

# CRS Issue Brief for Congress

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## **Fishery, Aquaculture, and Marine Mammal Legislation in the 108<sup>th</sup> Congress**

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## Fishery, Aquaculture, and Marine Mammal Legislation

### SUMMARY

Fish and marine mammals are important resources in open ocean and nearshore coastal areas. Many laws and regulations guide the management of these resources by federal agencies.

Reauthorization of major legislation — the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA) and the Marine Mammal Protection Act (MMPA) — will likely be on the agenda of the 108<sup>th</sup> Congress, since the authorization of appropriations for both laws expired at the end of FY1999. In the 107<sup>th</sup> Congress, reauthorization bills were introduced in the House and oversight hearings were held in both Chambers. One House bill was reported and another was marked up, but neither was enacted.

Commercial and sport fishing are jointly managed by the federal government and individual states. States have jurisdiction generally within 3 miles of the coast. Beyond state jurisdiction and out to 200 miles, the federal government manages fisheries under the MSFCMA through eight regional fishery management councils. Beyond 200 miles, the United States participates in international agreements relating to specific areas or species.

In the 108<sup>th</sup> Congress, P.L. 108-7 created a West Coast Groundfish Fishing Capacity Reduction Program, directed NOAA Fisheries

to establish a Regional Office for the Pacific Area, required increased legal and fiscal accountability for Pacific salmon recovery, and provided \$100 million in fishery disaster funding. Section 2105 of P.L. 108-11 directed the Secretary of Agriculture to promulgate regulations allowing wild seafood to be certified or labeled as organic.

Aquaculture — the farming of fish, shellfish, and other aquatic animals and plants in a controlled environment — is expanding rapidly, both in the United States and abroad. In the United States, important species cultured include catfish, salmon, shellfish, and trout. Early in the 108<sup>th</sup> Congress, a prominent issue is extending certain bankruptcy protection to aquaculture operations (H.R. 343 and H.R. 975).

Marine mammals are protected under the MMPA. This Act authorizes restricted use (“take”) of marine mammals. It addresses specific situations of concern, such as dolphin mortality, which is primarily associated with the eastern tropical Pacific tuna fishery. In the 108<sup>th</sup> Congress, P.L. 108-7 included language directing the Department of Commerce to evaluate and document foreign compliance with the International Dolphin Conservation Program. Early in the 108<sup>th</sup> Congress, a prominent issue is how the MMPA might affect military readiness (S. 747, S. 927, H.R. 1588, and H.R. 1835).



## **MOST RECENT DEVELOPMENTS**

On June 24, 2004, the Senate Committee on Environment and Public Works' Subcommittee on Fisheries, Wildlife, and Water is scheduled to hold a hearing to examine implementation of NOAA Fisheries' 2000 Biological Opinion for listed anadromous fish with regard to operation of the Federal Columbia River Power System. On June 19, 2003, the Senate Committee on Commerce, Science, and Transportation ordered S. 247 reported (amended), proposing to amend and reauthorize the Harmful Algal Bloom and Hypoxia Research and Control Act of 1998 through FY2006. On June 17, 2003, the Senate Committee on Environment and Public Works' Subcommittee on Fisheries, Wildlife, and Water held a hearing on S. 525, proposing to reauthorize the Nonindigenous Aquatic Nuisance Prevention and Control Act. On June 12, 2003, the Senate Committee on Commerce, Science, and Transportation held a hearing on global overfishing and international fishery management. On June 11, 2003, the House Committee on Resources ordered H.R. 1945 reported (amended), proposing to authorize the Secretary of Commerce to provide financial assistance for salmon habitat restoration projects, and ordered H.Res. 30 reported, expressing concern for continued U.S. recreational fishing access to waters near the Revillagigedo Islands, Mexico. On June 5, 2003, the Senate passed H.R. 1308 (amended) but without language to repeal the excise tax on fishing tackle boxes that was included in the House-passed H.R. 1308. On June 5, 2003, the House Science Subcommittee on Environment, Technology and Standards marked up H.R. 1856, the Harmful Algal Blooms and Hypoxia Research and Control Act. On June 4, 2003, the House Committee on Science ordered H.R. 1081 reported (amended), to establish marine and freshwater research, development, and demonstration programs to prevent, control, and eradicate invasive species. On June 4, 2003, the Senate Committee on Indian Affairs held a hearing on the impacts on tribal fish and wildlife management programs in the Pacific Northwest. On June 4, 2003, the Senate passed H.R. 1588, without including the House-passed provisions addressing military readiness concerns relative to marine mammals or the Sikes Act reauthorization, but containing authorization for the transfer of vessels stricken from the Naval Vessel Register for use as artificial reefs. On June 4, 2003, the Pew Oceans Commission released its report *America's Living Oceans: Charting a Course for Sea Change*, identifying policy recommendations. On May 22, 2003, the House passed H.R. 1588, containing provisions to address military readiness concerns relative to marine mammals and to authorize the transfer of vessels stricken from the Naval Vessel Register for use as artificial reefs. On May 22, 2003, the House Committee on Science reported (amended) H.R. 238, wherein §102(a)(3)(H) would set a goal for Department of Energy hydropower programs to decrease damage to fish and aquatic ecosystems. On May 22, 2003, the House Resources Subcommittee on Fisheries Conservation, Wildlife, and Oceans held a hearing on H.R. 2048, extending the reimbursement period under the Fishermen's Protective Act through FY2008 and reauthorizing the Yukon River Salmon Act through FY2008. On May 20, 2003, the Senate Commerce Committee's Subcommittee on Oceans, Fisheries, and Coast Guard held a hearing on the North Pacific Fishery Management Council's crab rationalization program. (Members and staff may request e-mail notification of new CRS reports in the areas of marine and freshwater fisheries, aquaculture, and marine mammal issues by contacting Gene Buck at [gbuck@crs.loc.gov](mailto:gbuck@crs.loc.gov) and requesting to be added to his notification list.)

