

Bradley Memorial Hospital, Cleveland, TN  
Point In Space Coordinates  
(Lat. 35°10'52" N, long. 84°52'56" W)

That airspace extending upward from 700 feet or more above the surface within a 12.5-mile radius of Mark Anton Airport, and that airspace within a 6.5-mile radius of Hardwick Field Airport, and that airspace within a 6-mile radius of the point in space (Lat. 35°37'34" N, long. 85°10'38" W) serving Bledsoe County Hospital, Pikeville, TN, and that airspace within a 6-mile radius of the point in space (Lat. 35°10'52" N, long. 84°52'56" W) serving Bradley Memorial Hospital, Cleveland, TN, excluding that airspace within the Athens, TN, Class E airspace area.

\* \* \* \* \*

Issued in College Park, Georgia, on October 4, 2001.

**Wade T. Carpenter,**

*Acting Manager, Air Traffic Division,  
Southern Region.*

[FR Doc. 01-25755 Filed 10-11-01; 8:45 am]

**BILLING CODE 4910-13-M**

## ENVIRONMENTAL PROTECTION AGENCY

### 40 CFR Part 62

[MO 0136-1136; FRL-7078-9]

#### Approval and Promulgation of State Plans for Designated Facilities and Pollutants; Control of Emissions From Hospital/Medical/Infectious Waste Incinerators (HMIWIs); State of Missouri

**AGENCY:** Environmental Protection  
Agency (EPA).

**ACTION:** Proposed rule.

**SUMMARY:** EPA proposes to approve a revision to the state of Missouri's section 111(d) plan for controlling emissions from existing HMIWIs.

In the final rules section of the **Federal Register**, EPA is approving the state's submittal as a direct final rule without prior proposal because the Agency views this as a noncontroversial revision amendment and anticipates no relevant adverse comments to this action. A detailed rationale for the approval is set forth in the direct final rule. If no relevant adverse comments are received in response to this action, no further activity is contemplated in relation to this action. If EPA receives relevant adverse comments, the direct final rule will be withdrawn and all public comments received will be addressed in a subsequent final rule based on this proposed action. EPA will not institute a second comment period on this action. Any parties interested in commenting on this action should do so at this time.

**DATES:** Comments on this proposed action must be received in writing by November 13, 2001.

**ADDRESSES:** Comments may be mailed to Wayne Kaiser, Environmental Protection Agency, Air Planning and Development Branch, 901 North 5th Street, Kansas City, Kansas 66101.

**FOR FURTHER INFORMATION CONTACT:** Wayne Kaiser at (913) 551-7603.

**SUPPLEMENTARY INFORMATION:** See the information provided in the direct final rule which is located in the rules section of the **Federal Register**.

Dated: September 27, 2001.

**William W. Rice,**

*Acting Regional Administrator, Region 7.*

[FR Doc. 01-25584 Filed 10-11-01; 8:45 am]

**BILLING CODE 6560-50-P**

## DEPARTMENT OF THE INTERIOR

### Fish and Wildlife Service

#### 50 CFR Parts 20 and 21

RIN 1018-AI07

#### Migratory Bird Hunting and Permits; Regulations for Managing Harvest of Light Goose Populations

**AGENCY:** Fish and Wildlife Service,  
Interior.

**ACTION:** Proposed rule.

**SUMMARY:** Various populations of light geese (greater and lesser snow geese and Ross' geese) have undergone rapid growth during the past 30 years, and have become seriously injurious to their habitat, habitat important to other migratory birds, and agricultural interests. The U.S. Fish and Wildlife Service (Service or "we") believes that several of these populations have exceeded the long-term carrying capacity of their breeding and/or migration habitats and must be reduced. This rule would authorize new methods of take for light goose hunting. In addition, the rule would revise the regulations for the management of overabundant light goose populations and modifies the conservation order that will increase take of such populations.

**DATES:** Comments on this proposed rule must be received by December 11, 2001.

**ADDRESSES:**

1. Comments should be mailed to Chief, Division of Migratory Bird Management, U.S. Fish and Wildlife Service, Department of the Interior, ms 634—ARLSQ, 1849 C Street NW., Washington, DC 20240. Alternatively, comments may be submitted electronically to the following address:

*white\_goose\_eis@fws.gov*. In order to be considered, electronic submissions must include your name and postal mailing address; we will not consider anonymous comments. All comments received, including names and addresses, will become part of the public record.

2. The public may inspect comments during normal business hours in Room 634—Arlington Square Building, 4401 N. Fairfax Drive, Arlington, Virginia.

3. You may obtain copies of the draft environmental impact statement from the above address, or by downloading it from our Web site at <http://migratorybirds.fws.gov/issues/snowgse/tblcont.html>.

**FOR FURTHER INFORMATION CONTACT:** Jon Andrew, Chief, Division of Migratory Bird Management, (703) 358-1714; or James Kelley (612) 713-5409.

**SUPPLEMENTARY INFORMATION:** We regulate the taking of migratory birds under the four bilateral migratory bird treaties the United States entered into with Great Britain (for Canada), Mexico, Japan, and Russia. Regulations allowing the take of migratory birds are authorized by the Migratory Bird Treaty Act (16 U.S.C. 703-711), and the Fish and Wildlife Improvement Act of 1978 (16 U.S.C. 712). The Acts authorize and direct the Secretary of the Interior to allow hunting, taking, killing, etc. of migratory birds subject to the provisions of, and in order to carry out the purposes of, the four migratory bird treaties.

The 1916 treaty with Great Britain was amended in 1999 by the governments of Canada and the U.S. Article II of the amended U.S.-Canada migratory bird treaty (Treaty) states that, in order to ensure the long-term conservation of migratory birds, migratory bird populations shall be managed in accord with conservation principles that include (among others): To manage migratory birds internationally; to sustain healthy migratory bird populations for harvesting needs; and to provide for and protect habitat necessary for the conservation of migratory birds. Article III of the Treaty states that the governments should meet regularly to review progress in implementing the Treaty. The review shall address issues important to the conservation of migratory birds, including the status of migratory bird populations, the status of important migratory bird habitats, and the effectiveness of management and regulatory systems. The governments agree to work cooperatively to resolve identified problems in a manner consistent with the principles of the

Treaty and, if the need arises, to conclude special arrangements to conserve and protect species of concern. Article IV of the Treaty states that each government shall use its authority to take appropriate measures to preserve and enhance the environment of migratory birds. In particular, the governments shall, within their constitutional authority, seek means to prevent damage to such birds and their environments and pursue cooperative arrangements to conserve habitats essential to migratory bird populations. Article VII of the Treaty authorizes permitting the take, kill, etc., of migratory birds that, under extraordinary conditions, become seriously injurious to agricultural or other interests.

### Geographic Distribution of Species

Greater snow geese (*Chen caerulescens atlantica*) breed in the eastern Arctic of Canada and migrate southward through Quebec, New York, and New England to their wintering grounds in the mid-Atlantic United States (Reed et al. 1998). Lesser snow geese (*Chen c. caerulescens*) breed throughout much of the Arctic region of North America (Mowbray et al. 2000). Additionally, a population that breeds on Wrangel Island, Russia, migrates through Alaska, western Canada, and several western States. The wintering range of lesser snow geese is broad, with birds nesting in the western Arctic tending to winter in the Pacific Flyway, and birds nesting in the central and eastern Arctic wintering primarily in the Central and Mississippi Flyways. Small numbers of lesser snow geese winter in the Atlantic Flyway.

Approximately 95% of Ross' geese (*Chen rossii*) breed in the Queen Maud Gulf region of the central Arctic (Kerbes 1994). Small numbers of Ross' geese also breed on Banks Island in the western Arctic, along western and southern Hudson Bay, and Southampton and Baffin Islands in the eastern Arctic. Prior to the 1960s, most Ross' geese migrated to wintering areas in California. This species has dramatically expanded its range eastward in recent decades (Ryder and Alisauskas 1995). A large proportion of Ross' geese winters in the Central Valley of California. Smaller numbers of Ross' geese winter in the southwest portion of the Central Flyway, and in Arkansas and Louisiana.

Greater snow geese, lesser snow geese, and Ross' geese are referred to as "light" geese due to the light coloration of the white-phase plumage morph, as opposed to true "dark" geese such as the white-fronted or Canada goose. We

include both plumage variations of lesser snow geese (white, or "snow" and dark, or "blue") under the designation light geese. Dark phase Ross' geese exist but are uncommon.

### Population Delineation

Waterfowl management activities frequently are based on delineation of populations that are the target of management. In most instances, populations are delineated according to where they winter, whereas others are delineated based on location of their breeding grounds. For management purposes, populations can comprise one or more species of geese. For example, lesser snow geese and Ross' geese in the central portion of North America are frequently found in the same breeding, migration, and wintering areas. Due to these similarities, the term "light goose population" is used to refer to various populations comprising both lesser snow geese and Ross' geese, as described below. In descriptions of geographic areas, eastern Arctic refers to the area east of approximately longitude 95° W; the central Arctic refers to the area between 95° W and approximately 115° W; and the western Arctic refers to the area west of 115° W. Administrative flyway boundaries also are used to describe population ranges.

*Greater snow geese*—A single population of greater snow geese is recognized in North America. The population is relatively isolated from other light goose populations, except for potential mixing with small groups of lesser snow geese in the central portion of the Atlantic Flyway.

