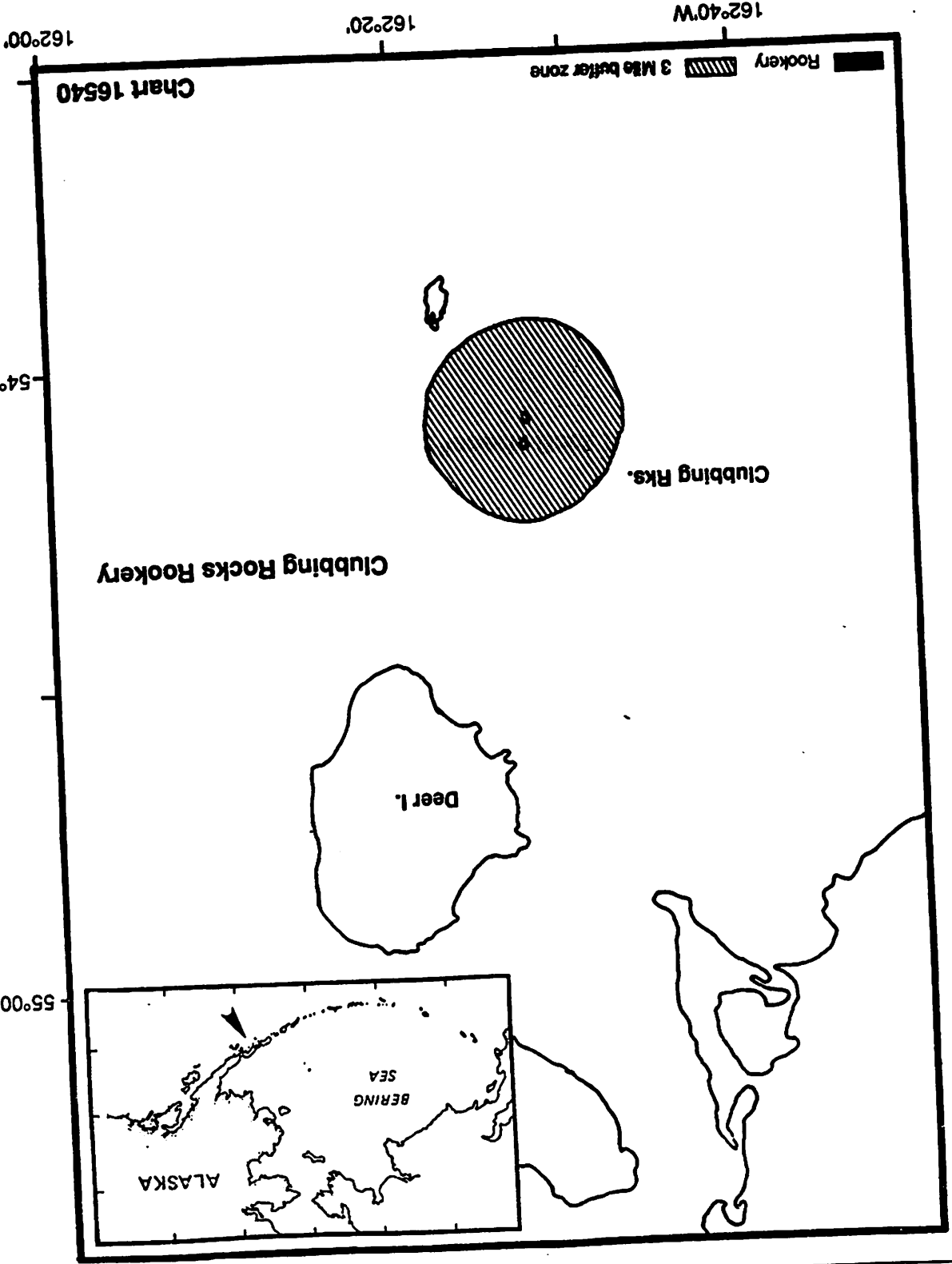


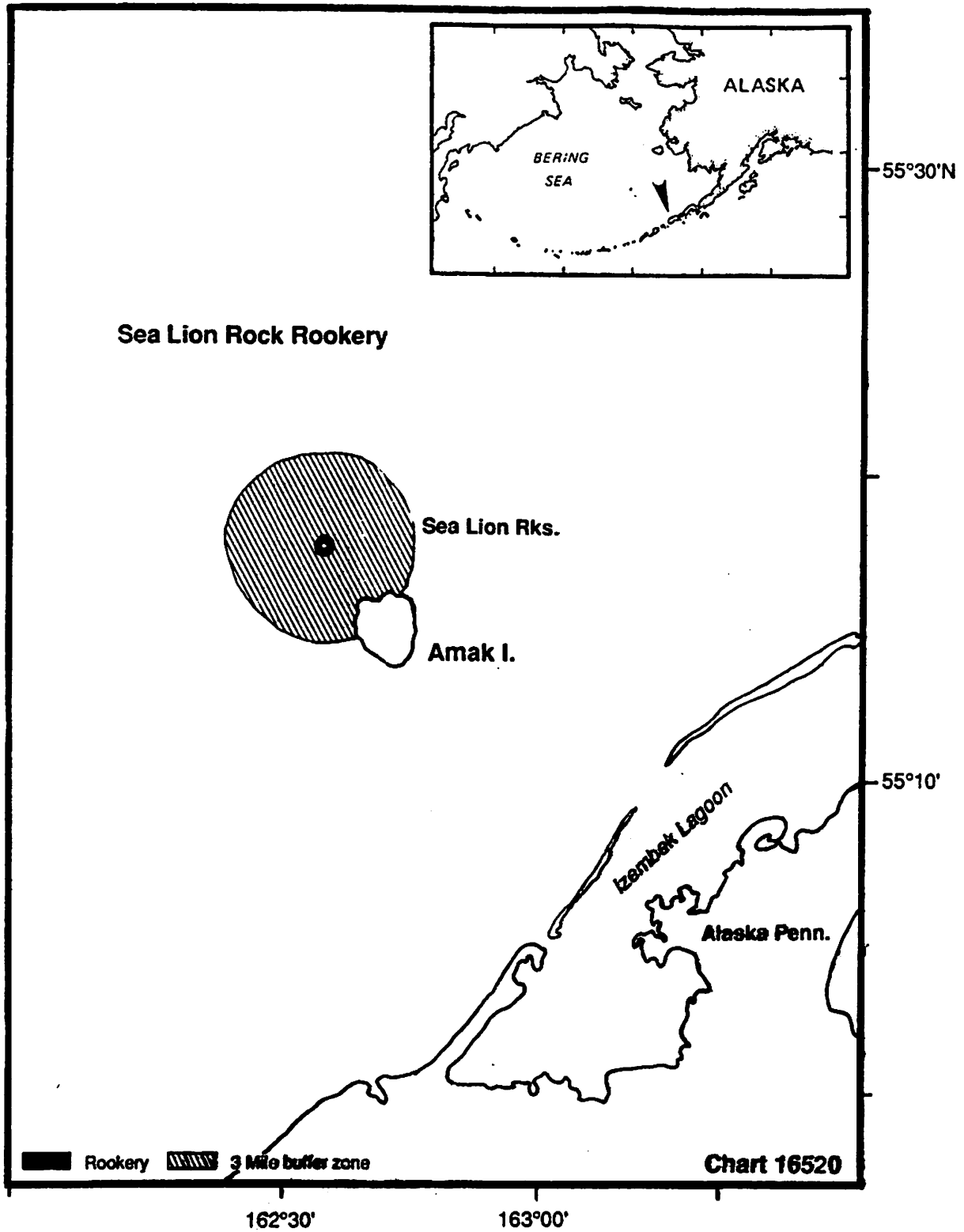












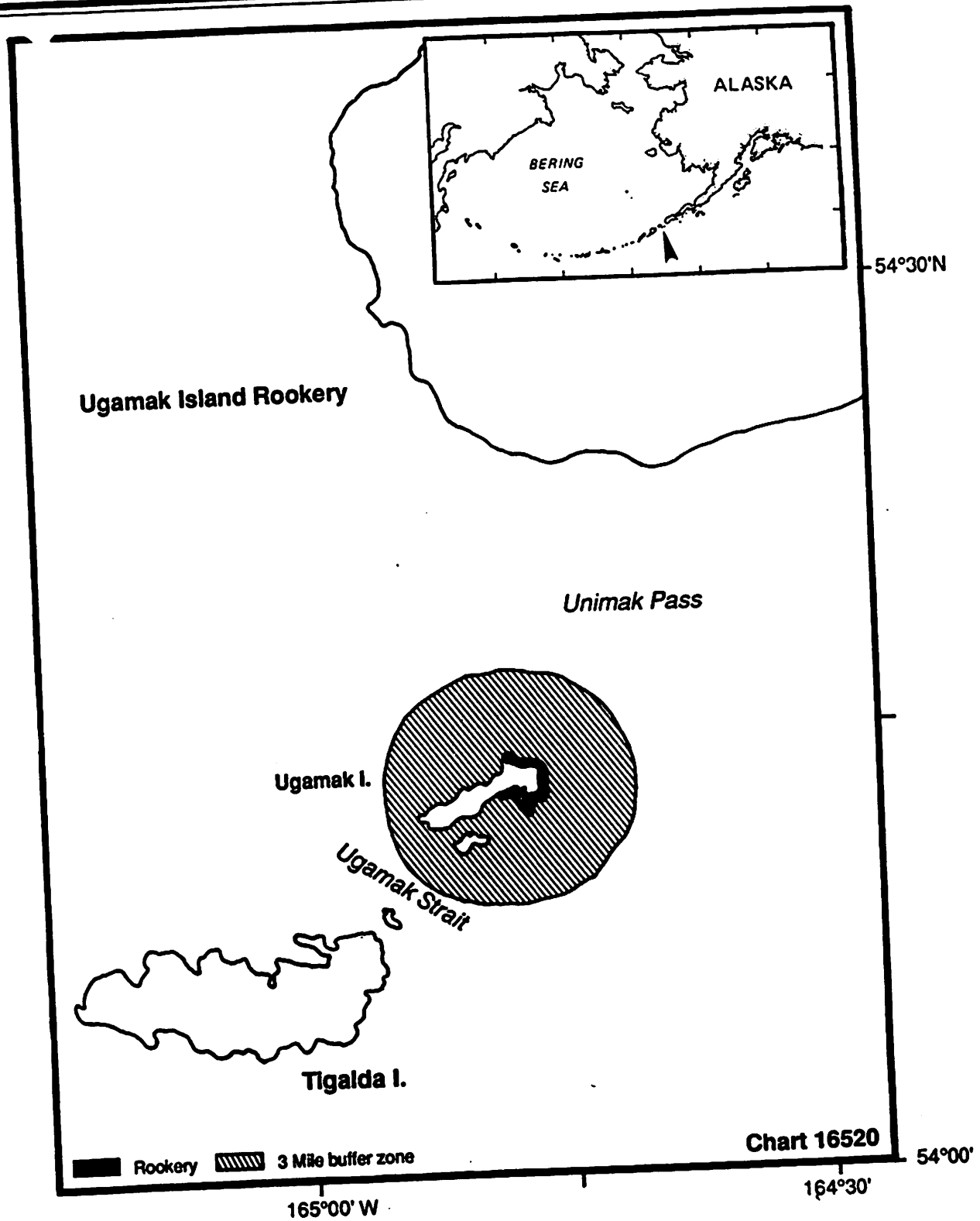