## **BACKGROUND AND ANALYSIS**

### **Commercial and Sport Fisheries: Background and Issues**

Historically, coastal states managed marine sport and commercial fisheries in nearshore waters, where most seafood was caught. However, as fishing techniques improved, fishermen ventured farther offshore. Before the 1950s, the federal government assumed limited responsibility for marine fisheries, responding primarily to international fishery concerns and treaties (by enacting implementing legislation for treaties; *e.g.*, the Northern Pacific Halibut Act in 1937) as well as to interstate fishery conflicts (by consenting to interstate fishery compacts; *e.g.*, the Pacific Marine Fisheries Compact in 1947). In the late 1940s and early 1950s, several Latin American nations proclaimed marine jurisdictions extending 200 miles offshore. This action was denounced by those within the United States and other distant-water fishing nations who sought to preserve access for far-ranging fishing vessels. Beginning in the 1950s (Atlantic) and 1960s (Pacific), increasing numbers of foreign fishing vessels steamed into U.S. offshore waters to catch the substantially unexploited seafood resources. Since the United States then claimed only a 3-mile jurisdiction (in 1964, P.L. 88-308 prohibited fishing by foreign-flag vessels within 3 miles of the coast; in 1966, P.L. 89-658 proclaimed an expanded 12-mile exclusive U.S. fishery jurisdiction), foreign vessels could fish many of the same stocks caught by U.S. fishermen. U.S. fishermen deplored this “foreign encroachment” and alleged that overfishing was causing stress on, or outright depletion of, fish stocks. The unsuccessful Law of the Sea Treaty negotiations in the 1970s provided impetus for unilateral U.S. action.

The enactment of the Fishery Conservation and Management Act (FCMA) in 1976 (later renamed the Magnuson Fishery Conservation and Management Act and more recently the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA) [<http://www.nmfs.noaa.gov/sfa/magact/>]) ushered in a new era of federal marine fishery management. The FCMA was signed into law on April 13, 1976, after several years of debate. On March 1, 1977, marine fishery resources within 200 miles of all U.S. coasts, but outside state jurisdiction, came under federal jurisdiction, and an entirely new multifaceted regional management system began allocating fishing rights, with priority given to domestic enterprise.

Today, individual states manage marine fisheries in inshore and coastal waters (generally within 3 miles of the coast). Interstate coordination occurs through three regional (Atlantic, Gulf, and Pacific) interstate marine fishery commissions, created by congressionally-approved compacts. Beyond state waters, out to 200 miles, the federal government manages fish and shellfish resources for which fishery management plans (FMPs) have been developed under the MSFCMA. Individual states manage fishermen operating state-registered vessels under state regulations consistent with any existing federal FMP when fishing in inshore state waters and, in the absence of a federal FMP, wherever they fish.

Primary federal management authority was vested in NOAA Fisheries (formerly the National Marine Fisheries Service [<http://www.nmfs.noaa.gov/>]) within the National Oceanic and Atmospheric Administration (NOAA) of the Department of Commerce. The 200-mile

fishery conservation zone was superseded by an Exclusive Economic Zone (EEZ), proclaimed by President Reagan on March 10, 1983 (Presidential Proclamation 5030).

Eight Regional Fishery Management Councils were created by the FCMA [<http://www.nmfs.noaa.gov/councils/>]. Council members are appointed by the Secretary of Commerce from lists of candidates knowledgeable of fishery resources, provided by coastal state Governors. The Councils prepare FMPs for those fisheries that they determine require active federal management. After public hearings, revised FMPs are submitted to the Secretary of Commerce for approval. Approved plans are implemented through regulations published in the *Federal Register*. Together these Councils have implemented 39 FMPs for various fish and shellfish resources, with 7 additional plans in various stages of development. Some plans are created for an individual species or a few related ones (*e.g.*, FMPs for red drum by the South Atlantic Council, for northern anchovy by the Pacific Council, and for shrimp by the Gulf of Mexico Council). Others are developed for larger species assemblages inhabiting similar habitats (*e.g.*, FMPs for Gulf of Alaska groundfish by the North Pacific Council and for reef fish by the Gulf of Mexico Council). Many of the implemented plans have been amended (one more than 30 times), and three have been developed and implemented jointly by two or more Councils. The MSFCMA was last reauthorized in 1996 by P.L. 104-297, the Sustainable Fisheries Act [<http://www.nmfs.noaa.gov/sfa/sfaguide/>]. This authorization of appropriations expired in FY1999.

Under initial FCMA authority, a substantial portion of the fish catch from federal offshore waters was allocated to foreign fishing fleets. However, the 1980 American Fisheries Promotion Act (Title II of P.L. 96-561) and other FCMA amendments orchestrated a decrease in foreign catch allocations as domestic fishing and processing industries expanded. Foreign catch from the U.S. EEZ declined from about 3.8 billion pounds in 1977 to zero since 1992. Commensurate with the decline of foreign catch, domestic offshore catch in federal waters increased dramatically, from about 1.6 billion pounds (1977) to more than 6.3 billion pounds (1993). Total (U.S. and foreign) offshore fishery landings from the U.S. EEZ increased about 24% between 1977 and 1986-1988 to a peak of 6.65 billion pounds, but declined slightly to stabilize over the next decade.

In 2001, U.S. commercial fishermen landed about 7.3 billion pounds of edible, unprocessed fish and shellfish [<http://www.st.nmfs.gov/commercial/index.html>] from combined state, federal, and international waters, worth almost \$ 3.1 billion at the dock. Imports of mostly processed products supplied another 4.1 billion pounds, worth about \$9.9 billion. U.S. consumers spent an estimated \$55.3 billion on edible seafood in 2001, with about \$38 billion of that amount spent in restaurants and other food service establishments. In addition, marine recreational anglers caught an estimated 440 million fish in 2001, of which the retained catch was about 262 million pounds [<http://www.st.nmfs.gov/st1/recreational/queries/index.html>]. In 2001, a nationwide survey [<http://www.census.gov/prod/www/abs/fishing.html>] estimated that marine and freshwater recreational anglers spent almost \$36 billion each year pursuing their sport.

## Magnuson Act Reauthorization

**Background.** The MSFCMA was last reauthorized in 1996 by P.L. 104-297, the Sustainable Fisheries Act; authorization for appropriations expired on September 30, 1999. The 1996 amendments established fish conservation initiatives directing NOAA Fisheries

and regional councils to protect essential fish habitat, minimize incidental fish bycatch, and restore overfished stocks. In addition, a host of modifications to regional council management procedures and federal management policy were enacted. NOAA Fisheries contends that implementation of the 1996 amendments has met many of the Act's objectives [<http://www.publicaffairs.noaa.gov/releases99/jan99/noaa99-4.html>]; fishing industry and environmental groups have criticized NOAA Fisheries and regional council implementation efforts. While environmental groups have expressed concerns that NOAA Fisheries and regional councils have not been as responsive as needed on conservation measures, fishing industry representatives are concerned that too stringent an application of conservation measures may cripple commercial fishing and bankrupt many fishermen. A key issue in any reauthorization debate in the 108<sup>th</sup> Congress may be seeking a balance between conserving fish and maintaining a viable commercial fishing industry.