*Mid-Continent Population (MCP) of light geese*—This term is used to describe light geese (lesser snow and Ross' geese) that migrate primarily through North Dakota, South Dakota, Nebraska, Kansas, Iowa, and Missouri, and winter in Arkansas, Louisiana, Mississippi, and eastern, central, and southern Texas. MCP birds nest in colonies along the southern and western shores of Hudson Bay and on Southampton and Baffin Islands in the eastern Arctic, and in the Queen Maud Gulf region of the central Arctic. Field studies conducted in Texas during winter indicate that surveyed MCP light geese comprise approximately 94% lesser snow geese and 6% Ross' geese (Texas Parks and Wildlife Department, unpublished data). Similar studies conducted in Louisiana indicate that MCP flocks in sampled areas comprise approximately 98% lesser snow geese and 2% Ross' geese (Helm 2001).

*Western Central Flyway Population (WCFP) of light geese*—WCFP light geese winter in southern Colorado,

northwestern Texas, New Mexico, and the northern Highlands of Mexico (Hines et al. 1999). WCFP light geese nest primarily in the central and western Canadian Arctic, with nesting colonies on Banks Island (mostly lesser snow geese, with some Ross' geese) and Queen Maud Gulf (mostly Ross' geese, with some lesser snow geese). Observations of birds marked with neck collars indicate that 17% of lesser snow geese from the central Arctic (Kerbes et al. 1999), and 24% of lesser snow geese from the western Arctic (Armstrong et al. 1999), migrate to WCFP wintering areas. Neck collar data are not available for Ross' geese. Overall, the WCFP comprises approximately 79% lesser snow geese and 21% Ross' geese (Thorpe 1999).

In our previous Environmental Assessment on light goose management (U.S. Fish and Wildlife Service 1999), we used the term Mid-Continent light geese (MCLG) to refer to birds that migrated and wintered in the Central and Mississippi Flyways. We defined MCLG as the combination of MCP and WCFP, as described above. However, confusion arose over the use of the terms MCLG and the Mid-Continent Population of light geese. Therefore, we have discontinued the use of the term MCLG. In our current EIS on light goose management, we refer to the combination of MCP and WCFP birds as Central/Mississippi Flyway (CMF) light geese.

*Western Population of Ross' geese (WPRG)*—We have chosen this designation for Ross' geese that migrate to the Pacific Flyway; primarily to the Central Valley of California. The WPRG nests mainly in the Queen Maud Gulf region of the central Arctic, although an increasing number of birds nest in the eastern Arctic. Smaller numbers of birds nest on Banks Island in the western Arctic. The WPRG comprises the largest percentage of wintering Ross' geese in the United States. However, the percent of central Arctic Ross' geese that are recovered by hunters in the Pacific Flyway has declined from nearly 100% in the 1950s and 1960s, to 60% during 1990–98.

*Pacific Flyway Population of lesser snow geese (PFSG)*—PFSG birds winter in the Pacific Flyway and nest primarily on Banks Island, and coastal river deltas on the mainland at Anderson River and Kendall Island in the western Arctic. Neck collar observations indicate that approximately 76% of lesser snow geese that nest in the western Arctic migrate to PFSG wintering areas (Hines et al. 1999). Very few lesser snow geese banded in the central and eastern Arctic are recovered in the Pacific Flyway.

*Wrangel Island Population of lesser snow geese*—This population nests on Wrangel Island off the north coast of Russia, and winters in southern British Columbia, the Puget Sound area of Washington, and in northern California.

#### Population Surveys

The status of light goose populations in North America is monitored using a combination of aerial surveys conducted on breeding, migration, and wintering areas. The breeding population of greater snow geese is estimated each spring when the entire population is staging in the St. Lawrence River Valley during northward migration (Reed et al. 1998). Due to the difficulty of conducting surveys throughout the vast arctic region, lesser snow and Ross' goose breeding colonies are monitored on a 5-year rotating basis using low-level aerial photography (Kerbes et al. 1999). Therefore, estimates of the number of breeding birds at each colony are not available every year. Surveys of breeding colonies provide estimates of the number of nesting birds, but not the number of non-breeding birds (primarily 1- and 2-year olds). Consequently, the total population size in spring is higher than estimates derived from photo surveys of breeding colonies. On the average, snow goose populations are considered to have 25–35% non-breeders in spring (Kerbes et al. 1999). Therefore, on average, the total population size may be 30% greater than breeding colony estimates indicate.

Winter waterfowl surveys are conducted each year throughout the entire lower 48 States. These surveys began in some areas as early as the 1930s; however, consistent survey coverage began in 1955. Biologists did not begin separate inventories of MCP and WCFP light geese until the winter of 1969–70. Therefore, during 1955–1969, the light goose count in the Central and Mississippi Flyways could not be separated into MCP and WCFP components.

Because not all areas in each State are surveyed, the winter survey does not provide a complete population count for light geese. Instead, the survey provides an index to the winter population of geese, which should not be confused with the size of the breeding population. Past photographic inventories of eastern arctic nesting colonies suggested that winter indices averaged about half of the actual spring population estimate (Kerbes 1975). Boyd et al. (1982) used a correction factor of 1.6 to apply to winter indices to estimate the approximate breeding population size in spring. By maintaining similar survey methods from year to year, the winter

index is utilized to monitor the relative size of the various populations each year. Because winter index data are available every year for most light goose populations (versus every 5 years for arctic breeding colony data), the winter index is utilized to annually monitor populations and aid in making many management decisions.

#### Population Status—Spring Surveys

Estimation of the spring population of greater snow geese is straightforward, because most birds are encountered during the photo survey conducted in the St. Lawrence River Valley in Quebec. However, determination of the number of breeding lesser snow and Ross' geese for various populations is problematic because delineation of most populations is based on wintering ground affiliation. For example, MCP light geese comprise birds that breed in the eastern and central Arctic. WCFP light geese comprise birds that breed in the central and western Arctic. Because photo surveys of breeding colonies for a particular region are conducted every 5 years, simultaneous estimates from 2 different portions of a population's breeding range may be lacking. Therefore, we present breeding population estimates for lesser snow and Ross' geese for the eastern, central, and western arctic regions, rather than providing spring estimates for populations that are delineated based on wintering ground affiliation.

*Greater snow geese*—The spring population estimate of greater snow geese increased from approximately 25,400 birds in 1965, to 813,900 birds in 2000 (Reed et al. 1998, Reed et al. 2000). The population growth rate during 1965–2000 was 8.8 % per year. At the current rate of growth, the greater snow goose population will reach 1 million by 2002, and over 2 million by 2010.

*Light geese in the eastern Arctic*—The number of breeding lesser snow geese on surveyed colonies in 1973 was approximately 1,057,400 birds (Kerbes 1975). During 1973–97, the number of breeding lesser snow geese increased at an annual rate of 4.7%, to approximately 3,010,200 birds (Canadian Wildlife Service, unpublished data). Including an additional 30% for non-breeding birds, the total number of lesser snow geese in the eastern Arctic was nearly 4 million birds in 1997. Assuming a 4.7% annual growth rate since 1997, we project the total number of lesser snow geese in the eastern Arctic will be approximately 4.7 million in spring 2001. Due to expansion of its breeding range, the number of Ross' geese in the eastern Arctic has increased from

approximately 2,000 birds in 1990, to 52,000 birds in 1998 (Canadian Wildlife Service, unpublished data). A reliable estimate of the annual growth rate of Ross' geese in the eastern Arctic is not available; therefore, we cannot project the number of Ross' geese for spring 2001.

*Light geese in the central Arctic*—In 1966, the numbers of breeding lesser snow and Ross' geese on surveyed colonies in the central Arctic were 10,300 and 34,000 birds, respectively (Kerbes 1994). During the period 1966–98, the number of breeding lesser snow geese in the central Arctic increased at an annual rate of 14.6%, to the latest estimate of 816,100 birds (Canadian Wildlife Service, unpublished data). During the same period, the number of breeding Ross' geese increased at an annual rate of 9.0%, to the latest estimate of 567,100 birds (Canadian Wildlife Service, unpublished data). Including an additional 30% to account for non-breeding birds, the total number of lesser snow and Ross' geese in the central Arctic during spring 1998 was approximately 1,061,000 and 737,000 birds, respectively. Population estimates following the 1998 photo surveys are not available at this time. However, assuming the same growth rates for each species cited above, the total number of lesser snow and Ross' geese in the central Arctic in spring 2001 will be approximately 1,572,000 and 955,000 birds, respectively.

*Light geese in the western Arctic*—The number of breeding lesser snow geese on surveyed colonies in 1976 was estimated to be 169,600 birds (Kerbes et al. 1999). During the period 1976–95, the number of breeding lesser snow geese increased at an annual rate of 5.3% to 486,000 birds (Kerbes et al. 1999). Including an additional 30% for non-breeding birds, the total number of lesser snow geese in the western Arctic was approximately 632,000 birds in 1995. The annual rate of population growth increased to 6.3% during 1981–95 (Kerbes et al. 1999); therefore, the number of lesser snow geese in spring 2001 likely will approach 912,000 birds. Ross' geese are not commonly found on breeding colonies in the western Arctic; however small numbers of birds are found on Banks Island.

*Wrangel Island Population of lesser snow geese*—The total population (breeders and non-breeders) of lesser snow geese on Wrangel Island declined from approximately 150,000 birds in 1970 to 56,000 birds in 1975, due to four consecutive years of poor reproductive success (Kerbes et al. 1999). The population increased during the 1980s to nearly 100,000 birds, but averaged

only about 65,000 birds in the mid-1990s. The 2000 population estimate was approximately 95,000 birds (U.S. Fish and Wildlife Service 2000).