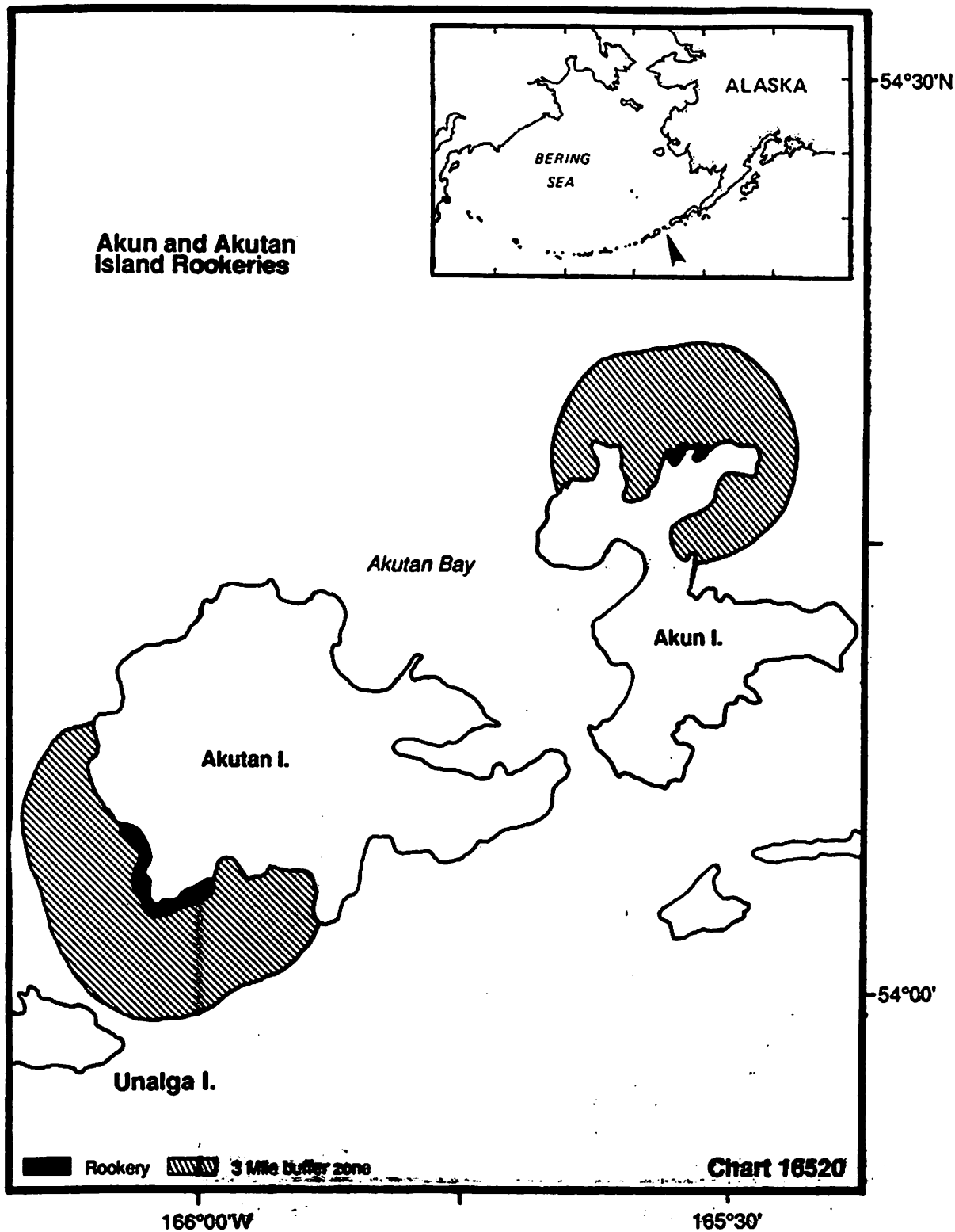
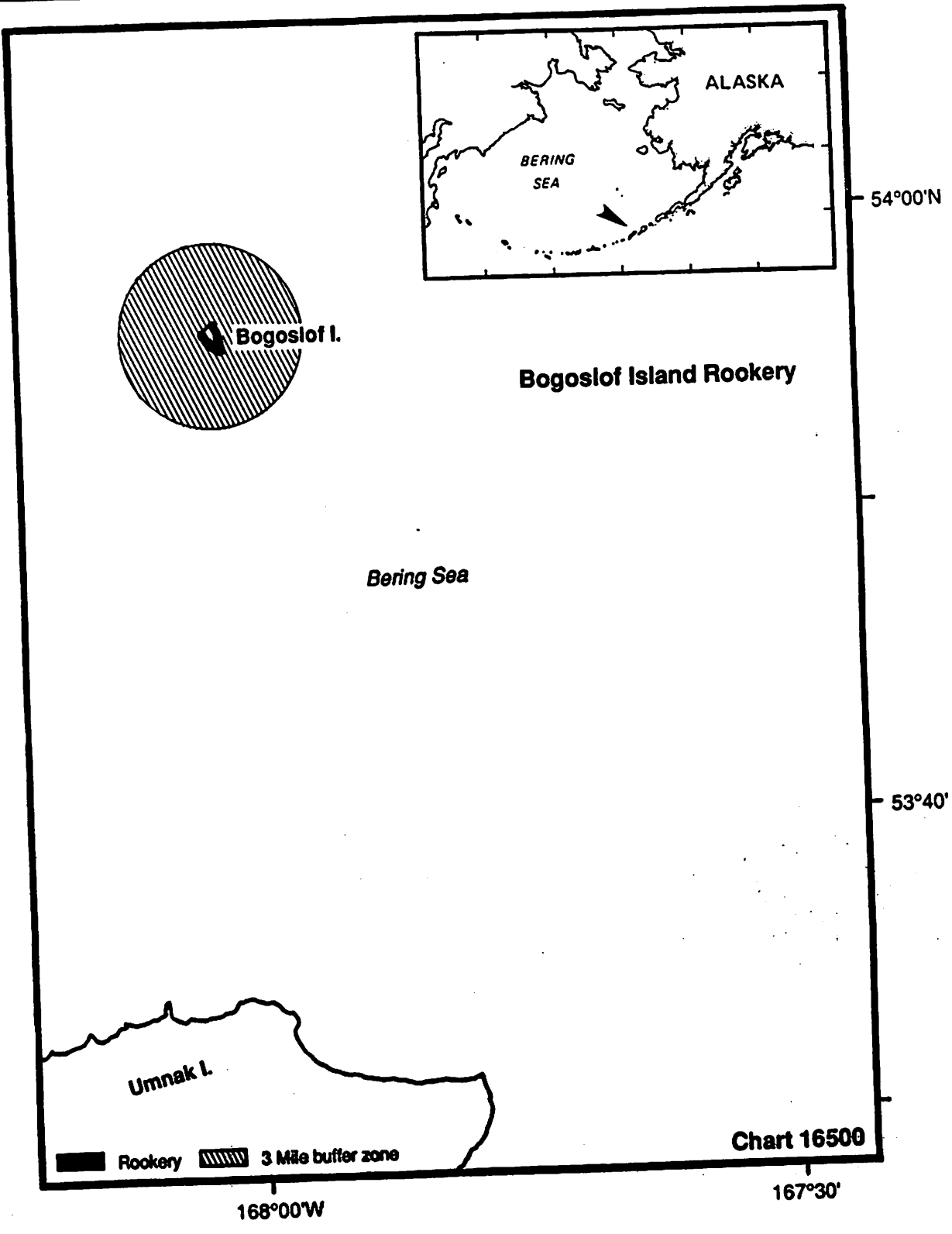
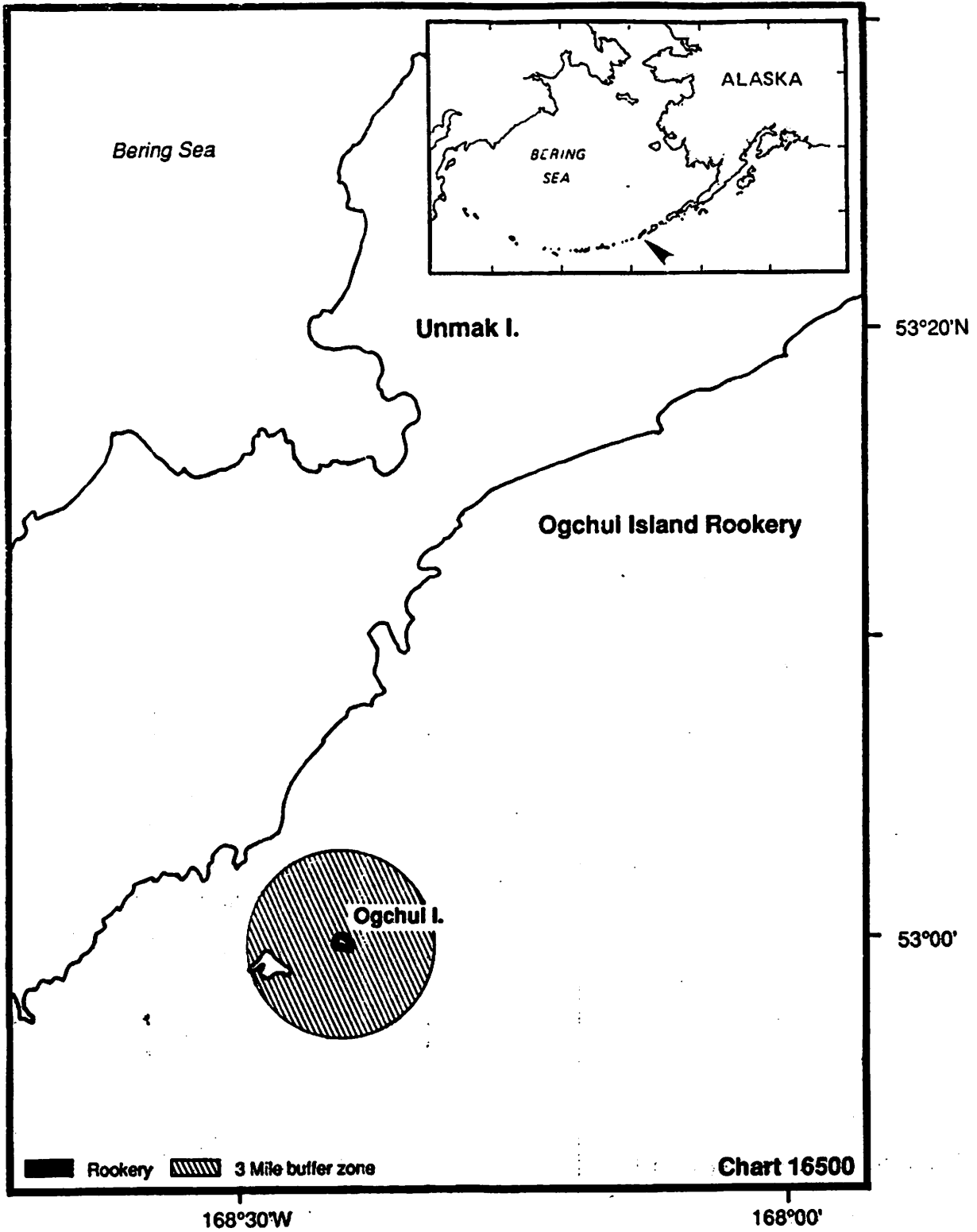
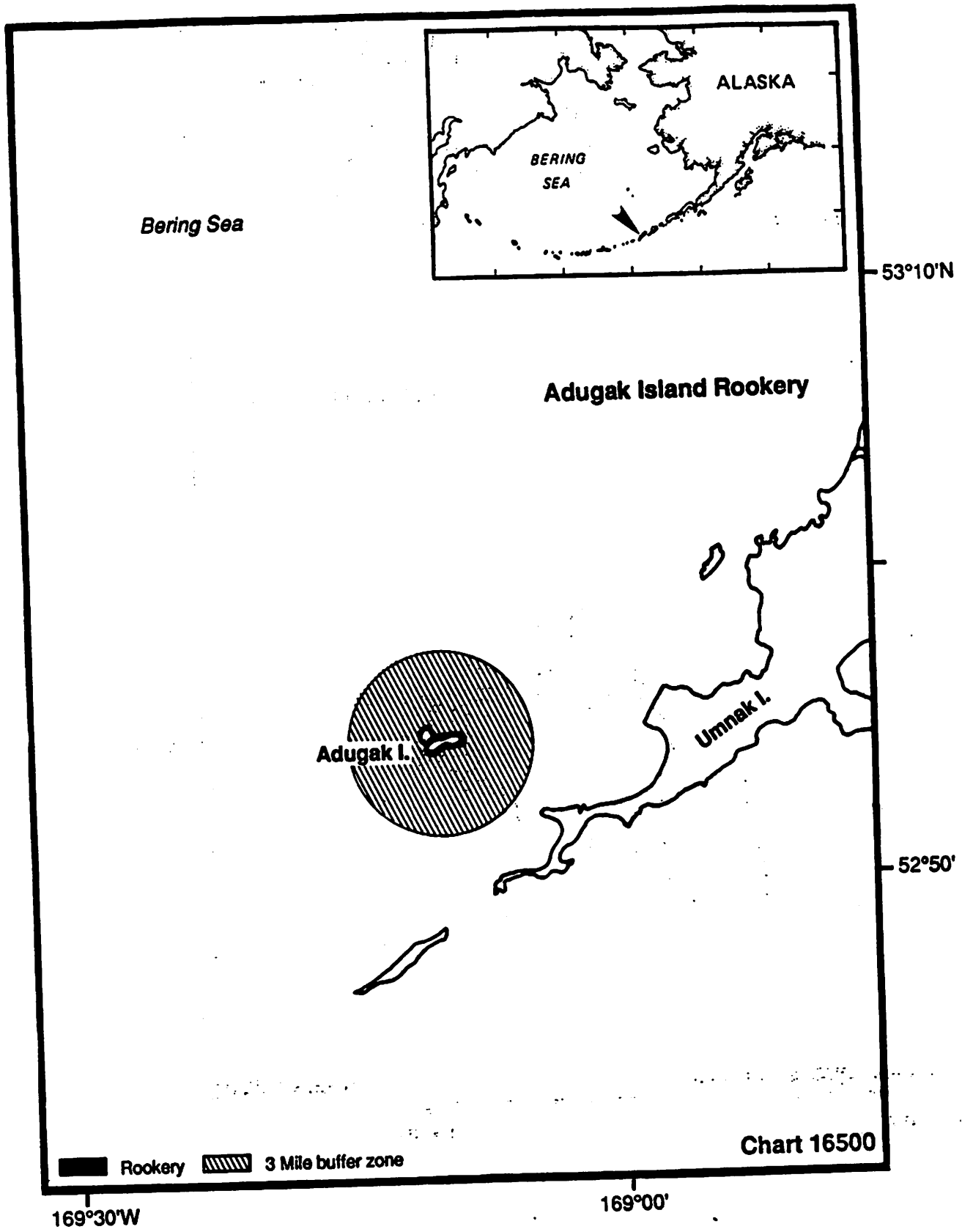