**Congressional Action.** At issue for the 108<sup>th</sup> Congress will be the terms and conditions of provisions designed to reauthorize and amend the MSFCMA to address the concerns of various interest groups. Thus far, only one bill, S. 482, has been introduced to comprehensively amend and reauthorize the MSFCMA. The remaining measures deal with single or several related issues. H.R. 1024 would establish a pelagic longline highly migratory species bycatch and mortality reduction research program within NOAA Fisheries. H.R. 1286 would prohibit the commercial harvesting of Atlantic striped bass in U.S. coastal waters and the exclusive economic zone. H.R. 1690 would prohibit certain bottom trawl gear to protect habitat and provide financial assistance to fishermen for transition to different gear. S. 781 would modify the membership of the Gulf of Mexico Regional Council. Section 3 of S. 910 would require annual performance evaluations by the Coast Guard on fisheries law enforcement and marine safety activities. S. 1106 would establish national standards for fishing quota systems. No action has been taken on any of these measures. Section 201 of H.R. 958 would reauthorize the Fisheries Survey Vessel Authorization Act of 2000 through FY2006; the House Resources Subcommittee on Fisheries Conservation, Wildlife, and Oceans held a hearing on this measure on March 27, 2003. On May 20, 2003, the Senate Commerce Committee's Subcommittee on Oceans, Fisheries, and Coast Guard held a hearing on the North Pacific Fishery Management Council's crab rationalization program. For additional information on reauthorization issues likely to be discussed in the 108<sup>th</sup> Congress, see CRS Report RL30215, *The Magnuson-Stevens Fishery Conservation and Management Act: Reauthorization Issues for the 107<sup>th</sup> Congress*. For a side-by-side comparison of the three bills introduced in the 106<sup>th</sup> Congress to reauthorize the MSFCMA, see CRS Report RS20788, *Legislation in the 106<sup>th</sup> Congress to Amend and Reauthorize the Magnuson-Stevens Fishery Conservation and Management Act*. A copy of a congressional memorandum, dated September 12, 2002, comparing House and Senate proposals for amending the MSFCMA in the 107<sup>th</sup> Congress may be requested by contacting Gene Buck directly at [gbuck@crs.loc.gov](mailto:gbuck@crs.loc.gov).

## Pacific Salmon

**Background.** Five species of salmon spawn in Pacific coastal rivers and lakes, after which juveniles migrate to North Pacific ocean waters where they mature. Since these fish may cross several state and national boundaries during their life spans, management is complicated. Threats to salmon include hydropower dams blocking rivers and creating reservoirs, sport and commercial harvest, habitat modification by competing resource industries and human development, and hatcheries seeking to supplement natural production

but sometimes unintentionally causing genetic or developmental concerns. In response to declining salmon populations in Washington, Oregon, Idaho, and California, discrete population units have been listed as endangered or threatened species under the Endangered Species Act.

To address some of these concerns, the United States and Canada negotiated a bilateral agreement on Pacific salmon in 1985. However, by the mid-1990s, controversy stalled renegotiations to adjust cooperative management of these fish, and U.S.-Canada relations [<http://radio.cbc.ca/news/fish/>] became more antagonistic, including the blockade of an Alaska state ferry by British Columbia fishermen in Prince Rupert, BC, in July 1997. This deadlock was resolved in June 1999 when a new accord was concluded. For additional information on the Pacific Salmon Treaty and new agreement, see CRS Report RL30234, *The Pacific Salmon Treaty: The 1999 Agreement in Historical Perspective*.

**Congressional Action.** In the 108<sup>th</sup> Congress, H.R. 1097 would direct the Secretary of Commerce to seek scientific analysis of federal efforts to restore Columbia River Basin salmon and steelhead listed under the ESA. H.R. 1604 would increase the funding authorized for temperature control devices at Folsom Dam, California. H.R. 1760 would establish water conservation and habitat restoration programs in the Klamath River basin and provide emergency disaster assistance to those who suffered economic harm from the Klamath River basin fish kill of 2002. H.R. 1753 would compensate the Spokane Tribe for the loss of salmon fisheries related to the construction of Grand Coulee Dam. H.R. 1945 would authorize the Secretary of Commerce to provide financial assistance for salmon habitat restoration projects; the House Committee on Resources ordered this bill reported (amended) on June 11, 2003. Section 3 of H.R. 2048 would reauthorize the Yukon River Salmon Act through FY2008; the House Resources Subcommittee on Fisheries Conservation, Wildlife, and Oceans held a hearing on this bill on May 22, 2003. No action has been taken on any of the other measures. On June 4, 2003, the Senate Committee on Indian Affairs held a hearing on the impacts on tribal fish and wildlife management programs in the Pacific Northwest. For background on this issue, see CRS Report 98-666 ENR, *Pacific Salmon and Anadromous Trout: Management Under the Endangered Species Act* and CRS Report RL31546, *The Endangered Species Act and Science: The Case of Pacific Salmon*.

## Miscellaneous Issues

**Trade.** H.R. 155/H.R. 2406 proposes to modify U.S. subsidies beneficial to certain foreign competitors with the domestic shrimp industry. Section 3 of S. 1110/H.R. 2308 would authorize a program for trade adjustment assistance to commercial fishermen and fish processors. No action has been taken on either measure.

**Tuna.** H.R. 1424 would extend the American Samoa Possession Tax Credit Act through January 1, 2016, beneficial to American Samoan tuna canneries; no action has been taken on this measure. S. 130 proposes to amend the labeling requirements for “dolphin-safe tuna” in the Dolphin Protection Consumer Information Act; no action has been taken on this measure. Section 2004(f) of S. 671 would amend the Andean Trade Preference Act to expand the definition of “United States vessel” relative to tuna harvesting; this measure was reported by the Committee on Finance on March 20, 2003 (S.Rept. 108-28).