#### Population Status—Winter Surveys

We use operational surveys conducted annually on wintering grounds to derive winter indices to light goose populations. Winter indices represent a certain proportion of the total wintering population, and thus are smaller than the true population size. However, by assuming that the same proportion of the population is counted each winter, we are able to monitor the trend of the overall population. Aerial surveys do not distinguish between lesser snow and Ross' geese; therefore, winter indices for each species are not generated. Species composition information derived from flock sampling on the ground can be used to approximate the number of lesser snow and Ross' geese in winter indices.

*Greater snow geese*—The winter index of greater snow geese has increased from approximately 46,000 birds in 1955, to approximately 465,000 birds in 2000 (Serie and Raftovich 2000). The winter survey is a useful tool for providing information on the winter distribution of snow geese in the Atlantic Flyway. However, the winter survey counts a smaller proportion of the population than does the spring survey.

*Mid-Continent Population (MCP) of light geese*—The winter index of MCP light geese has increased from approximately 777,000 birds in 1970, to nearly 2.4 million birds in 2000 (Sharp and Moser 2000). During 1970–2000, the MCP winter index increased 3.3% per year, although the rate of increase has elevated to 4.2% per year in the past 10 years. Using the average of species composition data obtained in Texas and Louisiana cited earlier, we estimate that the numbers of lesser snow and Ross' geese in the 2000 MCP winter index were 2,291,000 and 99,200 birds, respectively.

*Western Central Flyway Population (WCFP) of light geese*—The winter index of WCFP light geese has increased from approximately 42,000 birds in 1970 to approximately 256,000 birds in 2000 (Sharp and Moser 2000). During 1970–2000, the WCFP winter index increased 6.2% per year. Lesser snow geese and Ross' geese comprise approximately 79% and 21%, respectively, of WCFP light geese (Thorpe 1999). Using these proportions, the lesser snow and Ross' goose components of WCFP light geese in winter 2000 were approximately 202,200 and 53,600 birds, respectively.

*Western Population of Ross' geese (WPRG)*—Consistent, long-term surveys have not been in place to provide annual winter indices for WPRG. Special surveys conducted during the winters of 1988 and 1989 produced estimates of over 200,000 Ross' geese in California (Pacific Flyway Council 1992). Species composition surveys conducted in the Central Valley during the winter of 1992 resulted in an index of 221,300 birds (Mensik and Silveira 1993). The survey also was completed in December, 2000, resulting in an estimate of 256,000 Ross' geese (U.S. Fish and Wildlife Service, unpublished data).

*Pacific Flyway Population of lesser snow geese (PFSG)*—Annual winter indices are not available for PFSG. Species composition surveys conducted in 1992 indicated that 63% of light geese wintering in California were lesser snow geese (Mensik and Silveira 1993). The species composition survey conducted in California during December, 2000, yielded an estimate of 409,000 lesser snow geese (U.S. Fish and Wildlife Service, unpublished data).

*Wrangel Island Population of lesser snow geese*—Winter indices are not available for Wrangel Island lesser snow geese.

#### Population Goals

Population goals for various light goose populations are outlined in the North American Waterfowl Management Plan (NAWMP; U.S. Department of the Interior *et al.* 1998). In addition, Flyway Councils have set population goals for light geese they manage within their geographic boundaries. We compare current population levels to NAWMP population goals to demonstrate that most light goose populations have increased substantially over what is considered to be a healthy population level. We are not suggesting that light goose populations be reduced for the sole purpose of meeting NAWMP population goals.

*Greater snow geese*—The Atlantic Flyway Council population objective, as well as the NAWMP spring population goal for greater snow geese, is 500,000 birds. Therefore, the greater snow goose population currently is 63% higher than the Atlantic Flyway Council and NAWMP goals. The Arctic Goose Habitat Working Group of the Arctic Goose Joint Venture has recommended a management goal of stabilizing the greater snow goose population at between 800,000 to 1 million birds (Giroux *et al.* 1998a). However, the Working Group recommended a reduction of the population below this level if natural habitats continue to

deteriorate, or if measures taken to reduce crop depredation do not achieve desired results (Giroux *et al.* 1998a).

*Lesser snow geese*—The NAWMP winter index goal for MCP lesser snow geese is 1 million birds. The Central and Mississippi Flyway Councils have set an upper management threshold (winter index) of 1.5 million for MCP lesser snow geese, but have not set a threshold for WCFP lesser snow geese. The 2000 winter index of MCP lesser snow geese is 129% higher than the NAWMP goal, and 53% higher than the management threshold adopted by the Flyway Councils. The 2000 winter index of WCFP lesser snow geese is 84% higher than the NAWMP winter index goal of 110,000 birds.

In 1997, the Arctic Goose Habitat Working Group of the AGJV recommended a management goal of reducing the number of light geese in the mid-continent region (primarily MCP and WCFP birds) by 50% (Arctic Goose Habitat Working Group 1997). This suggests a reduction of the combined winter index of MCP and WCFP light geese from the winter 1996/1997 value of 3.1 million to approximately 1.6 million birds.

The NAWMP does not contain a winter index goal for lesser snow geese in the Pacific Flyway (PFSG), but does contain a goal of 200,000 birds for breeding lesser snow geese in the western Arctic. Approximately 76% of lesser snow geese that nest in the western Arctic migrate to PFSG wintering areas (Hines *et al.* 1999). The 1995 photo survey estimate of 486,000 breeding lesser snow geese in the western Arctic (Kerbes *et al.* 1999) is 143% higher than the NAWMP goal. Hines *et al.* (1999) suggested a proactive approach to management of western Arctic lesser snow geese by stabilizing the population at its current level before it escapes control via normal harvest.

*Ross' geese*—The NAWMP does not contain separate population goals for MCP and WCFP Ross' geese. However, the NAWMP and Pacific Flyway Council (Pacific Flyway Council 1992) utilize a total continental goal of 100,000 breeding Ross' geese. The estimate of 619,100 breeding Ross' geese in the central and eastern Arctic in 1998 is 519% higher than the NAWMP and Pacific Flyway goal.

The Pacific Flyway Council also has adopted a continental winter index goal of 150,000 Ross' geese (Pacific Flyway Council 1992). The combined winter index total of 408,750 Ross' geese in the MCP, WCFP, and WPRG geographic ranges is 172% higher than the Pacific Flyway Council goal.

### Potential Causes of Population Growth

The rapid rise of light goose populations has been influenced heavily by human activities (Abraham and Jefferies 1997, Filion *et al.* 1998, Reed *et al.* 1998, Sparrowe 1998). The greatest attributable factors likely include:

- (1) A decline in harvest rate (percent of population removed by hunting);
- (2) an increase in adult survival rates;
- (3) the expansion of agricultural areas in the United States and prairie Canada that provide abundant food resources during migration and winter; and
- (4) the establishment of sanctuaries along the Flyways.

We have attempted to curb the growth of light goose populations by increasing bag and possession limits and extending the open hunting season length for light geese to 107 days, the maximum allowed by the Treaty. Despite liberalizations in regular-season regulations, the harvest rate (the percentage of the population that is harvested) for light goose populations traditionally has been low. Low hunting mortality has contributed to population growth, which further reduces the harvest rate. The decline in harvest rate indicates that past harvest management strategies have not been sufficient to stabilize or reduce population growth rates.

Expansion of agriculture in light goose migration and wintering areas has contributed to population growth by providing a food subsidy (Ankney and MacInnes 1978; Abraham and Jefferies 1997, Giroux *et al.* 1998b). Light geese exploit corn, soybean, rice, wheat, barley, oats and rye during migration and winter. Food subsidies contribute to higher survival rates of geese and provide birds with additional nutrients during spring migration that allow them to arrive on the breeding grounds in prime condition to breed and have higher breeding success.

### Foraging Behavior of Geese

Light geese have a profound effect on habitat through their feeding actions, and have developed several modes of feeding on plant material for meeting their energy needs (Goodman and Fisher 1962, Bolen and Rylander 1978). Where spring thawing has occurred, and above-ground plant growth has not begun, snow geese dig into and break open the turf (grubbing), consuming the highly nutritious below-ground portions (e.g., roots, rhizomes) of plants. Grubbing continues into late spring. Snow geese also engage in shoot-pulling where birds pull the shoots of large sedges, consume the highly nutritious basal portion, and discard the remainder of the plant. A

third feeding strategy utilized by all light goose species is grazing of above-ground plant material by clipping action of the bill. The amount of time in which Ross' geese utilize grubbing and shoot-pulling is not well documented.

However, Ross' geese are known to grub for below-ground roots of sedges and grasses in early spring (Ryder and Alisauskas 1995). Due to their smaller bill size, Ross' geese are able to graze shorter stands of vegetation, which could prevent or slow vegetation recovery in damaged areas (Didiuk *et al.* 2001). In addition, Ross' geese cause considerable damage to vegetation by pulling up plants during nest-building activities (Didiuk *et al.* 2001).

### Habitat Impacts

We have described the impact of light geese on natural and agricultural systems for various breeding, migration, and wintering areas in our draft EIS on light goose management. Due to the volume of technical information, we refer the reader to the draft EIS for specific details. Procedures for obtaining a copy of the draft EIS are described in the **ADDRESSES** section of this document. A synopsis of ecosystem impacts follows.

