Fall 2006

Conserving Marine Habitats

Eric A. Bilsky

Sustainable Development Law & Policy

Volume 7
Issue 1 *Fall 2006: Ocean & Fisheries Law*

Article 23

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*by Eric A. Bilsky**

Introduction

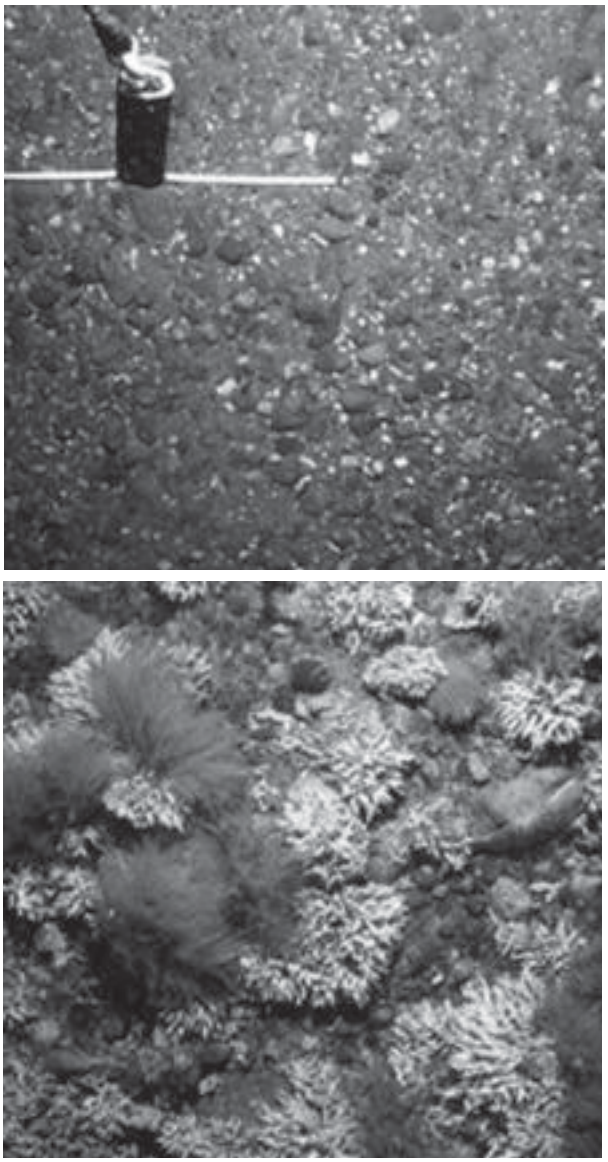
While the oceans are mostly out of sight, and therefore mostly out of mind, they make up the majority of our environment.[1] They are a place where industrial food production relies on hunting rather than farming. But industrial food production relies on industrial equipment such as massive bottom trawl nets and scallop dredges that scrape across the seafloor. The use of these destructive tools has been compared to using bulldozers for hunting squirrels in the forest.[2] The resulting impact is comparable to clear-cutting forests — but could be far more devastating.[3] In 1998, scientists estimated that every two years, destructive trawlers sweep an area equivalent to the entire world's continental shelf.[4] This article examines one route among many leading to the goal of conserving marine habitat: using the statutory mandate directing regional fishery management councils to protect essential fish habitat ("EFH").

Congress Puts Habitat Into The Magnuson-Stevens Act

When Congress enacted the Magnuson-Stevens Fishery Conservation and Management Act in 1976, conservation was not the concern. Congress wanted to "Americanize the fisheries," by kicking foreign fishing vessels out of United States waters.[5] To regulate the newly Americanized fisheries, the Act created eight regional fishery management councils composed of fisheries stakeholders.[6] The regional councils develop fishery management plans and implementing regulations to manage the fisheries.[7] These plans and regulations are subject to only limited federal oversight — the National Marine Fisheries Service may disapprove a plan or regulation if it finds that the measure violates the law.[8]

From the beginning, the Magnuson-Stevens Act gave councils the authority to "designate zones where, and periods when, fishing shall be limited, or shall not be permitted, or shall be permitted only by specified types of fishing vessels or with specified types and quantities of fishing gear."[9] This authority granted to the councils all the power that they needed to protect marine habitat. A council could prohibit all fishing in a sensitive habitat zone or forbid all destructive fishing gears from fishing in that zone. But most councils stood idle as the threat from destructive trawling and other destructive fishing gear became apparent over the years.[10]

From 1976 to 1996, the councils and the federal government, aided and abetted by the fishing community, embarked on an erratic series of policies that forced the marine ecosystem and fishing communities through a cycle of environmental and economic boom and bust.[11] First, government subsidies would bloat fishing capacity to an unsustainable level, after which regulations would belatedly, but abruptly, pull the plug on fishing, leaving environmental and economic chaos in their wake.[12] By 1994, with the collapse of the New England groundfish fishery,[13] reform was politically possible.