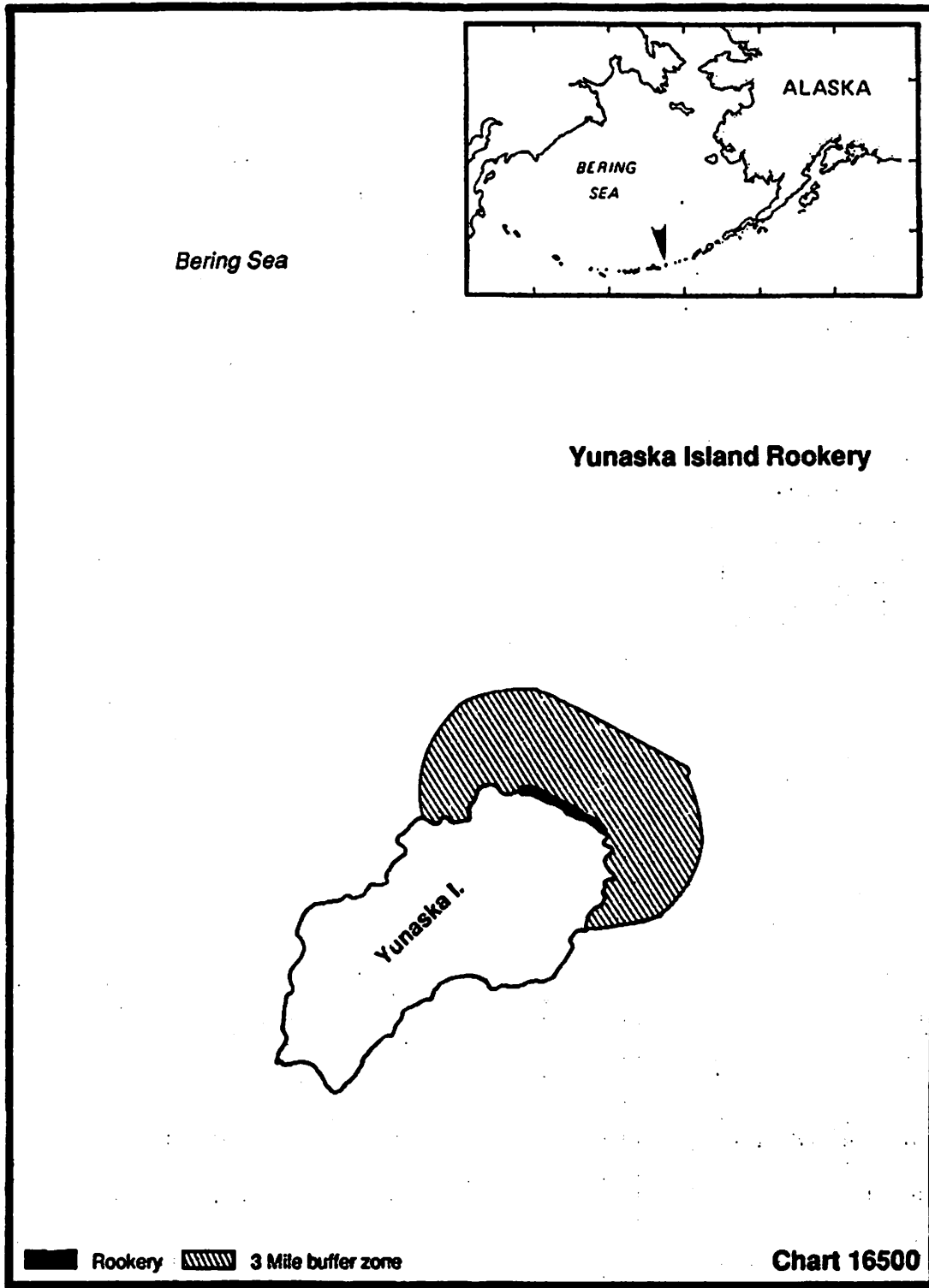
Chart 16520











Bering Sea

Yunaska Island Rookery

Yunaska I.