*Greater snow geese*—Studies conducted on Bylot Island, where 15% of the greater snow goose population nests, indicate that goose grazing levels are high, but there are as yet no indications of damage to the vegetation in terms of absence of re-growth following grazing (Giroux *et al.* 1998b). However, monitoring of fenced and unfenced study plots has shown that composition of the plant community is modified by geese, and that annual plant productivity is reduced in heavily-grazed areas. Long-term, intense grazing by geese leads to a low-level production equilibrium between geese and plants. When grazing is experimentally stopped, via enclosure fences, plant biomass increases rapidly within a few years (Giroux *et al.* 1998b). Measurements of food availability on Bylot Island suggest that the short-term ability of habitat to support geese has not been exceeded. However, given the rate of increase of greater snow goose numbers, it is highly probable that the intensity of grazing will increase and that the capacity of plants to recover will be exceeded (Masse *et al.* 2001).

The St. Lawrence River Valley is an important spring and fall staging area for greater snow geese. Vegetation studies in bulrush marshes indicate that plant stem density in some marshes declined by 40% during 1971–96 (Giroux and Bedard 1987). Repeated measures of below-ground plant

biomass suggested that geese had maintained the marsh system in a low-level steady state during the 1980s. However, decreased number of use-days by geese, declining productivity of bulrush habitats at some sites, changes in plant species composition, and erosion of marshes indicate that the carrying capacity of bulrush marshes may have been reached and that marshes can no longer accommodate the increasing number of snow geese (Giroux *et al.* 1998b). Until the 1960s, migrating greater snow geese staged in their traditional bulrush marshes of the upper St. Lawrence River estuary. However, birds gradually began field-feeding behavior during spring in the late 1960s and early 1970s, when the population level approached 100,000 (Filion *et al.* 1998). Crop damage in Quebec has prompted implementation of a compensation fund to cover 80% of farmers' losses. Bedard and LaPointe (1991) predicted that rapid goose population growth would soon lead to unacceptable crop damage. In some areas, compensation has not been sufficient for farmers who experience losses and the Quebec Farmers Union has asked for a control of the snow goose population (Filion *et al.* 1998). With recent shifts of geese toward the upper St. Lawrence estuary and their later departure from these regions, damage to forage production could increase and additional crops, such as winter cereals, could be affected (Filion *et al.* 1998).

Prior to the 1960s, the impact of greater snow geese on coastal marshes of the U.S. mid-Atlantic coast appeared to be relatively small. Goose impacts on marshes became more apparent as the population grew during the 1970s and 1980s. From New Jersey to North Carolina, areas of denuded marsh, or "eat-outs," were created by foraging geese (Giroux *et al.* 1998b). Marshes that have experienced eat-outs may be able to recover relatively quickly if sufficient below-ground biomass remains to resume vegetative growth (Smith and Odum 1981). However, areas that are grazed by geese year after year may be maintained as mudflats (Young 1985). Snow goose grazing has impacted natural marshes at several sites throughout the mid-Atlantic coast, although impacts to coastal marshes appear to have been reduced in areas where birds have adapted to feeding in agricultural habitats. The nutritional subsidy that agricultural foods provide to birds has likely contributed to the increase in the goose population. Increased damage to coastal marshes during the last 5–10 years has occurred

in areas where agricultural foods are less available or where large increases in goose numbers have rapidly occurred (Giroux *et al.* 1998b).

The use of agricultural lands by greater snow geese in the mid-Atlantic region is a relatively recent development. Agricultural depredations by geese in the mid-Atlantic were first reported during the winter of 1971–72. A 1998 poll of agency personnel in 6 mid-Atlantic States indicated, on average, an annual total of fewer than 35 crop damage complaints (Giroux *et al.* 1998b). However, goose damage was reported to be on the increase in Pennsylvania, Maryland, and Delaware, and stable in New Jersey, Virginia, North Carolina, and New York (Giroux *et al.* 1998b). Crop damage assessment surveys were conducted in Delaware during 1998 and 1999 (Delaware Div. of Fish and Wildlife 2000). In 1998, a total of \$500,000 in crop damage affecting 12,000 acres was documented; primarily in wheat, barley, and rye crops. In 1999, the number of acres affected had declined to 3,800 acres, with damage amounts of \$180,300 resulting. Although similar numbers of snow geese were present in both years, modification of hunting season opening dates for snow geese is believed to be responsible for the decline in crop damage. It is likely that crop damage reports underestimate actual losses. U.S. farmers are not traditionally compensated for wildlife damage and thus have little incentive to report damage to agencies. As snow goose populations continue to grow, it is expected that agricultural depredations will increase.

*Lesser snow and Ross' geese*—Under certain levels of goose grazing intensity, some salt-marsh plants in the Arctic show enhanced shoot growth following defoliation (Abraham and Jefferies 1997). However, other plant species show only limited shoot growth or no growth following defoliation (Zellmer *et al.* 1993). At high levels of grazing intensity, plant communities are unable to rebound from constant feeding pressures. Once lesser snow geese graze an area to the point where they can no longer obtain sufficient food, they will leave to exploit other areas. Normally, this would allow plant communities to rebound from grazing. However, Ross' geese can further impact areas after snow geese leave because they can graze on shorter stands of plants. The potential for plant recovery is further reduced by the short growing season in arctic and sub-arctic habitats.

Accelerated habitat degradation results from a negative feedback loop between light geese and the plant

communities they utilize. Removal of above-ground plant cover reduces the thickness of the vegetative mat that insulates underlying sediments from the air. This causes an increase in the rate of evaporation from surface sediments and greater concentration of salts from marine clays. Grubbing by geese further exposes the soil substrate. Most of the impacts by light geese on breeding habitats have been documented in the eastern and central arctic region. For example, the Hudson Bay Lowlands salt-marsh ecosystem consists of a 1,200-mile strip of coastline along west Hudson and James Bays, Canada. Vast areas of desertification, characterized by high soil salinity and little or no vegetation, have been documented extensively throughout the Hudson Bay Lowlands (Abraham and Jefferies 1997). Of the 135,000 acres of salt-marsh habitat in the Hudson Bay Lowlands, 35% is considered to be destroyed, 30% is damaged, and 35% is overgrazed (Abraham and Jefferies 1997). The rate of vegetation decline at La Perouse Bay during 1984–93 was approximately 159 acres/year (calculated from data in Jano *et al.* 1998). Habitats currently categorized as “damaged” or “overgrazed” are being further impacted and will be classified as “destroyed” if goose populations continue to expand. Experts fear that many destroyed habitats will not recover (Abraham and Jefferies 1997). For example, in a badly degraded area, less than 20% of the vegetation within an enclosure (fenced in area where geese cannot feed) has recovered after 15 years of protection from light geese (Abraham and Jefferies 1997). Recovery rates of degraded areas are further slowed by the short tundra growing season and the high salinity levels in the exposed and unprotected soil.

The Hudson Bay Lowlands have undergone isostatic uplift following retreat of the last glacial episode. Upon being released from the weight of glaciers, the coastline has undergone a slow rate of elevation increase (Hik *et al.* 1992). The gradual uplift causes modification to the soil environment and leads to a shift in communities of plants that tolerate drier conditions. It has been suggested that isostatic uplift, not the feeding actions of geese, is responsible for habitat damage at breeding colony sites. This theory is disproved by studies that utilize fencing to exclude geese from feeding in study plots. Vegetation in adjacent study plots that are exposed to goose grazing is removed, whereas vegetation in fenced plots is unaffected. If isostatic uplift was responsible for vegetation damage,

vegetation in fenced areas also should have been affected.

Satellite imagery has been used to demonstrate habitat damage at other sites in the Arctic. For example, lesser snow and Ross' goose population growth at Karrak Lake (approximately 750 miles north of La Perouse Bay) in the Queen Maude Gulf Migratory Bird Sanctuary has negatively affected habitat (Alisauskas 1998, Didiuk *et al.* 2001). By 1989, 52% of plant communities within the areas occupied by nesting light geese at Karrak Lake were converted to exposed peat, and a further 7% had eroded to bare mineral soils (Alisauskas 1998). Loss of vegetation at colony sites may eventually lead to desertification (Alisauskas 1998). Abraham and Jefferies (1997) described indications of habitat impacts by geese at other sites, such as: Akimiski Island; west coast of James Bay; Cape Henrietta Maria; Hudson Bay coast of Ontario; Hudson Bay coast of Manitoba; Knife and Seal Rivers; Manitoba; Tha-Anne River to the Maguse River (west coast of Hudson Bay); Southampton Island; and Southwestern Baffin Island. As of yet, extensive damage to vegetation has not been reported on breeding areas in the western arctic; however, field studies have not been in place to document whether or not any significant impacts have occurred (Kerbes *et al.* 1999). Recent photographs from Banks Island indicate possible vegetation changes as a result of goose grazing (Abraham and Jefferies 1997). As population size and bird density increases, geese may begin to impact western arctic breeding habitats in a manner similar to birds in the eastern and central Arctic.

In contrast to the greater snow goose situation, less attention has been paid to the impacts of lesser snow and Ross' geese on migration and wintering habitats. As of yet, increasing light goose populations in the mid-continent region have not caused a widespread crop depredation problem. A search of the crop damage reporting system of the U.S. Department of Agriculture indicated losses of \$28,000 in Louisiana during January 1994 through November 2000 (U.S. Dept. Agr., unpublished data). Losses totaling \$39,000 were reported in Texas from October 1993 to September 2000. Although many farmers may incur crop damage, they often do not report such losses because there is no compensation program in place. Although light geese create eat-outs in natural marsh systems on the Gulf Coast, there are no indications that such occurrences are serious enough to warrant management action.