**Invasive Species.** Section 6(c) of S. 144 would exclude state funding for noxious aquatic weed control from a noxious weed control program. On February 11, 2003, S. 144 was reported, amended (S.Rept. 108-6); the Senate passed this measure (amended) on March 4, 2003. H.R. 266 and S. 536 propose to authorize the National Invasive Species Council; no action has been taken on either measure. H.R. 989 would require regulations to assure that vessels entering the Great Lakes had adequate ballast water treatment; no action has been taken on this measure. H.R. 1080 would reauthorize the Nonindigenous Aquatic Nuisance Prevention and Control Act through FY2008 and amend this Act to expand programs to address aquatic invasive species concerns. H.R. 1081 would establish marine and freshwater research, development, and demonstration programs to prevent, control, and eradicate invasive species; the House Committee on Science ordered this bill reported (amended) on June 4, 2003. H.R. 2310 would establish an incentive grant program to control and eradicate invasive species. S. 525 would both amend and reauthorize the Nonindigenous Aquatic Nuisance Prevention and Control Act through FY2008 and establish marine and freshwater research, development, and demonstration programs; the Senate Environment and Public Works' Subcommittee on Fisheries, Wildlife, and Water held a hearing on this measure on June 17, 2003. On April 29, 2003, the House Resources Subcommittee on Fisheries Conservation, Wildlife and Oceans and Subcommittee on National Parks, Recreation, and Public Lands held a joint oversight hearing on the growing problem of invasive species.

**Hydropower.** Section 102(a)(3)(H) of H.R. 238 and §101(a)(7) of H.R. 1343 would set a goal for Department of Energy hydropower programs to decrease damage to fish and aquatic ecosystems; H.R. 238 was reported (amended) by the House Committee on Science on May 22, 2003 (H.Rept. 108-128, Part 1). No action has been taken on H.R. 1343. H.R. 1013, §13001 of H.R. 6, §3001 of H.R. 1644, and §511 of S. 14/S. 1005 would allow federal hydropower licensees to propose alternatives to any required by the Federal Energy Regulatory Commission as long as the alternative would result in equal or greater fish passage. On May 8, 2003, the Senate began consideration of S. 14. On April 8, 2003, the House Committee on Energy and Commerce reported H.R. 1644, amended (H.Rept. 108-65, Part I). On April 11, 2003, the House passed H.R. 6, as amended. On May 6, 2003, the Senate Committee on Energy and Natural Resources reported S. 1005 (S.Rept. 108-43). S. 1307 would authorize the Secretary of the Interior, acting through the Bureau of Reclamation, to assist in implementing fish passage and screening facilities at non-federal water projects; no action has been taken on this measure.

**Recreational Fishing.** H.Res. 30 would express concern for continued U.S. recreational fishing access to waters near the Revillagigedo Islands of Mexico; the House Resources Subcommittee on Fisheries Conservation, Wildlife, and Oceans held a hearing on this bill on May 22, 2003, and it was ordered reported on June 11, 2003. Section 1013 of S. 747/H.R. 1588 and §328 of S. 1047 would authorize the transfer of vessels stricken from the Naval Vessel Register for use as artificial reefs; H.R. 1588 was reported (amended) by the House Committee on Armed Services on May 16, 2003 (H.Rept. 108-106), while S. 1047 was reported by the Senate Committee on Armed Services on May 13, 2003. H.R. 1588 was passed by the House (amended) on May 22, 2003; and passed the Senate (amended to contain the language of S. 1047) on June 4, 2003. Section 206 of H.R. 878 and §503 of H.R. 1308 would repeal the excise tax on fishing tackle boxes that provides partial funding for the Sport Fish Restoration Program. On March 5, 2003, the House Committee on Ways and Means reported H.R. 878, amended (H.Rept. 108-23). On March 19, 2003, the House passed H.R. 1308; the Senate passed the bill (amended; no language to repeal the excise tax on fishing

tackle boxes) on June 5, 2003. Section 7501 of H.R. 2088/S. 1072 would extend the current allocation of funding for the Sport Fish Restoration Program through FY2009; §9007 would extend the transfer of small-engine fuel taxes to the Sport Fish Restoration Account through FY2011; the Committee on Environment and Public Works' Subcommittee on Transportation and Infrastructure held a hearing on S. 1072 on May 20, 2003. No action has been taken on H.R. 2088.

**Bankruptcy.** H.R. 343 and §1007 of H.R. 975 would extend similar protection to family fishermen as currently applies to family farmers under Chapter 12 of bankruptcy laws. The House Judiciary Subcommittee on Commercial and Administrative Law held a hearing on H.R. 975 on March 4, 2003, and reported this measure (amended) on March 18, 2003 (H.Rept. 108-40, Part I). On March 19, 2003, the House passed H.R. 975, as amended. No action has been taken on H.R. 343.

**Seafood Safety.** S. 366, S. 485, and H.R. 999 would amend the Clean Air Act to direct the EPA Administrator to take certain actions to reduce mercury emissions from electricity generating facilities. On April 8, 2003, the Senate Environment and Public Works' Subcommittee on Clean Air, Climate Change, and Nuclear Safety held a hearing on S. 485; additional hearings were held on May 8 and June 5, 2003. Section 12 of S. 484 would amend the Clean Air Act to evaluate the adequacy of public advisories concerning mercury-contaminated fish. Section 5 of S. 506/H.R. 1551 would require daily inspection of seafood commodities covered by NOAA Fisheries inspection programs that are used in Department of Agricultural school food programs. Section 2 of H.R. 1495 would require labels warning of increased risk of illness for certain individuals on for raw or partially cooked fish and shellfish; §3 of this same bill would require labeling identifying fish and shellfish that have been frozen. Section 4(c) of H.R. 1624 would amend §308 of the Federal Water Pollution Control Act to increase public information requirements for notification of waters where fish or shellfish contamination is a concern. No action has been taken on any of these measures.

**Organic Labeling.** Section 2105 of P.L. 108-11 amends the Organic Foods Production Act of 1990 to direct the Secretary of Agriculture to promulgate regulations allowing wild seafood to be certified or labeled as organic.

**Oil Spill Damage.** S. 370 would amend the Oil Pollution Act of 1990 to modify provisions concerning the recovery of damages for injuries to fishermen and aquaculture operations resulting from oil spills; no action has been taken on this measure.

**Health Care.** Section 2 of H.R. 660 and S. 545 would amend the Employee Retirement Income Security Act of 1974 to authorize associations within the fishing industry for the purpose of providing health care plans for association members. On March 13, 2003, the House Committee on Education and the Workforce's Subcommittee on Employer-Employee Relations held a hearing on H.R. 660; this measure was reported (amended) on June 16, 2003 (H.Rept. 108-156), and passed by the House (amended) on June 19, 2003. No action has been taken on S. 545.

**Tax Provisions.** S. 487 would amend the Internal Revenue Code to provide a business credit against income for the purchase of fishing vessel safety equipment. H.R. 927 and S. 665 would amend the Internal Revenue Code to allow commercial fishermen to

establish tax-deferred Farm and Ranch Risk Management Accounts to shelter a portion of fishery income. Section 8 of S. 842 would allow income averaging by commercial fishermen. No action has been taken on any of these measures. Section 108 of S. 256/S. 272/S. 476 would amend the Internal Revenue Code to provide tax incentives for participation in the Fish and Wildlife Services' "Partners for Fish and Wildlife Program" [<http://partners.fws.gov/>]. On February 27, 2003, S. 476 was reported amended (S.Rept. 108-11); on April 9, 2003, the Senate passed this measure (amended).