53°00'N

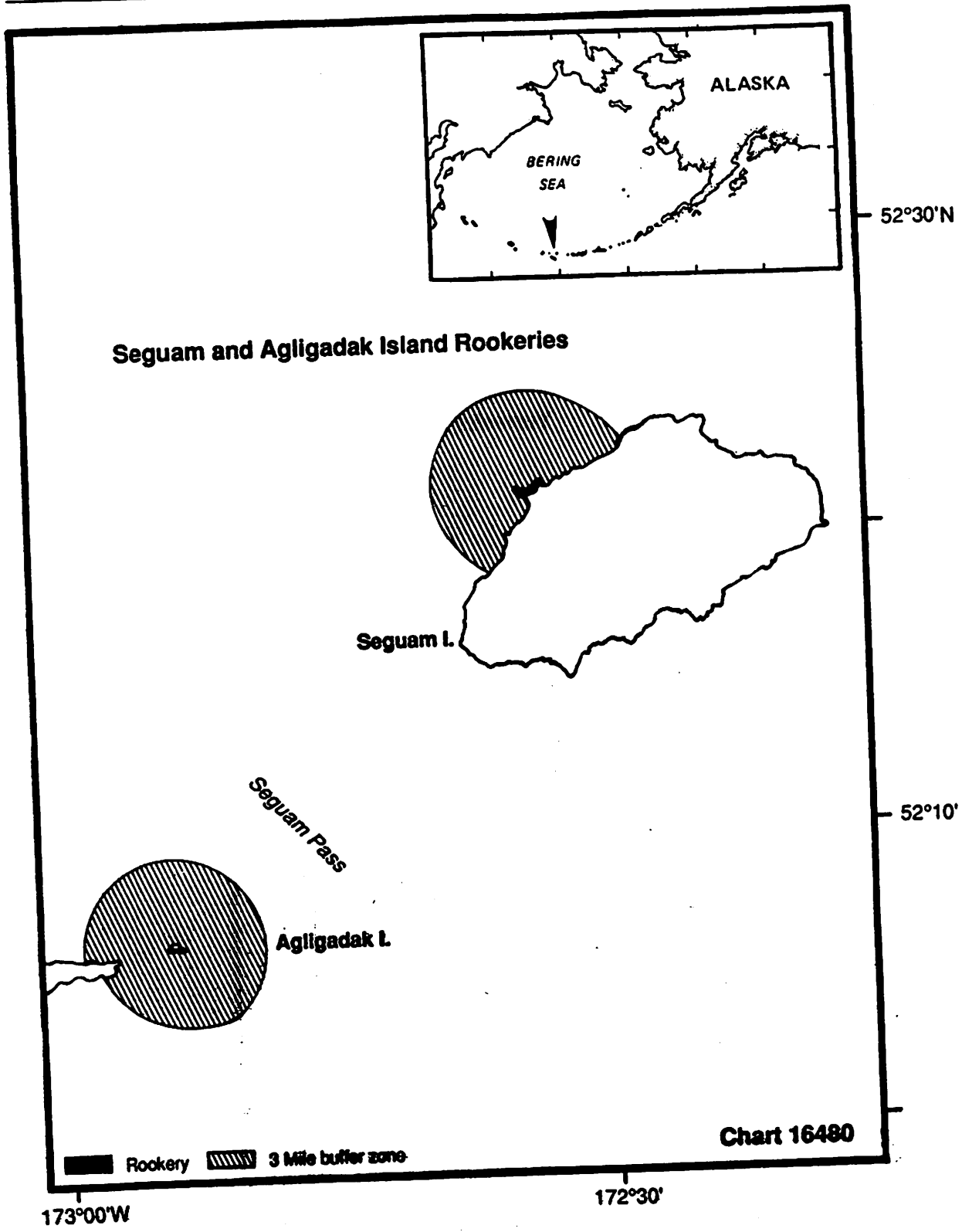
52°40'