U.S. Geological Survey

Seafloor off New England (Georges Bank): trawled and untrawled areas.

Two years later, in October 1996, Congress enacted the Sustainable Fisheries Act Amendments of 1996 to the Magnuson-Stevens Act ("SFA").[14] The amendments required, *inter alia*, that the regional councils incorporate habitat conservation measures into their fishery management plans.[15] The intent of Congress seemed plain, to take the "may protect habitat" already in the Magnuson-Stevens Act, and change it to a "must."

** Eric A. Bilsky is a Senior Attorney at Oceana.* *The author wishes to thank David Allison, Phil Kline, and the Stop Destructive Trawling campaign at Oceana. This article reflects the personal opinion of the author; it does not necessarily reflect the views of Oceana.*

Overdue Guidance Ignored by Regional Councils

The Fisheries Service Provides Guidance

While the habitat provisions of the bill appeared strong, vague language and lack of institutional reform sowed the seeds of future problems. First, the bill protected EFH from "adverse effects," but did not define the term. Second, the bill qualified its mandate, directing councils to "minimize" adverse effects "to the extent practicable," without explaining what "minimize" or "practicable" meant. Third, and most damaging, the bill gave the task of protecting habitat to the very institutions that had not done it in the past: the regional councils.

Nevertheless, the law mandated actions and set deadlines. It required the Fisheries Service to issue EFH guidance within six months of enactment.[16] In addition, the SFA required the Fisheries Service to provide specific EFH information and recommendations to each council.[17] The SFA also required the councils to amend their fishery management plans within 24 months to designate and protect EFH.[18]

The Fisheries Service termed its guidance, issued half a year late, an "interim final rule."[19] The interim guidance spoke directly to the key issues identified above. It broadly interpreted the term "adverse effect" to include "any impact which reduces quality and/or quantity of EFH."[20] The definition made clear that "adverse effects" included direct physical disruption to habitat[21] — seemingly guaranteeing that destructive trawling and dredging would be deemed to have adverse effects.

Scientists estimated that every two years, destructive trawlers sweep an area equivalent to the entire world's continental shelf.

In addition, the interim guidance included a completely unhelpful, if not actively counter-productive, discussion of the term "practicable."[22] The Fisheries Service advised that in considering practicability, councils should consider the adverse effects of the fishing activity, the long and short-term costs to the fishery and its EFH, and other appropriate factors, including the statutory command that regulations should, where "practicable," minimize costs and unnecessary duplication.[23] Thus, the agency told the councils to consider everything, but provided no guidance on how to make a decision.

To further fulfill its mandate to provide guidance to the councils, the agency commissioned a review of the scientific literature on the effects of fishing gear on habitat.[24] The review found that "[f]ishing is one of the most widespread human impacts to the marine environment."[25] More disturbingly, the study also found that "systems are being fished to the point where *recovery is delayed so long that the economic consequences are devastating*."[26] We are currently seeing this pattern in many fisheries around the world. Mindful of the eventual economic and ecological cost of destroying the habitat on which commercial fishing depends, the review advised that "managers bear the responsibility of adopting a precautionary approach when considering the environmental consequences of fishing rather than assuming that the extraction of fish has no ecological price and therefore no feedback loop to our non-ecologically based economic system."[27]

The Councils Deny Adverse Effects

While the Fisheries Service was initially responsive to the Congressional mandate, the regional councils rejected it. One council contended that it had already addressed all habitat problems and refused to take any new steps.[28] Two other councils determined that they would defer actually protecting habitat to the future, rather than complying with the Congressional 24-month deadline.[29] None of the six councils that had neglected habitat in the past adopted new management measures in response to the new legislative command.[30] In an interesting twist, even though the interim guidance contained a strong definition of "adverse effect" and a weak discussion of "practicability," the councils justified their failure to promulgate new management measures by the alleged inability to establish that there were any adverse effects.[31]