**Hypoxia and Harmful Algal Blooms.** S. 247, S. 937, and H.R. 1856 would amend and reauthorize the Harmful Algal Bloom and Hypoxia Research and Control Act of 1998 through FY2006. On March 13, 2003, the House Science Subcommittee on the Environment, Technology, and Standards held an oversight hearing on harmful algal bloom and hypoxia research. On June 5, 2003, the House Science Subcommittee on Environment, Technology and Standards marked up H.R. 1856. On June 19, 2003, the Senate Committee on Commerce, Science, and Transportation ordered S. 247 reported (amended).

**Indian Claims and Fishing Rights.** H.R. 2425 and Title III of S. 523 would establish the Quinault Permanent Fisheries Fund and other accounts to manage funds received from the settlement of claims; on April 10, 2003, S. 523 was reported, amended, by the Committee on Indian Affairs on May 15, 2003 (S.Rept. 108-49). Section 201 of H.R. 1661 would modify the treatment of income derived from the exercise of Indian fishing rights (detailed in §7873 of the Internal Revenue Code), for purposes of calculating earned income tax credit; no action has been taken on this measure. On June 4, 2003, the Senate Committee on Indian Affairs held a hearing on the impacts on tribal fish and wildlife management programs in the Pacific Northwest.

**Renewable Energy.** H.R. 1183 would amend the Coastal Zone Management Act of 1972 to require that consideration be given to concerns for access restrictions affecting commercial and recreational fishing when constructing and operating marine renewable energy projects; no action has been taken on this measure.

**Habitat on Military Lands.** H.R. 1497 and §311 of H.R. 1588 would reauthorize Title I of the Sikes Act through FY2008; on April 10, 2003, the House Resources Subcommittee on Fisheries Conservation, Wildlife, and Oceans held a hearing on H.R. 1497. On May 14, 2003, the House Committee on Resources reported H.R. 1497, as amended (H.Rept. 108-100, Part I). H.R. 1588 was reported (amended) by the House Committee on Armed Services on May 16, 2003 (H.Rept. 108-106), and passed by the House (amended) on May 22, 2003; the Senate did not include the Sikes Act provision when passing H.R. 1588 (amended) on June 4, 2003.

**International Fisheries.** Section 103(4) of S. 790 and §104(4) of S. 925 would authorize an appropriation of \$20,043,000 for "International Fisheries Commissions" for FY2004. Section 114(4) of H.R. 1950 would authorize \$20,043,000 for these commission for both FY2004 and FY2005; on May 16, 2003, the House Committee on International Relations reported (amended) H.R. 1950 (H.Rept. 108-105, Part I). S. 790 would authorize such sums as may be necessary for FY2005; no action has been taken on S. 790. On April 24, 2003, the Senate Committee on Foreign Relations reported S. 925 (S.Rept. 108-39). Section 2 of H.R. 2048 would extend the reimbursement period under the Fishermen's Protective Act through FY2008; the House Resources Subcommittee on Fisheries

Conservation, Wildlife, and Oceans held a hearing on this measure on May 22, 2003. On June 12, 2003, the Senate Committee on Commerce, Science, and Transportation held a hearing on global overfishing and international fishery management.

**Corals and Coral Reefs.** H.R. 1721 would amend the Foreign Assistance Act of 1961 to provide debt relief to developing nations that protect coral reef habitat; no action has been taken on this measure.

**Irrigation.** Section 7 of S. 900/H.R. 2257 would require fish protection devices for the Lower Yellowstone Irrigation Project; no action has been taken on either measure.

**Assistance.** On May 1, 2003, the House Committee on Education and the Workforce reported H.R. 1261 (amended), in which § 104(b)(2) would amend the Workforce Investment Act to specifically identify displaced fishermen as individuals that states would serve in relation to employment and training needs (H.Rept. 108-82); this measure was passed (amended) by the House on May 8, 2003.

**Capital Construction Fund.** H.R. 2360/S. 1193 would provide for qualified withdrawals from Capital Construction Fund accounts for fishermen leaving the industry for rollover into individual retirement plans; no action has been taken on either measure.

**Ocean Health.** S. 1218 would increase support and coordination of interagency ocean science programs, including U.S. research and monitoring programs related to the role of oceans in human health; no action has been taken on this measure.

**Great Lakes.** H.R. 2500 would authorize the Great Lakes Fishery Commission to investigate effects of migratory birds on the productivity of Great Lakes fish stocks; no action has been taken on this measure.

## Aquaculture: Background and Issues

Aquaculture is broadly defined as the farming or husbandry of fish, shellfish, and other aquatic animals and plants, usually in a controlled or selected environment. The diversity of aquaculture is typified by such activities as: fish farming, usually applied to freshwater commercial aquaculture operations (e.g., catfish and trout farms [<http://www.usda.gov/nass/pubs/stathigh/2002/livestock02.pdf>]); shellfish and seaweed culture; net-pen culture, used by the salmon industry, wherein fish remain captive throughout their lives in marine pens built from nets; and ocean ranching, used by the Pacific Coast salmon industry which cultures juveniles, releases them to mature in the open ocean, and catches them when they return as adults to spawn. Fish hatcheries are government and commercial aquaculture facilities that raise fish from recreational and commercial stocking as well as for mitigation of aquatic resource and habitat damage.

The United Nations' Food and Agriculture Organization (FAO) has characterized aquaculture as one of the world's fastest growing food production activities. World aquaculture production more than doubled in 10 years, from about 10 million metric tons in 1984 to a record 25.5 million metric tons in 1994, with a value of approximately \$40 billion. The FAO predicted world aquaculture production would reach 35 million metric tons in 2000 [<http://www.fao.org/docrep/003/w7499e/w7499e22.htm>]. U.S. aquaculture, until recently

and with a few exceptions, has been considered a minor industry. Despite considerable growth, the domestic aquaculture industry faced strong competition in 2002 from imports of foreign aquacultural products as well as competition from the domestic poultry and livestock industries [<http://usda.mannlib.cornell.edu/reports/erssor/livestock/ldp-aqs/2002/aqs16.pdf>]. With growth however, aquaculture operations are facing increasing scrutiny for habitat destruction, pollution, and other concerns. The major statute affecting U.S. aquaculture is the National Aquaculture Act of 1980, as amended (16 U.S.C. 2801 *et seq.*).