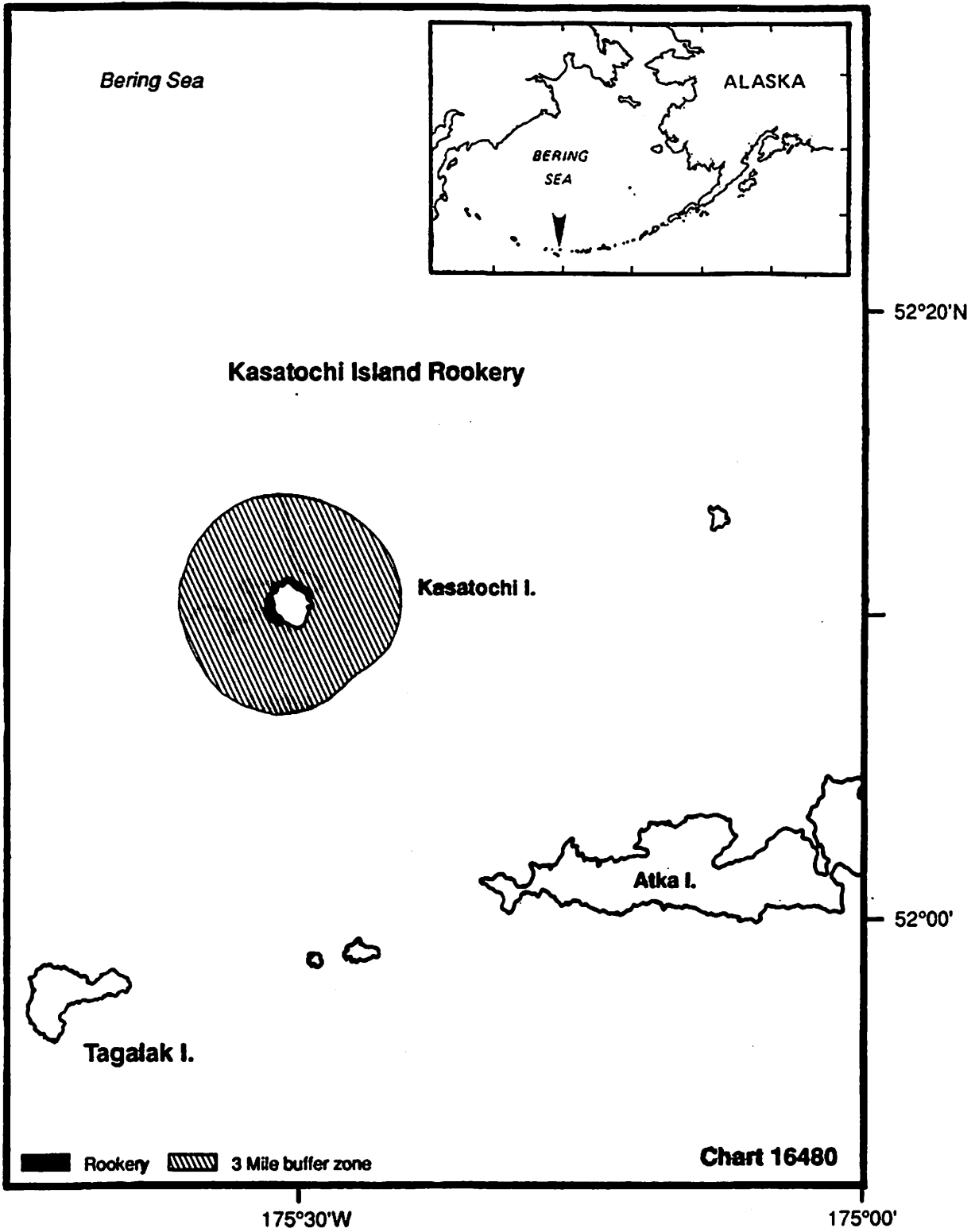
■ Rookery ▨ 3 Mile buffer zone

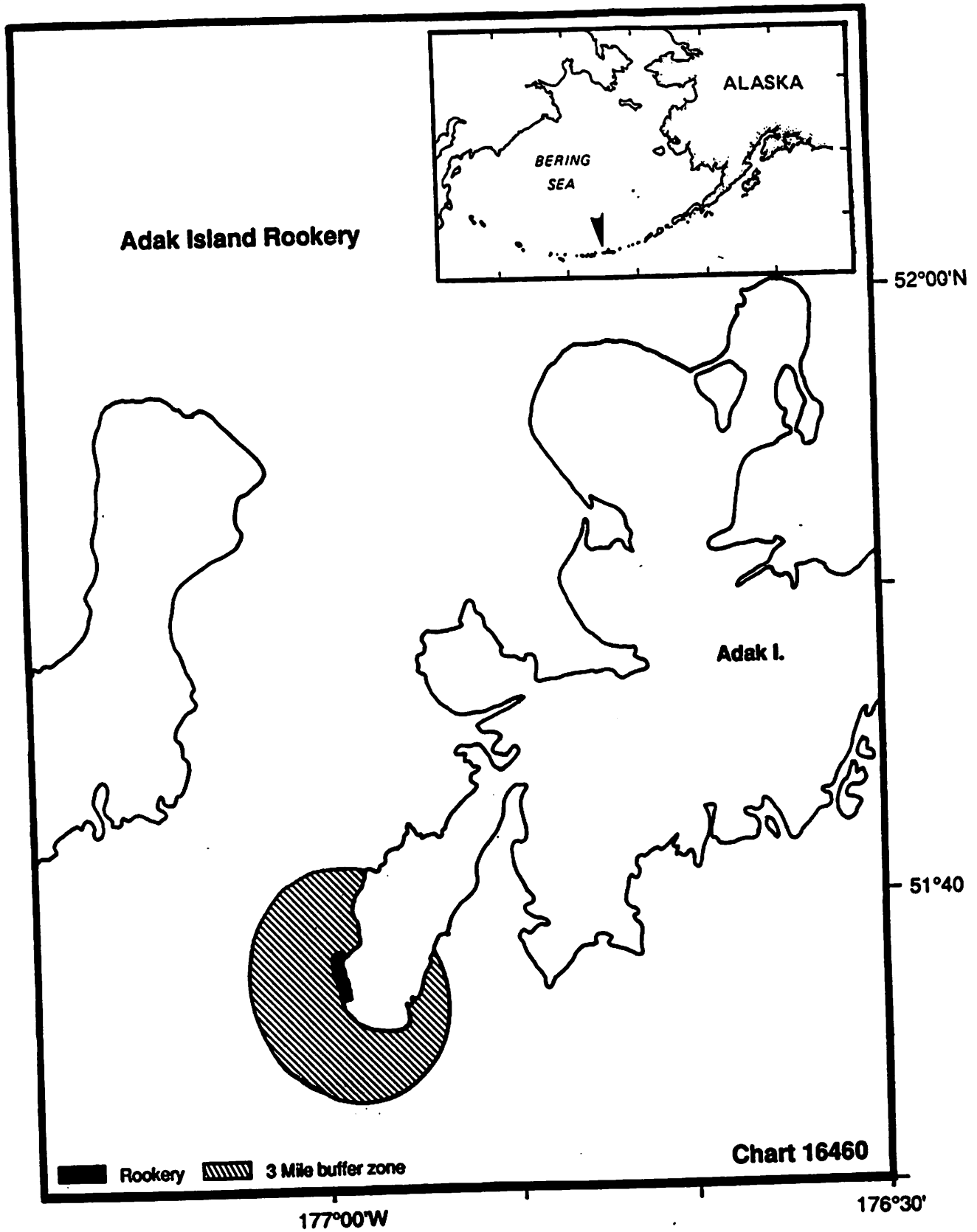
Chart 16500

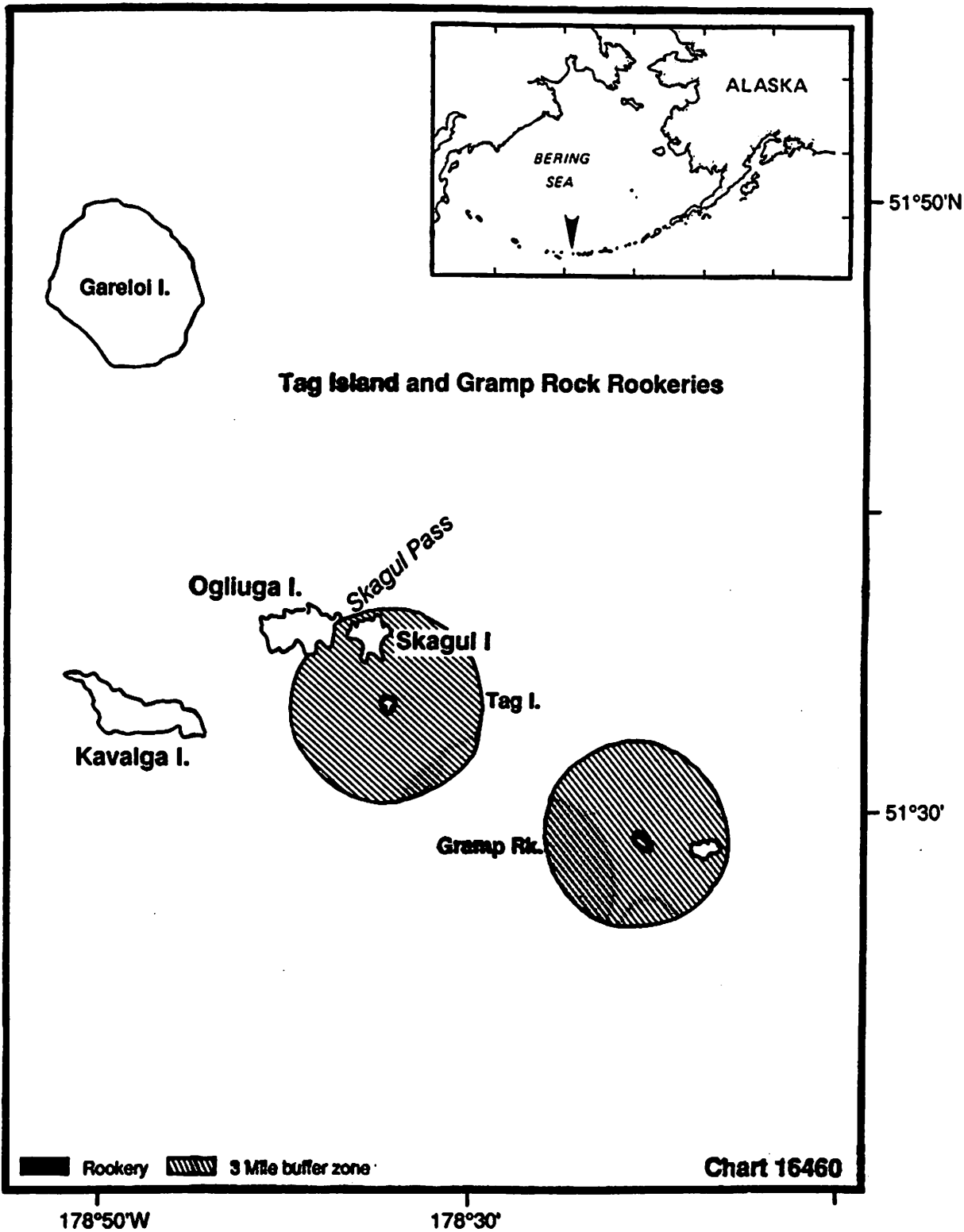
171°00'W

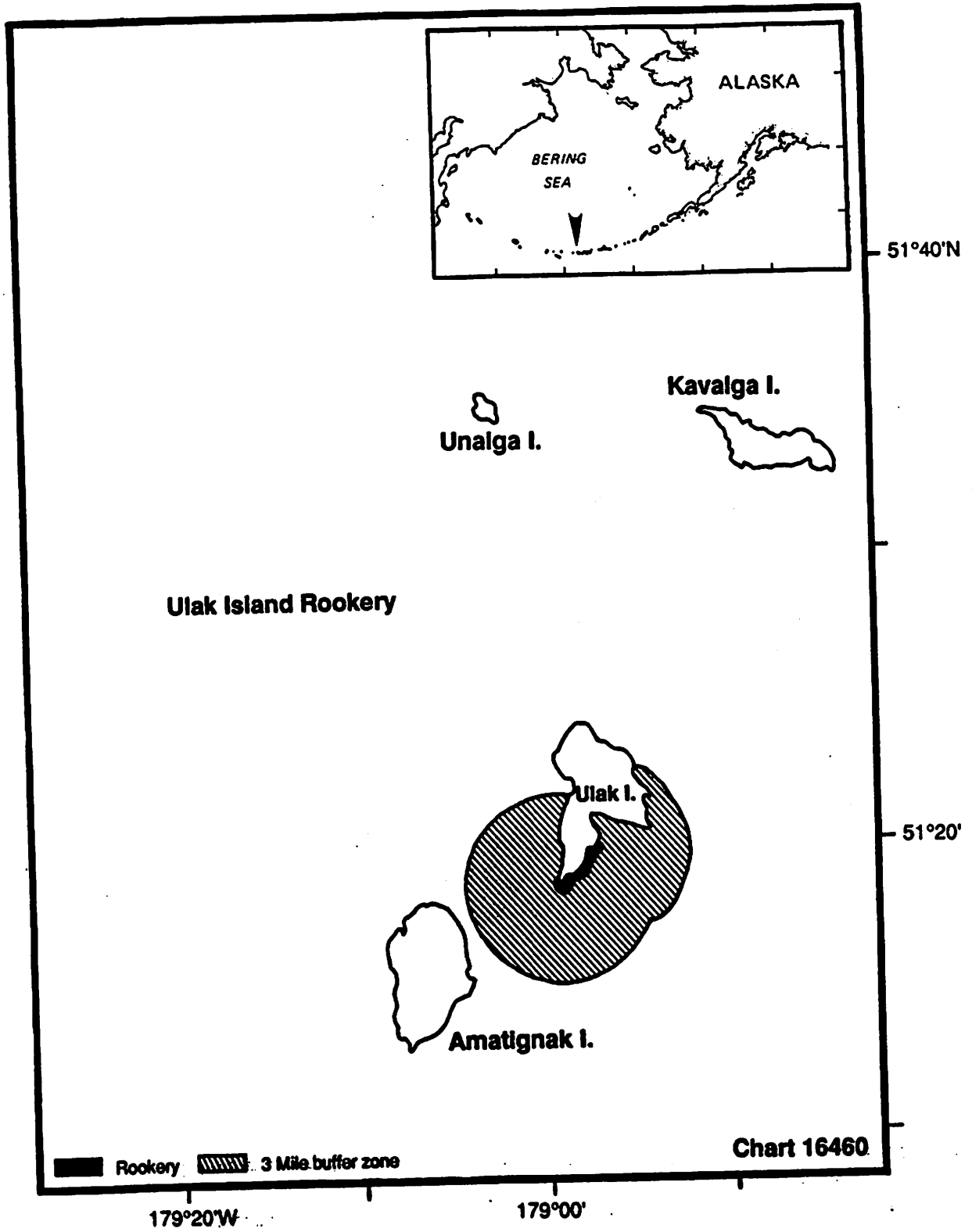
170°30'