The Fisheries Service approved all but one of the plainly deficient fishery management plan amendments submitted by the councils.[32] Marine conservation and fishing groups filed suit concerning the five regions where plans were approved.[33] In an initial blow to the enforceability of the new EFH provisions, the District Court did not heed the indisputable evidence that destructive gears physically disrupt the seafloor, causing adverse effects as defined by the interim guidance.[34] Instead, the District Court deferred to the council conclusions that there was not enough evidence to determine the effects of trawling and dredging on habitat.[35] But the District Court did not let the Government off the hook. Instead, it ruled that under the National Environmental Policy Act, the Government was required to develop the information necessary to determine whether there were adverse effects.[36] As a result of the ruling, the Government agreed to develop environmental impact statements ("EISs") around the country to reevaluate protecting EFH from fishing gear.[37]

In The Interim — The Courts Punt

Neither fishing nor the issuance of new fisheries regulations stopped while the EISs were under development. Conservation groups brought cases concerning the Atlantic sea scallop fishery and the golden tilefish fishery in the Mid-Atlantic to protect EFH during the interim. Both cases presented strong facts, but ran

afoul of the judicial reluctance to give weight to the crucial words of the EFH provision.

The golden tilefish case, *NRDC v. Evans*, concerned the impacts of destructive trawling on seafloor habitat, as golden tilefish live in burrows in the seafloor,[38] presenting an ideal example of a species in need of protection. Moreover, there was undisputed evidence that bottom trawls physically disrupted seafloor habitat by plowing over tilefish burrows and by leaving scars on the seafloor.[39] Yet the Mid-Atlantic Council refused to adopt any protective measures, arguing accurately that there was no scientific study one way or another as to the impacts on tilefish of having their burrows buried.[40] *NRDC v. Evans* thus repeated on a smaller scale the argument in the initial EFH case as to whether a showing of physical disruption, as specified in the interim guidelines, was enough to show an adverse effect, or whether courts could not act unless conservationists could produce scientific evidence linking impact on habitat to injury to a commercially-fished species. This is what has been called the "dead body" standard. The tilefish court followed *AOC v. Daley* and adopted the "dead body" standard over the physical disruption standard found in the agency's regulations.[41] As a result, the litigation route to establishing adverse effects stalled.[42]

Conservation Law Foundation v. U.S. Department of Commerce was the principal case brought in the Atlantic sea scallop fishery. It concerned a rule governing scallop fishing for the 2001 and 2002 fishing seasons.[43] The New England Council considered three options for closing areas of the fishery to allow scallops to mature.[44] The Council's analysis ranked the three options as to how well they protected EFH and evaluated their short-term cost and long-term cost to the fishery.[45] A closure in New England's Great South Channel was ranked as having the greatest benefit to habitat, the highest short-term cost, but possibly the highest long-term benefit to the fishery.[46] The Council rejected that alternative.[47] Given the analysis, the case presented an opportunity to test the enforceability of the requirement to protect EFH "to the extent practicable." Unfortunately, the First Circuit declined to attribute any force to the practicability requirement. Instead, the court declared: "We think by using the term 'practicable' Congress intended rather to allow for the application of agency expertise and discretion in determining how best to manage fishery resources."[48]

Winning the Battle on Adverse Effects

As the EISs and rulemakings recommenced, the councils and the Fisheries Service revisited the issue of adverse effects. This time, with relatively little struggle, the EISs documented the scientific consensus that destructive trawling and dredging adversely affect seafloor habitat. In fact, every single remand EIS found adverse effects.

Two events stand out. First, the Fisheries Service requested the National Academy of Sciences to investigate the effects of bottom trawling. The study unequivocally found adverse effects, concluding, for example, that "[t]rawling and dredging change the physical habitat and biologic structure of ecosystems and therefore can have potentially wide-ranging consequences."[49]

Second, the North Pacific Council stood alone in issuing a draft EIS that refused to find adverse effects.[50] But a peer-review by independent scientists noted in polite academic language that it "is premature to conclude that the current level and pattern of fishing activity has minimal or temporary effects on the habitat . . ." and that in any case, the draft EIS was "at odds," with the overall conclusion of the National Academy of Sciences report.[51] The peer review forced the North Pacific Council to reverse course. It appears that adverse effects will no longer be a battleground.