## Miscellaneous Issues

**Tax Provisions.** Section 2(e) of S. 106 would specifically exclude small businesses that raise fish from certain provisions modifying income tax on capital gains; no action has been taken on this measure.

**Bankruptcy.** H.R. 343 and §1007 of H.R. 975 would extend similar protection to family fishermen (including aquaculture operations) as currently applies to family farmers under Chapter 12 of bankruptcy laws. The House Judiciary Subcommittee on Commercial and Administrative Law held a hearing on H.R. 975 on March 4, 2003, and reported this measure (amended) on March 18, 2003 (H.Rept. 108-40, Part I). On March 19, 2003, the House passed H.R. 975, as amended. No action has been taken on H.R. 343.

**Oil Spill Damage.** S. 370 would amend the Oil Pollution Act of 1990 to modify provisions concerning the recovery of damages for injuries to fishermen and aquaculture operations resulting from oil spills; no action has been taken on this measure.

**Chesapeake Bay.** Section 6 of S. 831 would authorize grants to support education and development of Chesapeake Bay aquaculture sciences and technologies; no action has been taken on this measure.

**Discharge Penalties.** Section 2 of H.R. 1184 would amend the Federal Water Pollution Control Act to increase criminal penalties for negligent and knowing violations of regulations applicable to aquacultural discharges; no action has been taken on this measure.

**National Policy.** S.Res. 160 would express the sense of the Senate that the federal government should actively pursue a unified approach to strengthen and promote the national policy on aquaculture; no action has been taken on this measure.

## Marine Mammals: Background and Issues

Due in part to the high level of dolphin mortality (estimated at more than 400,000 animals per year) in the eastern tropical Pacific tuna purse-seine fishery, Congress enacted the Marine Mammal Protection Act (MMPA) in 1972. While some critics assert that the MMPA is scientifically irrational because it identifies one group of organisms for special protection unrelated to their abundance or ecological role, this Act has accomplished much by way of promoting research and increased understanding of marine life as well as encouraging attention to incidental bycatch mortalities of marine life by the commercial fishing and other maritime industries.

The Act established a moratorium on the “taking” of marine mammals in U.S. waters and by U.S. nationals on the high seas. The Act also established a moratorium on importing marine mammals and marine mammal products into the United States. This Act protected marine mammals from “clubbing, mutilation, poisoning, capture in nets, and other human actions that lead to extinction.” It also expressly authorized the Secretary of Commerce and the Secretary of the Interior to issue permits for the “taking” of marine mammals for certain purposes, such as scientific research and public display.

Under the Act, the Secretary of Commerce, acting through NOAA Fisheries, is responsible for the conservation and management of whales, dolphins, porpoises, seals, and sea lions. The Secretary of the Interior, acting through the Fish and Wildlife Service (FWS), is responsible for walrus, sea and marine otters, polar bears, manatees, and dugongs. This division of authority derives from agency responsibilities as they existed when the MMPA was enacted. Title II of the Act established an independent Marine Mammal Commission (MMC) and its Committee of Scientific Advisors on Marine Mammals to oversee and recommend actions necessary to meet the requirements of the Act.

Prior to passage of the MMPA, states were responsible for marine mammal management on lands and in waters under their jurisdiction. The MMPA shifted marine mammal management authority to the federal government. It provides, however, that management authority, on a species-by-species basis, could be returned to states that adopt conservation and management programs consistent with the purposes and policies of the Act. It also provides that the moratorium on taking can be waived for specific purposes, if the taking will not disadvantage the affected species or population. Permits may be issued to take or import any marine mammal species, including depleted species, for scientific research or to enhance the survival or recovery of the species or stock. The MMPA allows U.S. citizens to apply for and obtain authorization for the take of small numbers of mammals incidental to activities other than commercial fishing (*e.g.*, offshore oil and gas exploration and development) if the taking would have only a negligible impact on any marine mammal species or stock, provided that monitoring requirements and other conditions are met.

The Act’s moratorium on taking does not apply to any Indian, Aleut, or Eskimo who resides in Alaska and who dwells near the coast of the North Pacific or Arctic Ocean, if such taking is for subsistence purposes or for creating and selling authentic Native articles of handicrafts and clothing, and is not done wastefully.

The Act also authorizes the taking of marine mammals incidental to commercial fishing operations. In 1988, most U.S. commercial fish harvesters were exempted from otherwise applicable rulemaking and permit requirements for a 5-year period, pending development of an improved system to govern the incidental taking of marine mammals in the course of commercial fishing operations. This exemption expired at the end of FY1993, and was extended several times until new provisions were enacted by P.L. 103-238, which reauthorized the MMPA through FY1999. The eastern tropical Pacific tuna fishery was excluded from the incidental take regimes enacted in 1988 and 1994. Instead, the taking of marine mammals incidental to that fishery is governed by separate provisions of the MMPA, and was substantially amended by P.L. 105-42, the International Dolphin Conservation Program Act.

## Marine Mammal Protection Act Reauthorization

**Background.** The MMPA was reauthorized in 1994 by P.L. 103-238, the Marine Mammal Protection Act Amendments of 1994; the authorization for appropriations expired on September 30, 1999. The 1994 amendments indefinitely authorized the taking of marine mammals incidental to commercial fishing operations and provided for assessment of marine mammal stocks in U.S. waters, for the development and implementation of take reduction plans for stocks that may be reduced or are being maintained below their optimum sustainable population levels due to interactions with commercial fisheries, and for studies of pinniped-fishery interactions [<http://www.nwfsc.noaa.gov/pubs/tm/tm28/areas.htm>].

**Congressional Action.** Likely at issue for the 108<sup>th</sup> Congress will be the terms and conditions of any provisions designed to reauthorize and amend the MMPA to address the concerns of various interest groups. The Senate Commerce Committee's Subcommittee on Oceans, Fisheries, and Coast Guard postponed a hearing on the Marine Mammal Protection Act that had been scheduled for May 15, 2003. H.R. 2142 would amend the MMPA to repeal the goal for reducing the incidental mortality and serious injury of marine mammals in commercial fishing operations to zero and to modify the goal of take reduction plans for reducing such takings; no action has been taken on this measure. For additional information on potential reauthorization issues in the 108<sup>th</sup> Congress, see CRS Report RL30120, *Marine Mammal Protection Act: Reauthorization Issues for the 107<sup>th</sup> Congress*.