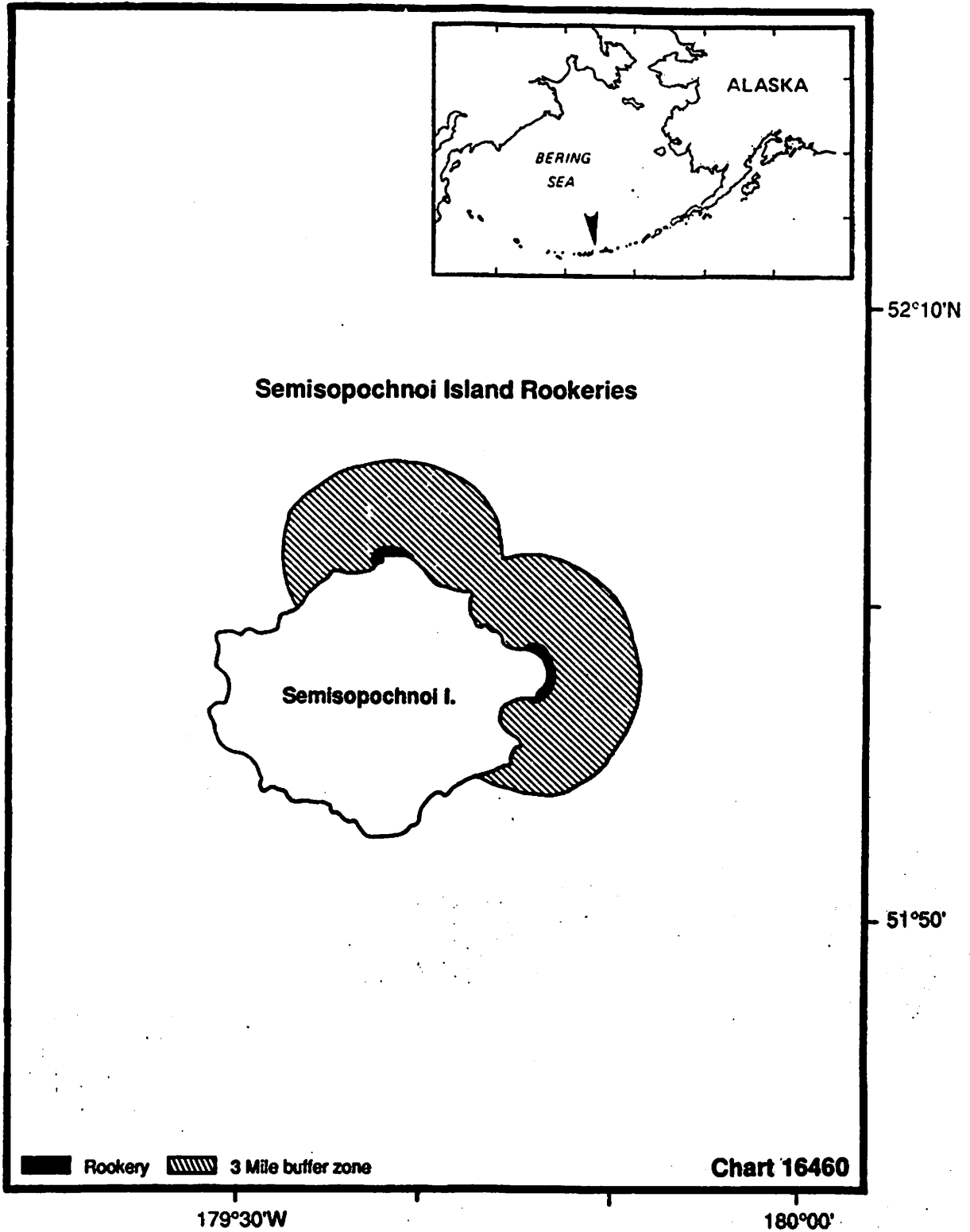


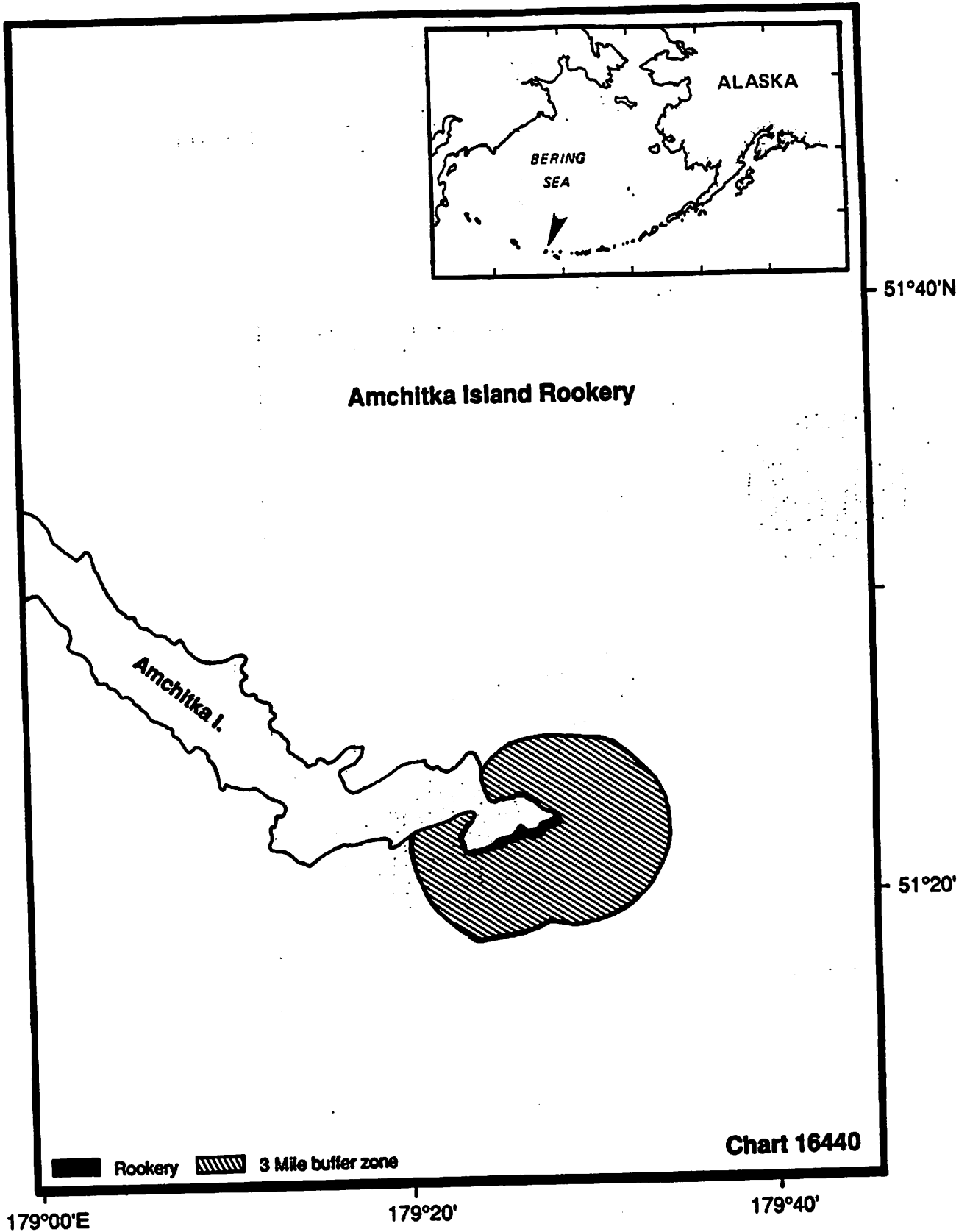


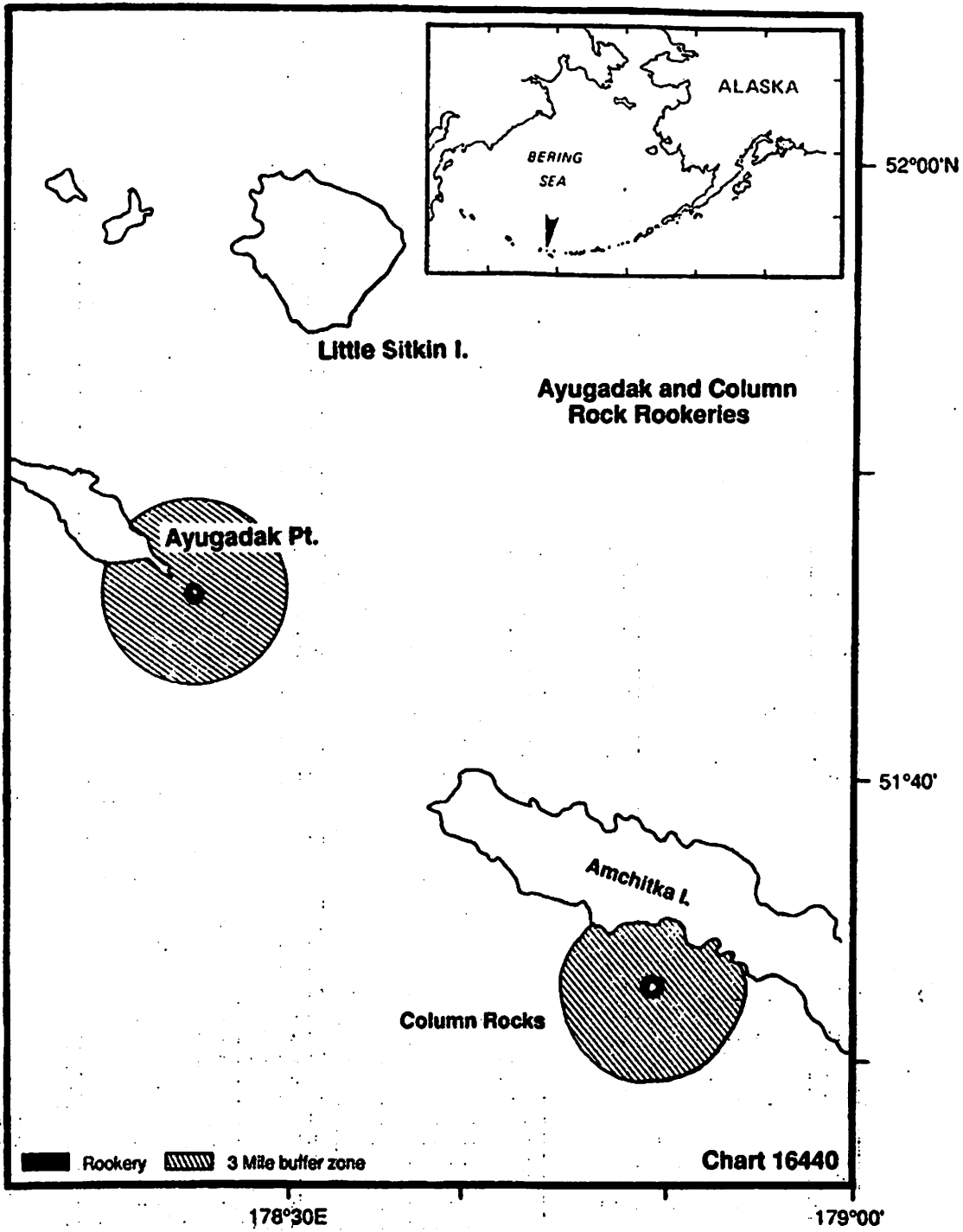


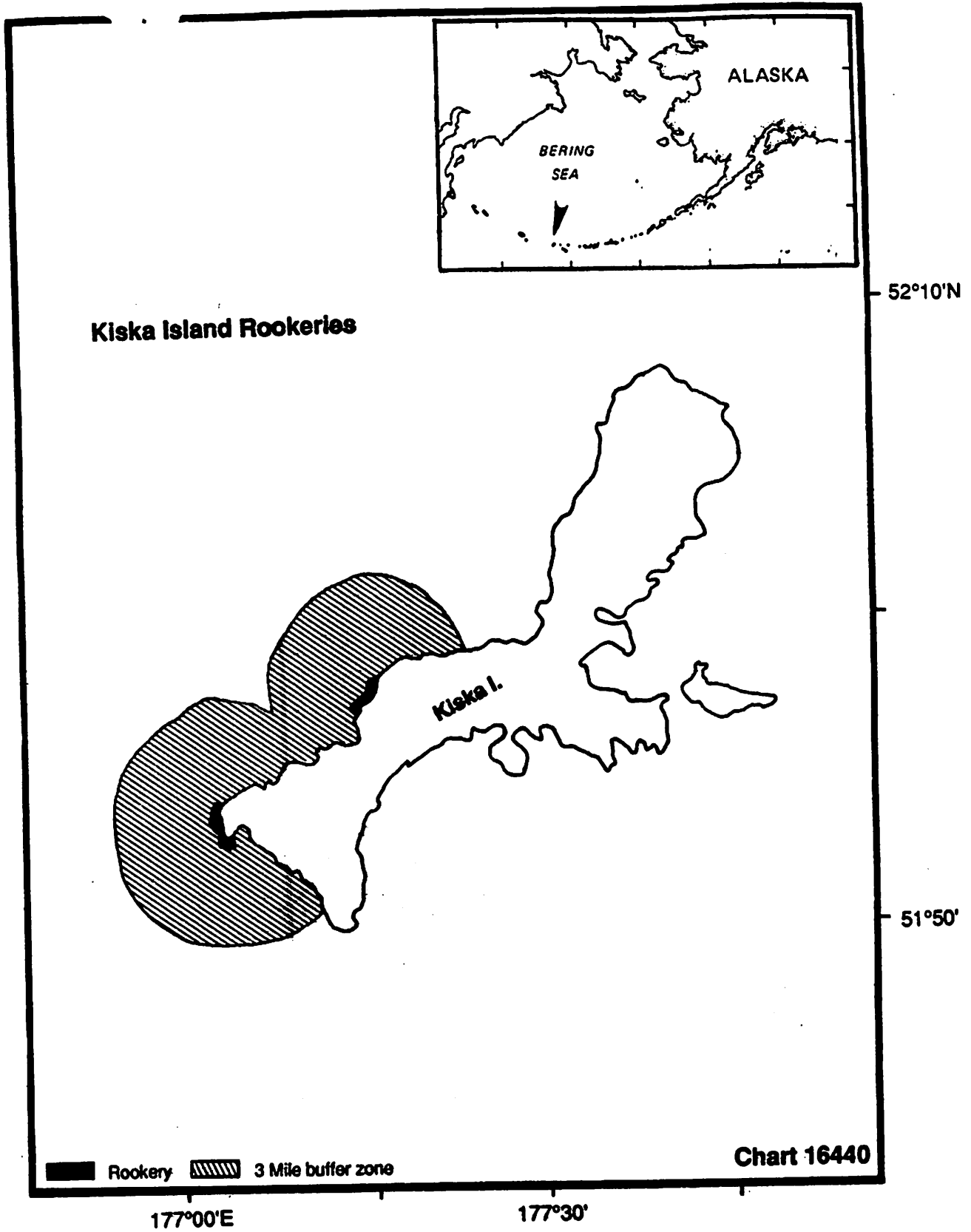


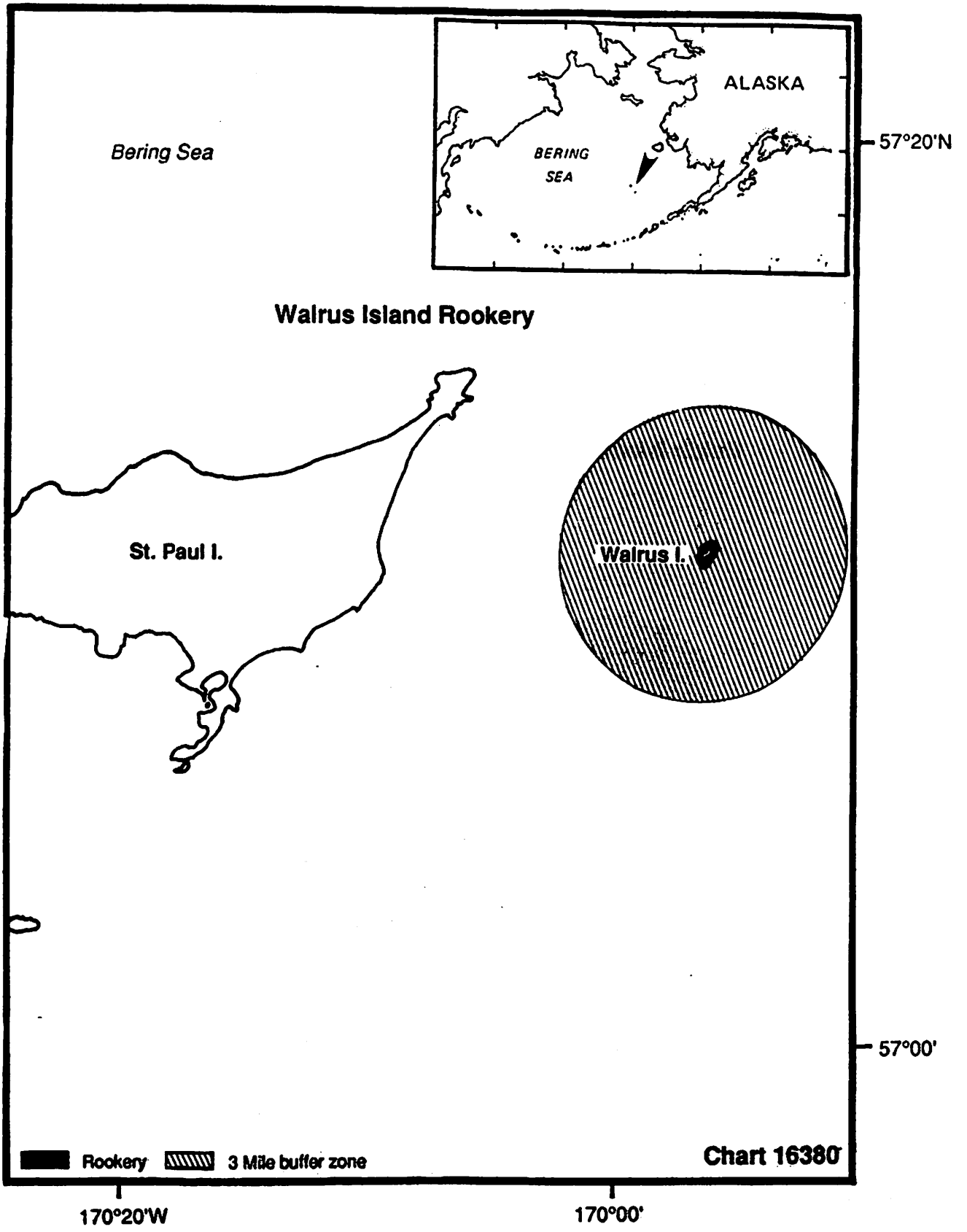


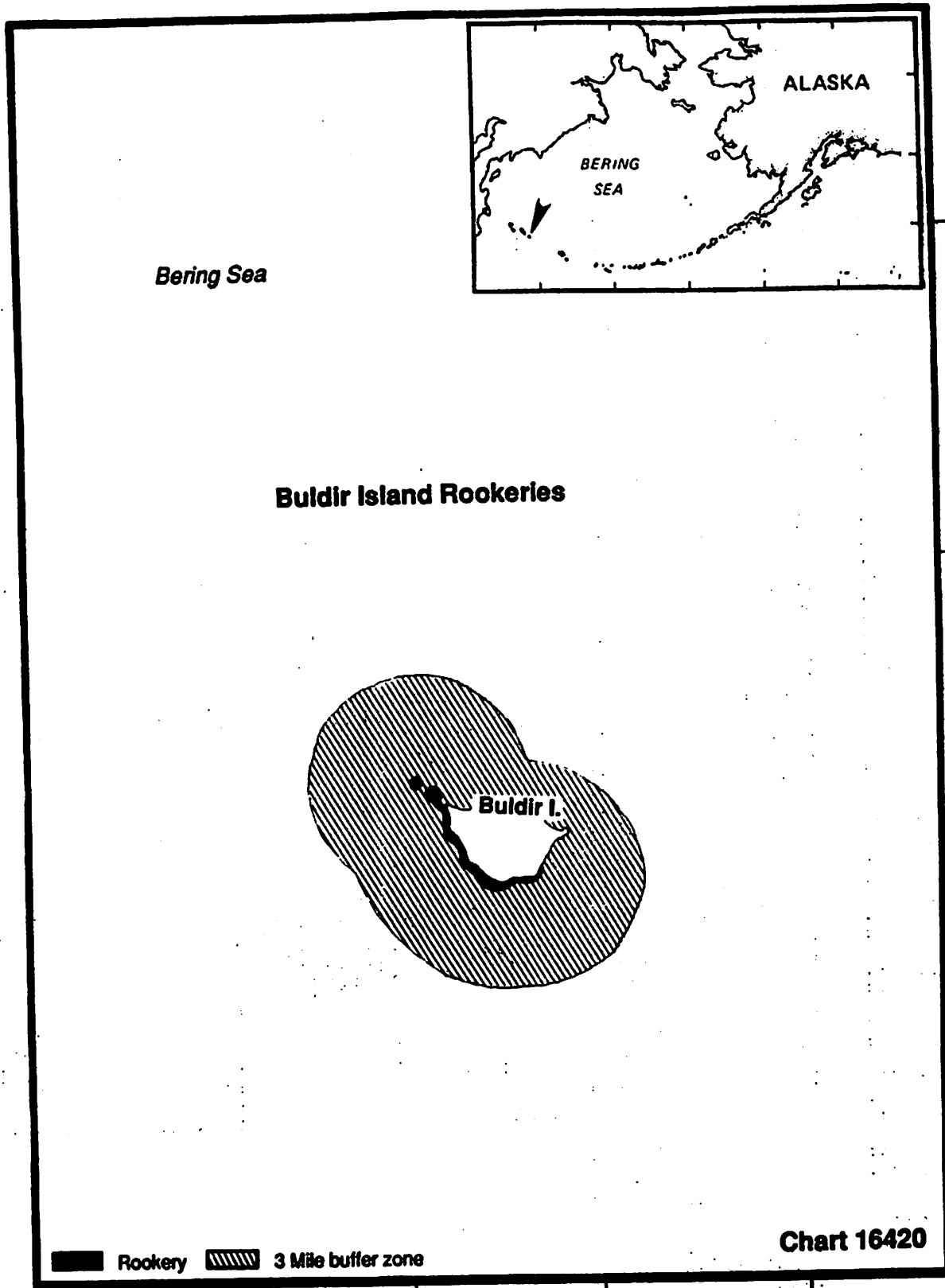


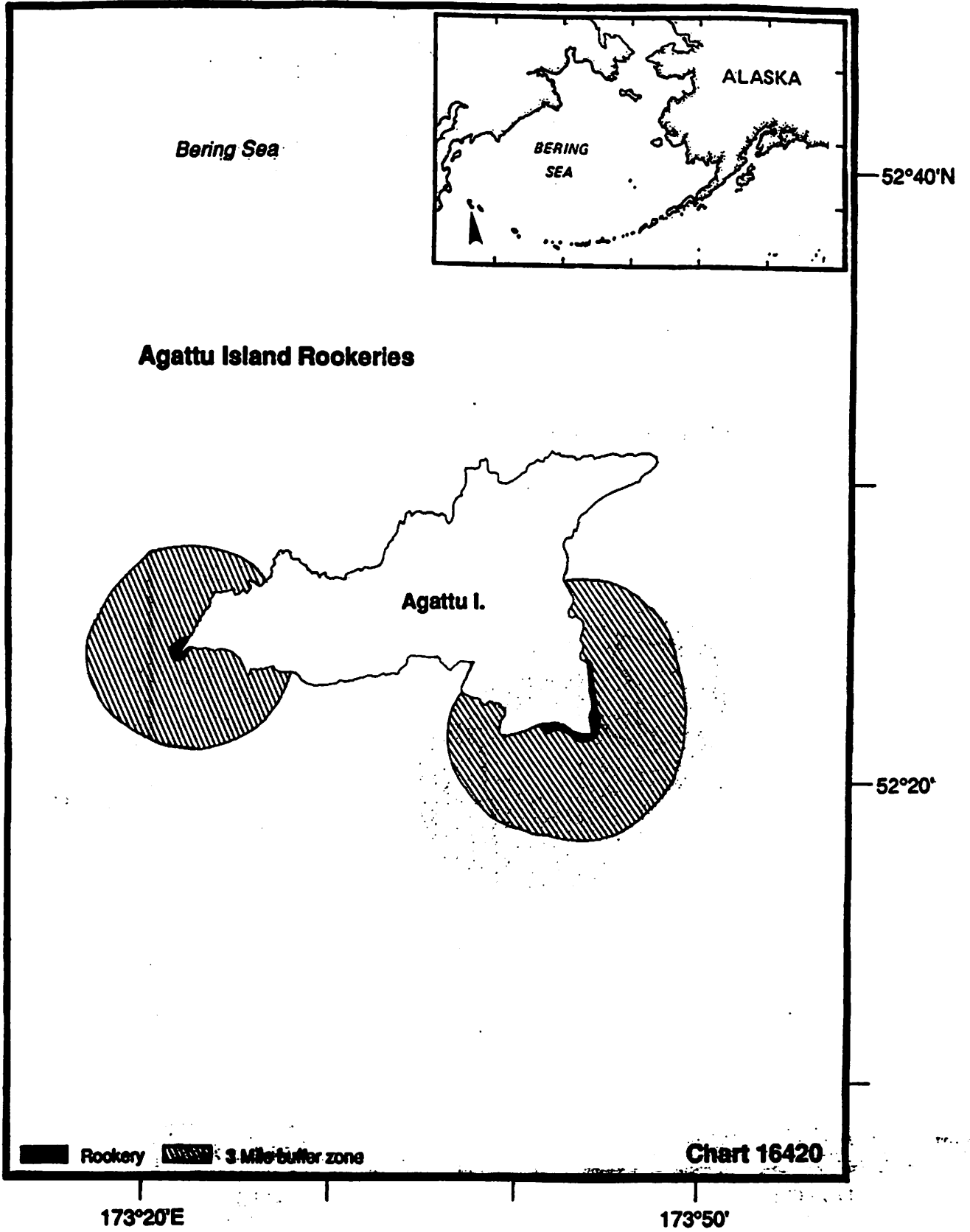


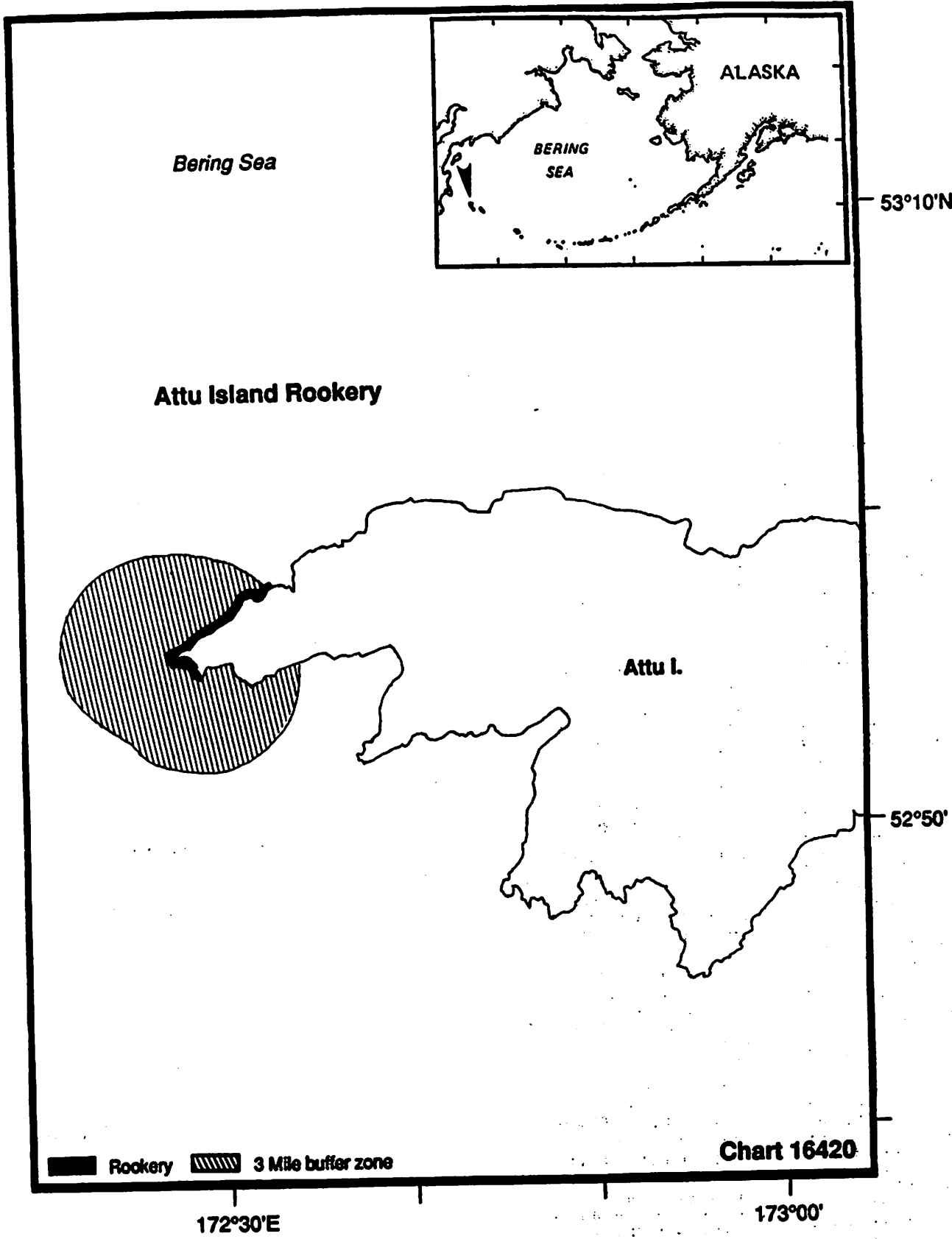












(4) *Quota.* If the Assistant Administrator determines and publishes notice that 675 Steller sea lions have been killed incidentally in the course of commercial fishing operations in Alaskan waters and adjacent areas of the U.S. Exclusive Economic Zone (EEZ) west of 141° W longitude during any calendar year, then it will be unlawful to kill any additional Steller sea lions in this area. In order to monitor this quota, the Director, Alaska Region, National Marine Fisheries Service, may require the placement of an observer on any fishing vessel. If data indicate that the quota is being approached, the Assistant Administrator will issue emergency rules to establish closed areas, allocate the remaining quota among fisheries, or take other action(s) to ensure that commercial fishing operations do not exceed the quota.

(b) *Exceptions—(1) Permits.* The Assistant Administrator may issue permits authorizing activities that would otherwise be prohibited under paragraph (a) of this section in accordance with and subject to the provisions of 50 CFR part 222, subpart C—Endangered Fish or Wildlife Permits.

(2) *Official activities.* Paragraph (a) of this section does not prohibit or restrict a Federal, state or local government official, or his or her designee, who is acting in the course of official duties from:

(i) Taking a Steller sea lion in a humane manner, if the taking is for the protection or welfare of the animal, the protection of the public health and welfare, or the nonlethal removal of nuisance animals; or

(ii) Entering the buffer areas to perform activities that are necessary for national defense, or the performance of other legitimate governmental activities.

(3) *Subsistence takings by Alaska natives.* Paragraph (a)(1) of this section does not apply to the taking of Steller sea lions for subsistence purposes under section 10(e) of the Act.

(4) *Emergency situations.* Paragraph (a)(2) of this section does not apply to an emergency situation in which compliance with that provision presents a threat to the health, safety, or life of a person or presents a significant threat to the vessel or property.