Trying to Protect Habitat That Is Being Fished

As mentioned earlier, the political impetus for the conservation reforms that established EFH came out of the collapse of the New England groundfish fishery. More than ten years later, cod is still in severely bad shape. Over the years, scientists have thoroughly documented the dependence of young cod on a certain kind of rocky or gravelly seafloor habitat with living structure such as sponges.[52] This habitat is continually pounded by destructive trawling. Oceana and other conservation groups vigorously worked to include alternatives for protecting cod habitat in the New England EISs. Unfortunately, the political situation was not yet ripe. The EISs did not take a scientific approach to identifying alternatives, but instead only examined alternatives based on historical closures enacted for other reasons.[53] As a result, these alternatives left most cod habitat unprotected.

Advocates with Oceana developed the innovative, although controversial, idea of taking the path of least resistance.

Eventually, the New England Council adopted one of the alternatives — a small step forward in recognizing the necessity of closures to protect habitat, but not enough to protect groundfish.[54] Oceana sued, seeking to compel the Council to consider more scientifically designed and more protective alternatives.[55] The court denied the claims, relying heavily on the First Circuit's holding that the EFH provision gave the Government vast discretion.[56]

But the process continues as the evidence grows and the philosophy and composition of the councils evolve. The New England Council is now seriously considering a proposal to protect juvenile cod EFH in the Great South Channel — the same area whose protection it earlier rejected.

Freezing The Footprint of Bottom Trawling: Protecting Habitat That Is Not Yet Being Fished

As the New England example shows, advocating that fishermen stay out of areas that they already fish is difficult. Advocates with Oceana developed the innovative, although controversial, idea of taking the path of least resistance.[57] To understand the new strategy, it is necessary to understand that fishing is not a static activity. If one area is fished out because it is overexploited, vessels explore and move to new areas.[58] So although it is very important to protect areas that are already subject to fishing, it is also valuable to protect areas that no one is fishing yet.

Acting on this insight, Oceana and other conservation groups in Alaska and the Pacific coast began gathering data on where vessels fished, and where they did not. Their enterprise was further bolstered by the discovery in 2001 of astonishingly beautiful gardens of deep-sea coral off Alaska's Aleutian Islands.[59] Conservation groups also identified other special areas off Alaska and in the Pacific, including deep-sea underwater mountains, or seamounts, that also supported special and beautiful ecological communities. Proposals based on restricting the expansion of destructive fishing and protecting special places succeeded in protecting submarine canyons in the Atlantic,[60] more than half a million square miles[61] of marine habitat off the Aleutian Islands[62] and in the Pacific[63].

Conclusion

The work to protect marine habitat from destructive trawling continues. Oceana is developing a comprehensive approach to halting the expansion of destructive trawling in the Atlantic. In the meantime, Oceana is advancing specific proposals to protect more deep-sea canyons and seamounts to the New England Council and Oceana is supporting the South Atlantic Council's development of a broad-based ecosystem management plan that will protect areas of coral from North Carolina to Florida.

Endnotes: Conserving Marine Habitats

[1] NASA Oceanography, *The Living Ocean* (Oct. 5, 2006), *available at* http://science.hq.nasa.gov/oceans/living/index.html (last visited Oct. 12, 2006) (stating that cceans cover about 70% of the Earth's surface and constitute 99% of the habitable space on the planet).

[2] Sylvia Earle, http://www.flmnh.ufl.edu/fish/sharks/innews/sharkparks2006.html (last visited Oct. 30, 2006) (comparing bottom trawling to using a bulldozer in a forest to hunt squirrels).

[3] Les Watling & Elliott A. Norse, *Disturbance of the Seabed by Mobile Fishing Gear: A Comparison to Forest Clearcutting*, 12 Conservation Biology 1180 (1998).

[4] Watling & Norse, *id.* at 1190.

[5] *See*, *e.g.*, H.R. 94-445 (Aug. 20, 1975) at 43-44, *reprinted in* 1976 U.S.C.C.A.N. 593, 611-612 ("technologically sophisticated and very efficient foreign fishing vessels in waters off United States coasts" are depleting fish populations and "if such fishing pressure is not regulated and reduced immediately, irreversible damage may well be done . . . .").

[6] 16 U.S.C. § 1852(a) (regional councils); 16 U.S.C..§ 1854(a)-(c) (federal supervision).