## Miscellaneous Issues

**Tuna-Dolphin.** S. 130 proposes to amend the labeling requirements for “dolphin-safe tuna” in the Dolphin Protection Consumer Information Act; no action has been taken on this measure.

**Renewable Energy.** H.R. 1183 would amend the Coastal Zone Management Act of 1972 to require that consideration be given to concerns for marine mammals and their critical habitat when constructing and operating marine renewable energy projects; no action has been taken on this measure.

**Military Readiness.** On March 13, 2003, the House Armed Services Subcommittee on Readiness held a hearing on potential amendments to the Marine Mammal Protection Act to address military readiness concerns. Section 316(b) of S. 747, §301(b) of S. 927, §318 of H.R. 1588, and §§3-5 of H.R. 1835 would amend the MMPA to modify the definition of harassment and provisions relating to taking and importing of marine mammals as they relate to military readiness activities. On May 6, 2003, the House Committee on Resources held a hearing on H.R. 1835; on May 14, 2003, this Committee reported (amended) H.R. 1835 (H.Rept. 108-99, Part 1). On May 16, 2003, the House Committee on Armed Services reported H.R. 1588 (amended) after adding marine mammal provisions in Committee markup (H.Rept. 108-106). H.R. 1588 was passed by the House (amended) on May 22, 2003; the Senate did not include the MMPA provision when passing H.R. 1588 (amended) on June 4, 2003. No action has been taken on S. 747 or S. 927.

**Ocean Health.** S. 1218 would increase support and coordination of interagency ocean science programs, including U.S. research and monitoring programs related to the role of oceans in human health; no action has been taken on this measure.

**International Whaling.** H.Con.Res. 216/S.Con.Res. 55 would express the sense of the Congress regarding the policy of the United States at the 55th Annual Meeting of the International Whaling Commission; no action has been taken on either measure.

**Subsistence Whaling.** S. 293/H.R. 952 would amend the Internal Revenue Code to provide a charitable deduction for certain whaling expenses incurred in support of Native Alaskan subsistence bowhead whaling activities; no action has been taken on either measure.

## NOAA Fisheries Appropriations

The Bush Administration's proposed FY2003 budget for NOAA Fisheries (\$741.2 million) was about \$7 million larger than its proposed FY2002 budget, and about \$34 million less than the enacted FY2002 funding. Major reductions between the FY2002 enacted appropriations and the FY2003 request included about \$20 million less for construction, \$20 million less for Pacific coastal salmon recovery, and about \$27.5 million less for Pacific Salmon Treaty matters. In addition, the FY2003 request proposed to terminate \$83.3 million for projects funded in FY2002. These reductions were partially offset by increases including a new fishery research vessel (\$45.5 million), Columbia River Biological Opinions implementation (\$12 million), modernization of annual fish stock assessments (\$10 million), Environmental Improvement and Restoration Fund (\$5.6 million), modernization and expansion of vessel management system program (\$5.4 million), and National Observer Program (\$3.2 million). During the 107<sup>th</sup> Congress, the Senate reported a bill to appropriate FY2003 funding for NOAA Fisheries; no House bill was reported. The 107<sup>th</sup> Congress did not complete action on FY2003 appropriations for NOAA Fisheries.

In the 108<sup>th</sup> Congress, P.L. 108-7 (omnibus FY2003 appropriations) was signed into law on February 20, 2003, to provide FY2003 appropriations for NOAA Fisheries. Supplemental FY2003 appropriations were proposed in S. 762 for the Pacific Salmon Commission (\$2.46 million) and the Great Lakes Fishery Commission (\$1 million, with half of that amount for sea lamprey control in Lake Champlain). On April 1, 2003, the Senate Committee on Appropriations reported S. 762 (S.Rept. 108-33); the Senate passed H.R. 1559, substituting the language of S. 762 (as amended), on April 7, 2003. However, the conference agreement made no specific mention was made to including funds for the Pacific Salmon Commission and the Great Lakes Fishery Commission; this measure was signed by President Bush as P.L. 108-11 on April 16, 2003.

**Table 1. NOAA Fisheries Appropriations**

(In thousands of dollars)

	<b>FY2002 Enacted</b>	<b>FY2003 Request</b>	<b>FY2003 Enacted</b>	<b>FY2004 Request</b>
Fisheries	347,216	339,234	349,504	363,008
Protected Resources	142,448	153,145	145,642	160,740
Habitat Conservation	54,485	45,527	62,261	46,512
Enforcement Surveillance	41,720	50,034	22,659	50,698
<b>SUBTOTAL</b>	<b>585,869</b>	<b>587,940</b>	<b>580,066</b>	<b>620,958</b>



	<b>FY2002 Enacted</b>	<b>FY2003 Request</b>	<b>FY2003 Enacted</b>	<b>FY2004 Request</b>
Construction	37,155	17,000	7,000	14,000
Fleet Replacement	0	0	50,874	0
Pacific Coastal Salmon Recovery	110,000	90,000	90,000	90,000
Pacific Salmon Treaty	47,419	20,000	40,000	0
Saltonstall-Kennedy obligations	11,127	4,127	11,325	218
Environmental Improvement & Restoration Fund	6,050	1,362	0	5,509
Other Accounts	1,675	1,088	2	1,434
<b>TOTAL</b>	<b>799,295</b>	<b>721,517</b>	<b>779,267</b>	<b>732,139</b>

**Sources:** Budget Justifications, House and Senate Committee Reports, and floor debate.

Additional directions in P.L. 108-7 for the Department of Commerce (including NOAA Fisheries) include:

- creation of a West Coast Groundfish Fishing Capacity Reduction Program;
- designation of \$10 million in Saltonstall-Kennedy funds to be used to develop an Alaska seafood marketing program;
- direction that NOAA Fisheries establish a Regional Office for the Pacific Area;
- designation of \$2 million in funding to the Louisiana oyster industry affected by hurricanes;
- increased legal and fiscal accountability for Pacific salmon recovery, including expanded use of ESA §6 cooperative agreements with states and tribes;
- evaluation of foreign compliance with dolphin conservation standards; and
- direction that NOAA establish an Ocean Health Initiative, with \$8 million provided for critical research.

### **Further Provisions in P.L. 108-7**

Other items related to fishery, aquaculture, and marine mammal programs in P.L. 108-7, but not in the NOAA Fisheries FY2003 appropriations above, include:

- fishery disaster funds totaling \$100 million: Hawaii (\$5 million), Alaska (\$35 million), Northeast multispecies capacity reduction (\$10 million), West Coast groundfish capacity reduction (\$10 million), South Atlantic shrimp (\$17.5 million), Gulf of Mexico shrimp (\$17.5 million) and Atlantic blue crab fishery (\$5 million);
- a requirement that all salmonid fish reared at federally operated or federally financed hatcheries be mass marked to distinguish them from wild fish; and

- increased Fish and Wildlife Service funding for Atlantic salmon recovery.