### Impacts on Other Species

Habitat damage will not only affect light geese themselves, but will also affect habitat that other species rely upon. Rockwell *et al.* (1997b) observed the decline of local populations of more than 30 avian species in the La Pérouse Bay area due to severe habitat degradation. Documentation of specific declines in bird nesting activity has been accomplished by repeated visits to study plots. For example, local nesting populations of semi-palmated sandpipers and red-necked phalaropes at La Pérouse Bay, Manitoba, were periodically sampled on study areas during 1983–99 (Gratto-Trevor 1994; Rockwell 1999). In 1983, more than 120 semi-palmated sandpiper and 46 red-necked phalarope nests were documented (Gratto-Trevor 1994). When the study area was sampled in 1999, only 4 sandpiper and 1 phalarope nests were found (Rockwell 1999). Results from these studies indicate declines in local populations of species in areas damaged by light geese. These results are not presented here to indicate continental declines in populations of any species. However, if light goose populations continue to grow at current rates, and geese continue to exploit and destroy habitats in new areas, it is possible that regional and continental declines in populations of other avian species may occur.

Avian cholera is a highly contagious and deadly disease, caused by the bacterium *Pasteurella multocida*, and is one of the most important diseases of North American waterfowl (Friend 1999). Although much remains to be learned about the mechanism of transmission, there is increasing evidence that lesser snow and Ross' geese act as reservoirs for the bacterium that causes cholera (Friend 1999, Samuel *et al.* 1997, Samuel *et al.* 1999a). The movement of cholera from major focal points of the disease follows the well-defined pathways of waterfowl migration, and is associated with movements of lesser snow and Ross' geese (Brand 1984; Samuel *et al.* 1999a). Over 100 species of waterbirds and raptors are susceptible to avian cholera (Botzler 1991). The threat of avian cholera to endangered and threatened bird species is continually increasing because of increasing numbers of cholera outbreaks and the expanding geographic distribution of the disease (Friend 1999). Potentially-affected species include whooping cranes and bald eagles. Various populations of sandhill cranes migrate, stage, and winter with light geese and potentially could be affected by cholera outbreaks.

The potential for massive outbreaks of avian cholera in light geese and other waterfowl is illustrated by several documented die-offs. On Banks Island, avian cholera caused the death of at least 30,000 and 20,000 lesser snow geese in 1995 and 1996, respectively (Samuel *et al.* 1999a). Over 72,000 waterbirds died of cholera in the Rainwater Basin of Nebraska during 1980 (Brand 1984). We believe that the increasing number and expanding geographic distribution of cholera outbreaks represents a serious threat to waterfowl and other bird populations that are susceptible to the disease. This threat is heightened due to the rapid increase of light goose populations that are known carriers of the disease. Transmission of avian cholera is enhanced by the gregarious nature of most waterfowl species and by high densities of birds that result from habitat limitations, especially in winter and spring (Friend 1999). The likelihood of cholera outbreaks may be reduced when waterfowl occur in lower densities (Samuel *et al.* 1999b). Therefore, we believe that a reduction of light goose populations will reduce the risk of avian cholera outbreaks and associated impacts to other species in the future.

### Environmental Consequences of Taking No Action

We fully analyzed the No Action alternative with regard to light goose management in our draft EIS, to which we refer the reader (U.S. Fish and Wildlife Service 2001). In summary, most light goose populations will continue to increase at rates anywhere from 5–15% per year, depending on the population. We expect breeding colonies to expand as habitat becomes destroyed in core areas. Birds will begin to exploit new areas and repeat the pattern of habitat destruction and colony expansion. In the case of greater snow geese, we expect the population to exceed the ability of migration habitats to support them. Concurrently, we expect goose damage to agricultural crops to increase.

Even if natural causes result in declines of goose populations, it will take habitats a prolonged time period to recover, especially in the Arctic. A variety of other bird species will be negatively impacted as the habitats they depend on become destroyed by light geese. As population densities increase, the incidence of avian cholera among light geese and other species is likely to increase. Significant losses of other species, such as pintails, white-fronted geese, sandhill cranes, and whooping cranes, from avian cholera may occur.

This may result in reduced hunting, birdwatching, and other recreational opportunities.

Habitat damage in the Arctic will eventually trigger density-dependent regulation of the population which likely will result in increased gosling mortality and may cause the population to decline precipitously. Impacts such as physiological stress, malnutrition, and disease in goslings have been documented and observations of such impacts are increasing. However, it is not clear when natural population regulation will occur and what habitat, if any, will remain to support the survivors. Such a decline may result in a population too low to permit any hunting, effectively closing light goose hunting seasons. The length of the closures will largely depend on the recovery rate of the breeding habitat, which likely will take decades.

In the near term, existing light goose hunting seasons would continue under the No Action Alternative. We have attempted to curb the growth of light goose populations by increasing bag and possession limits and extending the open hunting season length for light geese to 107 days, the maximum allowed by the Migratory Bird Treaty. However, due to the rapid rise in light goose numbers, the harvest rate (the percentage of the population that is harvested), has declined even though the actual number of geese harvested has increased (Martin and Padding 2000). The decline in harvest rate indicates that traditional harvest management strategies, which would continue under the No Action Alternative, are not sufficient to reduce population growth rates.

### Environmental Consequences of Proposed Action

We fully analyzed our proposed action in the draft EIS on light goose management, to which we refer the reader for specific details (U.S. Fish and Wildlife Service 2001). In summary, implementation of regulations to increase harvest of light geese will reduce various light goose populations to levels we believe are more compatible with the ability of habitats to support them. Furthermore, habitats upon which other species depend will be preserved.

The greater snow goose population will be reduced from the spring 2000 level of 813,900 birds to the management goal of 500,000 birds. The number of light geese in the Central and Mississippi Flyways (primarily MCP and WCFP light geese) will be reduced by 50%. This suggests a reduction of the combined winter index of MCP and WCFP light geese from 3.1 million in

1997 (the year the management objective was established) to slightly less than 1.6 million. Because the winter index does not represent the entire population, the true population size will be much higher than 1.6 million following a reduction program. Using an adjustment factor of 1.6 (Boyd *et al.* 1982), we estimate that a winter index of 1.6 million corresponds to nearly 2.6 million breeding birds in spring. Adding 30% for non-breeding birds brings the total population to a minimum of 3.3 million birds following a population reduction program. We believe a population level of 3.3 million birds is more than adequate to ensure the long-term health of MCP and WCFP light goose populations.

We do not anticipate population reduction actions for either Pacific Flyway lesser snow geese, or the Western Population of Ross' geese over the next several years. However, Hines *et al.* (1999) have suggested a proactive approach to management of lesser snow geese that breed in the western Arctic by stabilizing the population at its current level before it escapes control via normal harvest. Future actions may be taken to control either of these populations if it becomes evident that (1) additional harvest pressure is needed to control light geese that breed in the central Arctic, and/or (2) light goose damage to habitats in the western Arctic necessitates control of light geese that breed there. We would propose to authorize the Pacific Flyway to implement special light goose regulations under the above circumstances because a large proportion of central arctic light geese, especially Ross' geese, and the majority of western arctic light geese winter in the Pacific Flyway. If necessary, a proposal to include the Pacific Flyway would be published in the **Federal Register** for public comment. Any population control actions for light geese in the Pacific Flyway should be designed to minimize negative impacts to Wrangel Island lesser snow geese, which historically have not fared as well as other light goose populations.

Although our intention is to significantly reduce some light goose populations in order to relieve pressures on breeding and/or migration habitats, we feel that these efforts will not threaten the long-term status of these populations. We will carefully analyze and assess the status of light goose populations on an annual basis, using the winter index, periodic photo surveys in the Arctic, banding data, and other surveys, to ensure that the populations are not over-harvested.

Experts feel that breaking or removing eggs from nests, and other non-lethal techniques, would be ineffective at significantly reducing the populations within a reasonable timeframe to preserve and protect habitat (Batt 1997). We prefer to implement alternative regulatory strategies designed to increase light goose harvest afforded by the Migratory Bird Treaty and avoid the use of more drastic population control measures.

We believe that a reduction of certain light goose populations will relieve negative habitat pressures on other migratory bird populations that occur on light goose breeding and wintering grounds and other areas along migration routes. By arresting habitat damage by light geese, other species will not be forced to seek habitats elsewhere, thus avoiding potential decreases in their reproductive success. Further, we expect that by decreasing the numbers of light geese on wintering and migration stopover areas, the risk of transmission of avian cholera to other species will be reduced.

#### Special Light Goose Regulations

This proposed rule would make permanent regulations that are very similar to those in effect by reason of the Arctic Tundra Habitat Emergency Conservation Act. The differences are that we now would include the Atlantic Flyway States as being eligible to implement special light goose regulations to manage the population of greater snow geese. Pacific Flyway States may be eligible in the future if habitat damage becomes evident in the western Arctic, or if additional harvest pressure is needed on central Arctic light geese. We also have provided further guidance to States as to what type of information should be collected and reported with regard to harvest resulting from implementation of the conservation order. Such information will further refine our ability to evaluate the impacts of such regulations on light goose populations. Finally, we have revised terminology with regard to baiting that incorporate changes we made to baiting regulations on June 3, 1999 (64 FR 29799).