(5) *Exemptions.* Paragraph (a)(2) of this section does not apply to any activity authorized by a prior written

exemption from the Director, Alaska Region, National Marine Fisheries Service. Concurrently with the issuance of any exemption, the Assistant Administrator will publish notice of the exemption in the *Federal Register*. An exemption may be granted only if the activity will not have a significant adverse affect on Steller sea lions, the activity has been conducted historically or traditionally in the buffer zones, and there is no readily available and acceptable alternative to or site for the activity.

(c) *Penalties.* (1) Any person who violates this section or the Act is subject to the penalties specified in section 11 of the Act, and any other penalties provided by law.

(2) Any vessel used in violation of this section or the Endangered Species Act is subject to forfeiture under section 11(e)(4)(B) of the Act.

Dated: November 9, 1990.

William W. Fox, Jr.,
Assistant Administrator for Fisheries,
National Oceanic and Atmospheric
Administration.

[FR Doc. 90-27600 Filed 11-23-90; 8:45 am]
BILLING CODE 3510-22-M



Memo

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE

Alaska Fisheries Science Center
National Marine Mammal Laboratory
7600 Sand Point Way N.E., Bin C15700
Seattle, Washington 98115-0070

(206) 526-4045 FTS: 392-4045

10 January 1991 F/AKC3: RLM

JAN 10 1991

MEMORANDUM FOR: F/AKC - William Aron

FROM: F/AKC3 - ^{To ~} Thomas Loughlin

SUBJECT: Summary of northern sea lion studies during
CY 1990

WA AW
BJ JC
NJ

The following is a brief summary of our northern sea lion research conducted during the past calendar year.

Winter 1990

1. One adult female was equipped with a satellite transmitter at Marmot Island in January 1990. She made at least 8 trips to sea over a 46 day period. The furthest trip was 130 nm into the Gulf of Alaska. She spent most of her time during four of the trips in the canyon on the southern edge of Portlock Bank (60 nm from the island). She also visited Marmot Bay on at least two trips and Shelikof Strait on one. She was in Marmot Bay when we last heard from her on 18 February, which was about the same time the Miller Freeman was performing trawl surveys there. This survey's results indicated that there were large concentrations of walleye pollock (especially two-year-olds) in Marmot Bay then.