[7] 16 U.S.C. § 1852(h); 16 U.S.C..§ 1853.

[8] 16 U.S.C. § 1854(a)(3); 16 U.S.C. § 1854(b)(1).

[9] Pub. L. 94-265, §303(b)(2), 90 Stat. 351 (April 13, 1976), codified at 16 U.S.C. § 1853(b)(2).

[10] Two Councils were exceptions. Even prior to the 1996 amendments discussed below, the South Atlantic and the West Pacific (Hawaii and Pacific Islands) Councils had largely restricted destructive trawling. *See* Amy Mathews Amos, Marine Fish Conservation Network, Ray of Hope: Successes and Shortcomings in Protecting Essential Fish Habitat, 10, 15 (2006) *available at* http://www. conservefish.org/site/pubs/network_reports/efh_rayofhope_lowres.pdf (last visited October 30, 2006).

[11] *See*, *e.g.*, Eugene H. Buck, *Overcapitalization in the U.S. Commercial Fishing Industry*, at 1 (Feb. 22, 1995) *available at* http://ncseonline.org/NLE/CRS reports/Marine/mar-6.cfm (last visited Oct. 12, 2006) (discussing how causes including government assistance led to substantial expansion of United States fishing capacity after 1976 and depleted state of many fish populations); *see also* GAO/RCED-00-120, *Entry Limits Benefits of Buyback Programs*, 9 (June 2000) (explaining that the Government spent $24.4 million to remove 79 vessels from New England fishery, but allowed 62 new vessels to become active).

[12] *See, e.g.*, Glenn Martin & Carol Ness, *Sea of Anxiety Over Rockfish Ban: Fishermen, Distributors, Coastal Towns Brace for Hard Times as Species Recovers*, *available at* http://www.sfgate.com/cgibin/ article.cgi?f=/c/a/2002/06/21/MN11519.DTL (last visited Oct. 30, 2006) (commenting on the fact that groundfishing closed off most of California coast).

[13] *Conservation Law Foundation v. Evans*, 209 F. Supp. 2d 1, 7 (D.D.C. 2001) (citing SFA legislative history discussing collapse of New England groundfish fisheries); *Conservation Law Foundation v. Mineta*, 131 F. Supp. 2d 19, 22 (D.D.C. 2001) (stating that 1994 collapse prompted closure of three fishing areas).

[14] Pub. L. 104-297, §§ 106, 108, 110 Stat. 3559 (Oct. 11, 1996).

[15] 16 U.S.C. §§ 1852(a), (h).

[16] 16 U.S.C. § 1855(b)(1)(A).

[17] 16 U.S.C. § 1855(b)(1)(B).

[18] Pub. L. 104-297, *supra* note 14, at § 108(b), 110 Stat. 3575.

[19] Interim Final Rule, 62 Fed. Reg. 66,531 (Dec. 19, 1997).

[20] 62 Fed. Reg. 66551, promulgating 50 C.F.R. § 600.810(a).

[21] 62 Fed. Reg., *id.*

[22] 62 Fed. Reg., *id.* at 66553, promulgating 50 C.F.R. § 600.815(a)(3)(iv).

[23] 62 Fed. Reg, *id.* at 66553.

[24] Peter J. Auster & Richard W. Langton, *The Effects of Fishing on Fish Habitat*, 22 American Fisheries Society Symposium 150-187 (1999).

[25] Auster & Langton, *id.* at 181.

[26] Auster & Langton, *id.* at 181-82 (emphasis added).

[27] Auster & Langton, *id.* at 182.

[28] Letter, Chair Gulf of Mexico Fishery Management Council to Acting Director Office of Habitat Conservation, Feb. 3, 1997, at 3, cited in *American Oceans Campaign v. Daley*, 183 F. Supp. 2d 1, 6 (D.D.C. 2000).

[29] *Daley*, *id.* at 7-8.

[30] *Daley*, *id.*

[31] *Daley*, *id.*

[32] *Daley*, *supra* note 28 at 7-8; Mathews Amos, *supra* note 10, at 8 (Mid-Atlantic measures disapproved).

[33] *See* generally, *Daley*, *supra* note 28.

[34] *American Oceans Campaign v. Daley*, 183 F. Supp 2d, at 12-18.

[35] *Daley*, *id.* at 20.