These proposed regulations address two areas. The first would authorize the use of new hunting methods (e.g., electronic calls and unplugged shotguns) to harvest light geese during normal hunting season frameworks. New methods of take would be allowed only during periods when all waterfowl (except light goose) and crane hunting seasons, excluding falconry, are closed. Authorization of new methods of take during light-geese-only seasons would

be allowed only during normal hunting season framework dates (September 1 to March 10), except as provided in Part 21 described below. Individual States would determine the exact dates when such changes would be authorized. Persons utilizing new methods of take during light goose hunting seasons would be required to possess a Federal migratory bird hunting stamp, be registered under the Harvest Information Program, and be in compliance with any additional State license and stamp requirements pertaining to hunting waterfowl.

The second would revise subpart E of 50 CFR part 21 for the management of overabundant light goose populations. Under this subpart, we propose to establish a conservation order specifically for the control and management of light geese. Under the authority of this rule, States could initiate aggressive harvest management strategies with the intent to increase light goose harvest without having to obtain an individual permit, which will significantly reduce the administrative burden on State and Federal governments. This rule would enable States, as a management tool, to use hunters to harvest light geese, by shooting in a hunting manner, inside or outside of the regular migratory bird hunting season framework dates of September 1 and March 10. Although a conservation order could be implemented at any time, we believe the greatest value of this rule would be the provision of a mechanism to increase harvest of light geese beyond March 10, the latest possible closing date for traditional migratory bird hunting seasons. This provision would be especially effective in increasing harvest in mid-latitude and northern States during spring migration. The conservation order is not a hunting season, and implementation of such regulations should not be construed as opening, re-opening, or extending any open hunting season contrary to any regulations promulgated under Section 3 of the Migratory Bird Treaty Act.

Conditions under the conservation order would require that participating States inform participants acting under the authority of the conservation order of the conditions that apply to the amendment. In order to minimize or avoid take of non-target species, States may implement this action only when all waterfowl (including light goose) and crane hunting seasons, excluding falconry, are closed. In addition to authorizing new methods of take (i.e., electronic calls and unplugged shotguns), the conservation order would not impose daily bag limits for light



geese and would allow shooting hours for light geese to end one-half hour after sunset. Because it is not a hunting season, conservation order participants would not be required by Federal law to possess a valid migratory bird hunting stamp or be registered in the Harvest Information Program, unless otherwise required by an individual State. States may impose additional requirements on participants.

Initially, we restrict the scope of this proposed rule to the light geese in the U.S. portions of the Atlantic, Mississippi, and Central Flyways. However, we would propose to include the Pacific Flyway in the future if it becomes evident that (1) additional harvest pressure is needed to control light geese that breed in the central Arctic, and/or (2) light goose damage to habitats in the western Arctic necessitates control of light geese that breed there. The Pacific Flyway would be allowed to implement special light goose regulations under the above circumstances because a large proportion of central Arctic light geese, especially Ross' geese, and the majority of western Arctic light geese, winter in the Pacific Flyway.

We acquired experience with the proposed regulatory changes in the Central and Mississippi Flyways during 1999–2001 after we implemented such regulations on February 16, 1999 (64 FR 7507; 64 FR 7517). We withdrew the new light goose regulations on June 17, 1999 (64 FR 32778) to end existing litigation and initiate development of the environmental impact statement. However, Congress passed the Arctic Tundra Habitat Emergency Conservation Act (Pub. L. 106–108) in November, 1999, which reinstated the regulations. We published a notice of this reinstatement on December 20, 1999 (64 FR 71236). Our most recent estimate indicates that implementation of new light goose regulations increased harvest of light geese in the Central and Mississippi Flyways by 69% during 1999/00 (U.S. Fish and Wildlife Service 2001). The 1999/2000 total U.S. harvest of over 1.3 million light geese in the Central and Mississippi Flyways is nearly equal to the annual harvest of 1.4 million that is required to reduce the number of birds by 50% (Rockwell and Ankney 2000). We estimate that the greater snow goose population can be reduced to 500,000 birds by 2004 if implementation of new light goose regulations in the Atlantic Flyway increases harvest by 69% (U.S. Fish and Wildlife Service 2001).

We will annually monitor the status of light goose populations in North America. The amendments to 50 CFR

Parts 20 and 21 will be suspended in the Atlantic Flyway if the greater snow goose population is reduced to the goal of 500,000 birds. The amendments will be suspended in the Central and Mississippi Flyways if the winter index is reduced to the management goal of approximately 1.6 million birds (primarily MCP and WCFP light geese). However, in the event that any light goose population resumes population growth above management goals, it may become necessary to re-implement additional methods of take (Part 20) and/or the conservation order (Part 21) in an attempt to return the population to the desired level. Furthermore, if electronic calls and unplugged shotguns are shown to be no longer effective in increasing harvest of light geese, we will propose to supplement them by authorizing additional methods of take. Any proposed changes to light goose regulations will be published in the **Federal Register** for public comment.

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### NEPA Considerations

In compliance with the requirements of section 102(2)(C) of the National Environmental Policy Act of 1969 (42 U.S.C. 4332(C)), and the Council on Environmental Quality's regulation for implementing NEPA (40 CFR 1500–1508), we prepared a draft Environmental Impact Statement (DEIS) in August 2001. The DEIS is available to the public at the location indicated under the ADDRESSES caption.

### Endangered Species Act Consideration

Section 7(a)(2) of the Endangered Species Act (ESA), as amended (16 U.S.C. 1531–1543; 87 Stat. 884) provides that “Each Federal agency shall, in consultation with and with the assistance of the Secretary, insure that any action authorized, funded, or carried out \* \* \* is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of [critical] habitat \* \* \*.” We have initiated Section 7 consultation under the ESA for this proposed rule. The result of our consultation under Section 7 of the ESA will be available to the public at the location indicated under the ADDRESSES caption.

### Regulatory Flexibility Act

The Regulatory Flexibility Act of 1980 (5 U.S.C. 601 *et seq*) requires the preparation of flexibility analyses for rules that will have a significant effect on a substantial number of small entities, which includes small businesses, organizations, or governmental jurisdictions. The economic impacts of this proposed rulemaking will fall primarily on small businesses because of the structure of the waterfowl hunting-related industries. The rule benefits small businesses by avoiding failure of an ecosystem that produces migratory bird resources important to American citizens. Hunting seasons for all goose

species produce a total annual economic impact of \$608 million (U.S. Department of the Interior 1997). Light geese represent approximately 24% of all geese taken in the U.S. The distribution of light goose harvest among Flyways is as follows: Atlantic Flyway 5%; Mississippi Flyway 36%, Central Flyway 53%; Pacific Flyway 6%. Allocating the economic impact of light goose hunting in each Flyway by these proportions, the economic impact of light goose hunting is \$7.5 million in the Atlantic Flyway, \$52.5 million in the Mississippi Flyway, \$76.7 million in the Central Flyway, and \$9.3 million in the Pacific Flyway. The proposed rule is expected to preserve this economic impact and generate additional output by providing opportunity to increase take of light geese beyond March 10 in the three easternmost Flyways. Data are not available to estimate the number of small entities affected, but it is unlikely to be a substantial number on a national scale. In 1999, we estimated that implementation of new light goose regulations would avert a population crash, thus avoiding the closure of normal light goose hunting seasons due to low populations in the Central and Mississippi Flyways, and avoiding a \$70 million loss in economic output associated with such seasons. Implementation of light goose regulations would also help reduce agricultural losses caused by geese. Our proposed action is to implement special regulations to increase harvest of light geese. If the proposed alternative is implemented, populations would be reduced to levels that habitats can support and agricultural damages will be reduced. We have determined that a Regulatory Flexibility Act analysis is not required.

#### **Executive Order 12866**

This rule was reviewed by the Office of Management and Budget and deemed non-significant under E.O. 12866. This rule will not have an annual economic effect of \$100 million or adversely affect any economic sector, productivity, competition, jobs, the environment, or other units of government. Therefore, a cost-benefit economic analysis is not required. The rule will affect regional economic benefits in two ways. First, it may prevent a die-off of light geese and other ill-effects of overpopulation. People derive pleasure from both hunting and watching light geese. The improvement in public welfare is difficult to measure but, given the number of people involved and time committed, it is less than \$100 million. By preventing a crash in light goose populations, the rule benefits hunters

and birdwatchers by ensuring the populations remain at usable levels and ensures the future of a \$146 million industry associated with light goose hunting in the U.S. Second, the rule would generate about \$21 million in added local output associated with increased number of days to take light geese during conservation orders in the Atlantic, Mississippi, and Central Flyways. Information on the economic benefit to non-consumptive uses of light geese is not available. Finally, control of light goose populations will reduce the probability of avian disease spreading to other species, curb further damage to natural habitats, and reduce agricultural losses to goose depredations. This rule will not create inconsistencies with other agencies' actions or otherwise interfere with an action taken or planned by another agency. Federal agencies most interested in this rulemaking are primarily other Department of the Interior bureaus (e.g., Biological Resources Division of the U.S. Geological Survey). The action proposed is consistent with the policies and guidelines of other Interior bureaus. This rule will not materially affect entitlements, grants, user fees, loan programs, or the rights and obligations of their recipients. This rule will not raise novel legal or policy issues because we have previously managed the harvest of light geese under the Migratory Bird Treaty Act. Executive Order 12866 requires each agency to write regulations that are easy to understand. We invite comments on how to make this rule easier to understand, including answers to questions such as the following: (1) Are the requirements in the rule clearly stated? (2) Does the rule contain technical language or jargon that interferes with its clarity? (3) Does the format of the rule (grouping and order of sections, use of headings, paragraphing, etc.) aid or reduce its clarity? (4) Would the rule be easier to understand if it were divided into more (but shorter) sections? (5) Is the description of the rule in the SUPPLEMENTARY INFORMATION section of the preamble helpful in understanding the rule? (6) What else could the Service do to make the rule easier to understand?