Summer 1990

1. Aerial survey for northern sea lions were conducted by NMFS and ADF&G personnel from Southeast Alaska through the central Gulf of Alaska. Results indicated that numbers in most areas were similar to counts from 1989.

2. Fifteen satellite transmitters were deployed from Marmot Island to Kiska Island, 14 on adult females and 1 on an adult male. Results from five of the females indicate:

- a. Trips to sea were typically short in duration (less than one day) and distance (less than 20 nm), with most trips beginning in late afternoon and ending in the early morning.
- b. Dives were shallow (average was 25-30 m, deepest was 120 m) and brief (average of 94-99 sec). Most dives involved a descent to depth, with the animals remaining at the same depth for a minute or more, followed by the ascent. Where locations and dive data coincided, it appeared that at some locations animals were foraging in the water column while at



other locations they were foraging at the bottom.

c. Most diving appeared to be a night (2100-0300) and early morning (0300-0600). There was no obvious change in dive depths or durations by time of day.

d. Animals dove in water which was progressively cooler from east to west (average temperature at maximum dive depths varied from 8.1°C at Chirikof to 5.1°C at Kiska). Only at Chirikof Island did animals appear to be diving in a thermally stratified water column (range from 5° to 10°C over 50-60 m depth), and there the animals spent most of their time in the thermocline (at around 8.1°C).

Fall 1990

1. Deployment of satellite packs in central Gulf of Alaska -
 - a. Four units were deployed on adult females at Chirikof Island in December 1990. Preliminary results indicate that animals in the late fall-early winter are foraging much further at sea and much deeper than during summer 1990. Two of the animals have travelled at least 240 nm eastward into the Gulf of Alaska, and appear to be foraging near the Gilbert and Patton Seamounts.
 - b. No units were deployed at Marmot Island due to the lack of animals there.

2. As part of joint US/USSR northern sea lion studies, a cruise was conducted on the USF&WS R/V Surfbird in southeastern Alaska including three Soviet scientists (Vladimirov, Perlov, and Mikhno), Loughlin (NMFS), and McAllister (ADF&G). The intent was to deploy satellite tags but no instruments were deployed due to weather and a lack of animals.

cc: Braham