## **FY2004 Administration Request**

On February 3, 2003, the Bush Administration released its request for FY2004 funding for various federal agencies and programs. Major increases in the requested \$732 million for NOAA Fisheries include: \$3 million to expand fishery observer coverage in the Northeast; \$3.1 million for implementing the 2000 Federal Columbia River Power System Biological Opinion and Basin-wide Recovery Strategy; \$3 million to continue modernization and expansion of fishery stock assessments; \$2.8 million to support efforts to reduce bycatch; \$2 million to fund consultations under §7 of the Endangered Species Act; and \$2 million to improve the understanding and prediction of climate change on major U.S. marine and coastal ecosystems in the Bering Sea and Gulf of Alaska. The major decrease is elimination of the funding provided in FY2003 under the bilateral Pacific Salmon Treaty for capitalization of two enhancement and restoration funds.

On March 19, 2003, the House Resources Subcommittee on Fisheries Conservation, Wildlife, and Oceans held a hearing on the FY2004 NOAA budget request. On March 12, 2003, the Senate Commerce Subcommittee on Oceans, Atmosphere, and Fisheries held a hearing on the FY2004 NOAA budget request.

## **LEGISLATION**

### **Fisheries**

P.L. 108-7 (H.J.Res. 2) and P.L. 108-11 (H.R. 1559).

H.Res. 30 (Cunningham); H.R. 6 (Tauzin); H.R. 155 (Paul); H.R. 238 (Boehlert); H.R. 266 (Ehlers); H.R. 343 (Baldwin); H.R. 660 (Fletcher); H.R. 878 (Thomas); H.R. 927 (Hulshof); H.R. 958 (Young of Alaska); H.R. 975 (Sensenbrenner); H.R. 989 (Hoekstra); H.R. 999 (Barton); H.R. 1013 (Radanovich); H.R. 1024 (Saxton); H.R. 1080 (Gilchrest); H.R. 1081 (Ehlers); H.R. 1183 (Delahunt); H.R. 1261 (McKeon); H.R. 1286 (Pallone); H.R. 1308 (Thomas); H.R. 1343 (Woolsey); H.R. 1424 (Faleomavaega); H.R. 1495 (Pallone); H.R. 1497 (Pombo); H.R. 1551 (Schakowsky); H.R. 1588 (Hunter); H.R. 1604 (Doolittle); H.R. 1624 (Pallone); H.R. 1644 (Barton); H.R. 1661 (Rangel); H.R. 1690 (Hefley); H.R. 1721 (Kirk); H.R. 1753 (Nethercutt); H.R. 1760 (Thompson of California); H.R. 1856 (Ehlers); H.R. 1945 (Thompson of California); H.R. 1950 (Hyde); H.R. 2048 (Gilchrest); H.R. 2088 (Young of Alaska); H.R. 2257 (Rehberg); H.R. 2308 (Levin); H.R. 2310 (Rahall); H.R. 2360 (Capps); H.R. 2406 (Paul); H.R. 2425 (Dicks); H.R. 2500 (Stupak); S. 14 (Domenici); S. 130 (Boxer); S. 144 (Craig); S. 247 (Snowe); S. 256 (Grassley); S. 272 (Santorum); S. 366 (Jeffords); S. 370 (Smith); S. 476 (Grassley); S. 482 (Collins); S. 484 (Leahy); S. 485 (Inhofe); S. 487 (Collins); S. 506 (Durbin); S. 523 (Campbell); S. 525 (Levin); S. 545 (Snowe); S. 665 (Grassley); S. 671 (Grassley); S. 747 (Warner); S. 762 (Stevens); S. 781 (Lott); S. 790 (Lugar); S. 842 (Kerry); S. 900 (Burns); S. 910 (Akaka); S. 925 (Lugar); S. 937 (Voinovich); S. 1005 (Domenici); S. 1047 (Warner); S. 1072 (Inhofe); S. 1106 (Snowe); S. 1110 (Bingaman); S. 1193 (Wyden); S. 1218 (Hollings); and S. 1307 (Smith of Oregon).

## **Aquaculture**

P.L. 108-7 (H.J.Res. 2).

H.R. 343 (Baldwin); H.R. 975 (Sensenbrenner); H.R. 1184 (Dingell); S.Res. 160 (Akaka); S. 106 (Collins); S. 370 (Smith), and S. 831 (Sarbanes).

## **Marine Mammals**

P.L. 108-7 (H.J.Res. 2).

H.Con.Res. 216 (Delahunt); H.R. 952 (Young of Alaska); H.R. 1183 (Delahunt); H.R. 1588 (Hunter); H.R. 1835 (Gallegly); H.R. 2142 (Young of Alaska); S.Con.Res. 55 (Snowe); S. 130 (Boxer); S. 293 (Murkowski); S. 747 (Warner); S. 927 (Warner); and S. 1218 (Hollings).

## **FOR ADDITIONAL READING**

CRS Report RL30856. *Fishery, Aquaculture, and Marine Mammal Online News and Information Sources.*

CRS Report RS21312. *How Many Commercial Fishermen?*

CRS Report RL30123. *Invasive Non-Native Species: Background and Issues for Congress.*

CRS Report RS20810. *Marine Protected Areas: An Overview.*

CRS Report RL31705. *The National Ocean Policy Study: A Model for the Future?*

CRS Report RL30907. *The North Atlantic Right Whale: Federal Management Issues.*

CRS Report 98-666. *Pacific Salmon and Anadromous Trout: Management Under the Endangered Species Act.*

Myers, Ransom A., and Boris Worm. "Rapid Worldwide Depletion of Predatory Fish Communities." *Nature*, v. 423 (May 15, 2003): 280-283.

NOAA Fisheries. *Sustaining and Rebuilding: The Status of U.S. Fisheries.* April 2003. 151 pp. Available at [<http://www.nmfs.noaa.gov/sfa/reports.html>].

Pew Oceans Commission. *America's Living Oceans: Charting a Course for Sea Change.* May 2003. 144 pp. Available at [<http://www.pewoceans.org/oceans/index.asp>].

Rosenberg, Andrew A. "Managing to the Margins: The Overexploitation of Fisheries." *Frontiers in Ecology and the Environment*, v. 1, no. 5 (2003): 102-106.