#### **Small Business Regulatory Enforcement Fairness Act**

This rule is not a major rule under 5 U.S.C. 804(2), the Small Business Regulatory Enforcement Fairness Act. It will not have an annual effect on the economy of \$100 million or more; nor will it cause a major increase in costs or prices for consumers, individual

industries, Federal, State, or local government agencies, or geographic regions. It will not have significant adverse effects on competition, employment, investment, productivity, innovation, or the ability of U.S.-based enterprises to compete with foreign-based enterprises.

#### **Paperwork Reduction Act and Information Collection**

We examined these regulations under the Paperwork Reduction Act of 1995 (44 U.S.C. 3507(d)). Under the Act, information collections must be approved by the Office of Management and Budget (OMB). Agencies may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. We expect a maximum of 39 State wildlife agencies will participate under the authority of the conservation order each year it is available, requiring an average of 24 hours to collect the information from participants. Therefore, the burden assumed by the State participants would be 936 hours or less. Any suggestions on how to reduce this burden should be sent to the Information Collection Clearance Officer, U.S. Fish and Wildlife Service, ms 222-ARLSQ, 1849 C Street, NW., Washington, DC 20204. We will use the record-keeping and reporting requirements imposed under regulations established in 50 CFR part 21, subpart E to administer this program, particularly in the assessment of impacts that alternative regulatory strategies may have on light geese and other migratory bird populations. We will require the information collected to authorize State and Tribal governments responsible for migratory bird management to take light geese within our guidelines. Specifically, OMB has approved the information collection requirements of this action and assigned clearance number 1018-0103 (expires 01/31/2002).

#### **Unfunded Mandates Reform Act**

We have determined and certify pursuant to the Unfunded Mandates Reform Act, 2 U.S.C. 1502, *et seq.*, that this rulemaking will not impose a cost of \$100 million or more in any given year on local or State government or private entities.

#### **Civil Justice Reform—Executive Order 12988**

We, in promulgating this rule, have determined that these regulations meet the applicable standards provided in Sections 3(a) and 3(b)(2) of Executive Order 12988. Specifically, this rule has

been reviewed to eliminate errors and ambiguity, has been written to minimize litigation, provides a clear legal standard for affected conduct, and specifies in clear language the effect on existing Federal law or regulation. It is not anticipated that this rule will require any additional involvement of the justice system beyond enforcement of provisions of the Migratory Bird Treaty Act of 1918 that have already been implemented through previous rulemakings.

#### Takings Implication Assessment

In accordance with Executive Order 12630, this proposed rule, authorized by the Migratory Bird Treaty Act, will not have significant takings implications and will not affect any constitutionally protected property rights. The rule will not result in the physical occupancy of property, the physical invasion of property, or the regulatory taking of any property. In fact, the proposed rule would allow hunters to exercise privileges that would be otherwise unavailable; and, therefore, reduce restrictions on the use of private and public property.

#### Federalism Effects

Due to the migratory nature of certain species of birds, the Federal Government has been given responsibility over these species by the Migratory Bird Treaty Act. These rules do not have a substantial direct effect on fiscal capacity, change the roles or responsibilities of Federal or State governments, or intrude on State policy or administration. Therefore, in accordance with Executive Order 13132, these regulations do not have significant federalism effects and do not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

#### Government-to-Government Relationship With Tribes

In accordance with the President's memorandum of April 29, 1994, "Government-to-Government Relations with Native American Tribal Governments" (59 FR 22951), E.O. 13175, and 512 DM 2, we have determined that this rule has no effects on Federally-recognized Indian tribes. Specifically, Tribes were sent copies of our May 13, 1999, Notice of Intent (64 FR 26268) that outlined the proposed action in the Draft Environmental Impact Statement on Light Goose Management. In addition, Tribes were sent our August 30, 1999, Notice of Meetings (64 FR 47332), which provided the public additional

opportunity to comment on the DEIS process.

#### Energy Effects—Executive Order 13211

On May 18, 2001, the President issued Executive Order 13211 on regulations that significantly affect energy supply, distribution, and use. Executive Order 13211 requires agencies to prepare Statements of Energy Effects when undertaking certain actions. This rule is not a significant regulatory action under Executive Order 12866 and is not expected to adversely affect energy supplies, distribution, or use. Therefore, this action is not a significant energy action and no Statement of Energy Effects is required.

#### List of Subjects in 50 CFR Parts 20 and 21

Exports, Hunting, Imports, Reporting and recordkeeping requirements, Transportation, Wildlife.

For the reasons stated in the preamble, we hereby propose to amend parts 20 and 21, of subchapter B, chapter I, title 50 of the Code of Federal Regulations, as set forth below:

#### PART 20—[AMENDED]

1. The authority citation for part 20 continues to read as follows:

**Authority:** 16 U.S.C. 703–712; and 16 U.S.C 742a–j.

2. Revise paragraphs (b) and (g) of § 20.21 to read as follows:

#### § 20.21 What hunting methods are illegal?

\* \* \* \* \*

(b) With a shotgun of any description capable of holding more than three shells, unless it is plugged with a one-piece filler, incapable of removal without disassembling the gun, so its total capacity does not exceed three shells. This restriction does not apply during a light-geese-only season (greater and lesser snow geese and Ross' geese) when all other waterfowl and crane hunting seasons, excluding falconry, are closed while hunting light geese in Atlantic, Central, and Mississippi Flyway portions of Alabama, Arkansas, Colorado, Connecticut, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, New Hampshire, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Vermont, Virginia, West Virginia, Wisconsin, and Wyoming.

\* \* \* \* \*

(g) By the use or aid of recorded or electrically amplified bird calls or sounds, or recorded or electrically amplified imitations of bird calls or sounds. This restriction does not apply during a light-geese-only season (greater and lesser snow geese and Ross' geese) when all other waterfowl and crane hunting seasons, excluding falconry, are closed while hunting light geese in Atlantic, Central, and Mississippi Flyway portions of Alabama, Arkansas, Colorado, Connecticut, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, New Hampshire, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Vermont, Virginia, West Virginia, Wisconsin, and Wyoming.

\* \* \* \* \*

3. Revise § 20.22 to read as follows:

#### § 20.22 Closed seasons.

No person shall take migratory game birds during the closed season except as provided in part 21.

4. Revise § 20.23 to read as follows:

#### § 20.23 Shooting hours.

No person shall take migratory game birds except during the hours open to shooting as prescribed in subpart K of this part and subpart E of part 21.

#### PART 21—[AMENDED]

5. The authority citation for part 21 continues to read as follows:

**Authority:** Pub. L. 95–616, 92 Stat. 3112 (16 U.S.C. 712(2)).

6. Subpart E, consisting of § 21.60, is revised to read as follows:

#### Subpart E—Control of Overabundant Migratory Bird Populations

##### § 21.60 Conservation order for light geese.

(a) What is a conservation order? A conservation order is a special management action that is needed to control certain wildlife populations when traditional management programs are unsuccessful in preventing overabundance of the population. We are implementing a conservation order under the authority of the Migratory Bird Treaty Act to reduce and stabilize various light geese populations. The conservation order allows additional methods of taking light geese, allows shooting hours for light geese to extend to one-half hour after sunset, and removes daily bag limits for light geese inside or outside the migratory bird

hunting season frameworks as described below.

(b) Which waterfowl species are covered by the order? The conservation order addresses management of greater snow (*Chen caerulescens atlantica*), lesser snow (*Chen c. caerulescens*) and Ross' (*Chen rossii*) geese that breed, migrate, and winter in North America. Populations in the Atlantic, Central and Mississippi Flyways are the primary focus of concern.

(c) In what areas can the conservation order be implemented? (1) The following States, or portions of States, that are contained within the boundaries of the Atlantic, Mississippi, and Central Flyways: Alabama, Arkansas, Colorado, Connecticut, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, New Hampshire, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Vermont, Virginia, West Virginia, Wisconsin, and Wyoming.

(2) Tribal lands within the geographic boundaries in paragraph (b) (1) above.

(d) What is required in order for State/Tribal governments to participate in the conservation order? Any State or Tribal government responsible for the management of wildlife and migratory birds may, without permit, kill or cause to be killed under its general supervision, light geese under the following conditions:

(1) Activities conducted under the conservation order may not affect endangered or threatened species as designated under the Endangered Species Act.

(2) Control activities must be conducted clearly as such and are intended to relieve pressures on migratory birds and habitat essential to migratory bird populations only and are not to be construed as opening, re-opening, or extending any open hunting season contrary to any regulations promulgated under Section 3 of the Migratory Bird Treaty Act.

(3) Control activities may be conducted only when all waterfowl (including light goose) and crane hunting seasons, excluding falconry, are closed.

(4) Control measures employed through this section may be implemented only between the hours of one-half hour before sunrise to one-half hour after sunset.