[36] *Daley*, *id.*

[37] *Oceana v. Evans*, 2005 WL 555416 *9 (D.D.C. March 9, 2005).

[38] *NRDC v. Evans*, 254 F. Supp. 2d 434 (S.D.N.Y. 2003) at 437-38 ("Unquestionably, from submersible vessel research, there are trawl door patterns observed in areas with tilefish burrows . . . .").

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[39] *NRDC*, *id.*

[40] *NRDC*, *id.* at 437.

[41] *NRDC*, *id.* at 440-41.

[42] In a case involving a short-term rule for the Atlantic sea scallop fishery, conservationists tried to get at the adverse effect issue by claiming that the environmental assessment violated NEPA because it did not sufficiently analyze the effects of scallop dredging on groundfish habitat. *Conservation Law Foundation V. Mineta*, 131 F. Supp. 2d 19, 27 (D.D.C. 2001). The same court that decided *AOC v. Daley* decided this case, but the court did not repeat its favorable NEPA ruling. The court held that the agency's analysis was sufficient, but also noted that pursuant to the *AOC v. Daley* ruling, the agency would develop an EIS for the scallop fishery, exactly the relief the plaintiffs' requested: *Mineta*, 131 F. Supp. 2d at 30 and n. 27.

[43] *Conservation Law Foundation v. United States Dept. of Commerce*, 229 F. Supp. 2d 29, 31 (D. Mass. 2002), *aff'd sub nom. Conservation Law Foundation v. Evans*, 360 F.3d 21 (1st Cir. 2004).

[44] Decision Document, Final Meeting, Framework Adjustment 14, 2-3, Jan. 25, 2001, *reproduced in* Administrative Record 6302-03, *Conservation Law Foundation v. United States Dept. of Commerce*, 229 F. Supp. 2d 29 (D. Mass. 2002).

[45] Decision Document, *id.*

[46] Decision Document, *id.*

[47] *Conservation Law Foundation v. Evans*, 209 F. Supp. 2d, at 28.

[48] *Conservation Law Foundation v. Evans*, *id*.

[49] National Research Council, Effects of Trawling and Dredging on Seafloor Habitat at 29 (2002).

[50] Ken Drinkwater, Summary Report: Review on Evaluation of Fishing Activities That May Adversely Affect Essential Fish Habitat (EFH) in Alaska, 5 (2004), *available at* http://www.fakr.noaa.gov/habitat/cie/reports/Drinkwatersummary.pdf (last vistited Oct. 12, 2006).

[51] Drinkwater, *id.* at 23.

[52] *See*, *e.g. Oceana v. Evans*, 2005 WL 555416 at *5.

[53] *See*, *e.g.* Amendment 13 Final Rule, 69 Fed. Reg. 22906, 22924 (April 27, 2004) (response to Comment 42: 81% of area of closure selected is within existing closure area).

[54] *See*, *e.g.*, Amendment 13, *id.* at 22913.

[55] *Oceana v. Evans*, 2005 WL 555416 at *5.

[56] *Oceana v. Evans*, *id.* at *31.

[57] *See*, *e.g.*, Mathews Amos, *supra* note 10, at 2 ("Councils need to move beyond adopting the easiest and most obvious measures . . . .").

[58] *See*, *e.g.*, William T. Hogarth, Ass't Administrator for Fisheries, NOAA, "*Keeping Our Fisheries Sustainable*," *in* American Fisheries Society Symposium 41:11-17 (2005) ("As near-shore fisheries have declined, much of our fishing effort has moved further offshore and downslope to deeper, colder waters."); Santi Roberts and Michael Hirshfield, *Deep Sea Corals: Out of Sight but No Longer Out of Mind*, Front. Ecol. Envrion., April 2004 at 123, 126.

[59] *See*, *e.g.*, Arctic Science Journeys Radio Script, http://seagrant.uaf.edu/news/03ASJ/11.14.03coral-gardens.html (last viewed Oct. 12, 2006).

[60] Final Fule, 70 Fed. Reg. 21927, 21929 (April 28, 2005).

[61] *See*, *e.g.*, *A Beginning for Conservation*, USA Today, July 25, 2006, at A11.

[62] Aleutian Islands EFH Final Rule, 71 Fed. Reg. 36694 (June 28, 2006).

[63] Pacific Coast Groundfish EFH Final Rule, 71 Fed. Reg. 27408 (May 11, 2006).