(5) Nothing in the conservation order may limit or initiate management

actions on Federal land without concurrence of the Federal agency with jurisdiction.

(6) States and Tribes must designate participants who must operate under the conditions of the conservation order.

(7) States and Tribes must inform participants of the requirements/conditions of the conservation order that apply.

(8) States and Tribes must keep annual records of activities carried out under the authority of the conservation order. Specifically, information must be collected on:

(i) The number of individuals participating in the conservation order;

(ii) The number of days individuals participated in the conservation order;

(iii) The number of individuals who pursued light geese with the aid of a shotgun capable of holding more than three shells;

(iv) The number of individuals who pursued light geese with the aid of an electronic call;

(v) The number of individuals who pursued light geese during the period one-half hour after sunset;

(vi) The total number of light geese shot and retrieved during the conservation order;

(vii) The number of light geese taken with the aid of an electronic call;

(viii) The number of light geese taken with the fourth, fifth, or sixth shotgun shell;

(ix) The number of light geese taken during the period one-half hour after sunset; and

(x) The number of light geese shot but not retrieved. Information from Tribes may be incorporated in State reports. The States and Tribes must submit an annual report summarizing activities conducted under the conservation order on or before September 15 of each year, to the Chief, Division of Migratory Bird Management, 4401 N. Fairfax Dr., Suite 634, Arlington, Virginia 22203.

(e) What is required for individuals to participate in the conservation order? Individual participants in State or Tribal programs covered by the conservation order must comply with the following requirements:

(1) Participants must comply with all applicable State or Tribal laws or regulations including possession of whatever permit(s) or other authorization(s) may be required by the State or Tribal government concerned.

(2) Participants who take light geese under the conservation order may not sell or offer for sale those birds or their plumage, but may possess, transport, and otherwise properly use them.

(3) Participants must permit at all reasonable times including during

actual operations, any Federal or State game or deputy game agent, warden, protector, or other game law enforcement officer free and unrestricted access over the premises on which such operations have been or are being conducted and must promptly furnish whatever information an officer requires concerning the operation.

(4) Participants may take light geese by any method except those prohibited as follows:

(i) With a trap, snare, net, rifle, pistol, swivel gun, shotgun larger than 10 gauge, punt gun, battery gun, machine gun, fish hook, poison, drug, explosive, or stupefying substance.

(ii) From or by means, aid, or use of a sinkbox or any other type of low-floating device, having a depression affording the person a means of concealment beneath the surface of the water.

(iii) From or by means, aid, or use of any motor vehicle, motor-driven land conveyance, or aircraft of any kind, except that paraplegics and persons missing one or both legs may take from any stationary motor vehicle or stationary motor-driven land conveyance.

(iv) From or by means of any motorboat or other craft having a motor attached, or any sailboat, unless the motor has been completely shut off and the sails furled, and its progress has ceased. A craft under power may be used only to retrieve dead or crippled birds; however, the craft may not be used under power to shoot any crippled birds.

(v) By the use or aid of live birds as decoys. No person may take light geese on an area where tame or captive live geese are present unless such birds are, and have been for a period of 10 consecutive days before the taking, confined within an enclosure that substantially reduces the audibility of their calls and totally conceals the birds from the sight of light geese.

(vi) By means or aid of any motor-driven land, water, or air conveyance, or any sailboat used for the purpose of or resulting in the concentrating, driving, rallying, or stirring up of light geese.

(vii) By the aid of baiting, or on or over any baited area, where a person knows or reasonably should know that the area is or has been baited as described in § 20.11(j-k). Light geese may not be taken on or over lands or areas that are baited areas, and where grain or other feed has been distributed or scattered solely as the result of manipulation of an agricultural crop or other feed on the land where grown, or solely as the result of a normal agricultural operation as described in

§ 20.11(h and l). However, nothing in this paragraph prohibits the taking of light geese on or over the following lands or areas that are not otherwise baited areas:

(A) Standing crops or flooded standing crops (including aquatics); standing, flooded, or manipulated natural vegetation; flooded harvested croplands; or lands or areas where seeds or grains have been scattered solely as the result of a normal agricultural planting, harvesting, post-harvest manipulation or normal soil stabilization practice as described in § 20.11(g, i, l, and m);

(B) From a blind or other place of concealment camouflaged with natural vegetation;

(C) From a blind or other place of concealment camouflaged with vegetation from agricultural crops, as long as such camouflaging does not result in the exposing, depositing, distributing, or scattering of grain or other feed; or

(D) Standing or flooded standing agricultural crops where grain is inadvertently scattered solely as a result of a hunter entering or exiting a hunting area, placing decoys, or retrieving downed birds.

(viii) Participants may not possess shot (either in shotshells or as loose shot for muzzleloading) other than steel shot, bismuth-tin, tungsten-iron, tungsten-polymer, tungsten-matrix, tungsten-nickel-iron, or other shots that are authorized in § 20.21(j).

(f) Under what conditions would the conservation order be suspended? We will annually assess the overall impact and effectiveness of the conservation order on each light goose population to ensure compatibility with long-term conservation of this resource. If at any time evidence is presented that clearly demonstrates that an individual light goose population no longer presents a serious threat of injury to the area or areas involved, we will initiate action to suspend the conservation order for the specific light goose population in question. However, resumption of growth by the light goose population in question may warrant reinstatement of such regulations to control the population. Depending on the status of individual light goose populations, it is possible that a conservation order may be in effect for one or more light goose populations, but not others.

(g) Will information concerning the conservation order be collected? The information collection requirements of the conservation order have been approved by OMB and assigned clearance number 1018-0103. Agencies may not conduct or sponsor, and a

person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The recordkeeping and reporting requirements imposed under § 21.60 will be utilized to administer this program, particularly in the assessment of impacts that alternative regulatory strategies may have on light geese and other migratory bird populations. The information collected will be required to authorize State and Tribal governments responsible for migratory bird management to take light geese within the guidelines provided by the Service.

Dated: October 5, 2001.

**Joseph E. Doddridge,**

*Assistant Secretary for Fish and Wildlife and Parks.*

[FR Doc. 01-25612 Filed 10-11-01; 8:45 am]

**BILLING CODE 4310-55-P**

## DEPARTMENT OF COMMERCE

### National Oceanic and Atmospheric Administration

#### 50 CFR Part 679

[Docket No. 010823213-1213-01; I.D. 071701C]

RIN 0648-AK70

#### Fisheries of the Exclusive Economic Zone Off Alaska; Individual Fishing Quota Program

**AGENCY:** National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

**ACTION:** Proposed rule; request for comments.

**SUMMARY:** NMFS proposes regulations to implement Amendment 54 to the Fishery Management Plan (FMP) for the Groundfish Fishery of the Bering Sea and Aleutian Islands Area and Amendment 54 to the FMP for Groundfish of the Gulf of Alaska (collectively, Amendments 54/54). These amendments would make three changes in the Individual Fishing Quota (IFQ) Program: (1) allow a quota share (QS) holder's indirect ownership of a vessel, through corporate or other collective ties, to substitute for vessel ownership in the QS holder's own name for purposes of hiring a skipper to fish the QS holder's IFQ; (2) revise the definition of "a change in the corporation or partnership" to include language specific to estates; and (3) revise sablefish use limits to be expressed in QS units rather than as percentages of the QS pool. These

proposed amendments are intended to improve the effectiveness of the IFQ Program and are necessary to promote the objectives of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) and the Northern Pacific Halibut Act of 1982 (Halibut Act) with respect to the IFQ fisheries.

**DATES:** Comments on the proposed rule must be received by November 26, 2001.

**ADDRESSES:** Comments must be sent to Sue Salvesson, Assistant Regional Administrator for Sustainable Fisheries, Alaska Region, NMFS, P.O. Box 21668, Juneau, AK 99802, Attn: Lori Gravel, or delivered to the Federal Building, 709 West 9th Street, Juneau, AK. Copies of Amendments 54/54 and the Regulatory Impact Review/Initial Regulatory Flexibility Analysis (RIR/IRFA) prepared for the amendments are available from NMFS at the above address.

**FOR FURTHER INFORMATION CONTACT:** John Lepore, 907-586-7228 or email at john.lepore.noaa.gov.

#### SUPPLEMENTARY INFORMATION:

##### Background

The groundfish fisheries in the Exclusive Economic Zone (3 to 200 nautical miles offshore) of the Bering Sea and Aleutian Islands management area (BSAI) and Gulf of Alaska (GOA) are managed under their respective FMPs. Both FMPs were prepared by the North Pacific Fishery Management Council (Council) under the Magnuson-Stevens Act, Public Law 94-265, 16 U.S.C. 1801. The GOA and BSAI FMPs were approved by NMFS and became effective in 1978 and 1982, respectively. The IFQ Program, a limited access management system for the fixed gear Pacific halibut and sablefish fisheries off Alaska, was approved by NMFS in January 1993, and fully implemented beginning in March 1995. The IFQ Program for the sablefish fishery is implemented by the FMPs and Federal regulations under 50 CFR part 679, Fisheries of the Exclusive Economic Zone Off Alaska, under authority of the Magnuson-Stevens Act. The IFQ Program for the halibut fishery is implemented by Federal regulations promulgated under the authority of the Halibut Act.

##### Indirect Vessel Ownership

The IFQ Program contains a number of provisions designed to promote an owner-operator IFQ fishing fleet. For example, one exception to the owner-onboard provisions of the IFQ Program allows initial recipients of QS in