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Jeff Rester

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Darrell Brannan

Walter Keithly

### **13.0 List of Agencies, Organizations, and Persons to Whom Copies of the Statement Are Sent**

#### **Gulf of Mexico Fishery Management Council**

Law Enforcement Advisory Panel  
Standing Scientific and Statistical Committee (SSC)  
Ad Hoc Aquaculture Advisory Panel

#### **Other Agencies, Organizations, or Persons**

Alabama Cooperative Extension Service  
Alabama Department of Conservation and Natural Resources  
Florida Fish and Wildlife Conservation Commission  
Florida Sea Grant  
Louisiana Cooperative Extension Service  
Louisiana Department of Wildlife and Fisheries  
Mineral Management Service  
Mississippi Cooperative Extension Service  
Mississippi Department of Marine Resources  
NOAA Fisheries Service Southeast Regional Office  
NOAA Fisheries Service Southeast Fisheries Science Center  
NOAA Fisheries Service Silver Spring Office  
NOAA Fisheries Service Law Enforcement  
Texas Cooperative Extension Service  
Texas Parks and Wildlife Department  
United States Coast Guard  
United States Environmental Protection Agency  
United States Fish and Wildlife Service  
United States Food and Drug Administration

#### 14.0 Public Hearing Locations and Dates

July 9, 2007	Best Western	7921 Lamar Poole Rd	Biloxi	MS	39532	228-875-7111
July 9, 2007	Doubletree Beach Resort	17120 Gulf Blvd.	N. Reddington Beach	FL	33708	727-391-4000
July 10, 2007	W Hotel New Orleans	333 Poydras St	New Orleans	LA	70130	504-525-9444
July 10, 2007	City of Orange Beach Rec. Ctr	27235 Canal Rd	Orange Beach	AL	36561	251-981-6028
July 11, 2007	San Luis	5222 Seawall Blvd.	Galveston	TX	77550	409-744-1500
July 11, 2007	Embassy Suites Hotel	570 Scenic Gulf Drive	Destin	FL	32550	850-337-7000
July 12, 2007	Best Western Marina Grand	300 N. Shoreline Blvd.	Corpus Christi	TX	78401	361-883-5111

December 10, 2007	Comfort Inn North	2260 54th Ave. N.	St. Petersburg	FL	33714	727-362-0075
December 10, 2007	Hilton Hobby Airport	8181 Airport Blvd.	Houston	TX	77061	713-645-3000
December 11, 2007	Hilton Airport	901 Airline Drive	New Orleans	LA	70062	504-469-5000
December 12, 2007	Wingate Inn	12009 Indian River Rd.	Biloxi	MS	39540	228-396-0036
December 13, 2007	Ashbury Hotel	600 S. Beltline Hwy.	Mobile	AL	36608	251-344-8030
February 19, 2008	The Islander	82100 Overseas Hwy.	Islamorada	FL	33036	305-664-2031
July 21, 2008	Radisson Hotel	3820 N. Roosevelt Blvd.	Key West	FL	33040	305-294-5511

## 15.0 Index

- ACOE, vii, 3, 5, 10, 15, 22, 31, 36, 38, 51, 52, 54, 57, 58, 59, 60, 61, 64, 65, 66, 87, 126, 127, 169, 176, 195, 199, 204, 206, 209, 211, 227, 228, 229, 230, 231, 232, 233, 235, 236, 252, 253, 254, 261, 262, 273, 277, 278, 283, 284, 305, 306, 307, 308, 327, 332
- Allowable aquaculture system, 2, 5, 7, 19, 21, 22, 30, 31, 32, 33, 34, 37, 38, 48, 49, 52, 53, 57, 58, 59, 60, 61, 62, 63, 64, 67, 78, 79, 80, 198, 207, 208, 209, 210, 211, 223, 228, 229, 233, 234, 236, 237, 245, 247, 253, 257, 262, 273, 284, 290, 291, 305, 315, 316, 324, 327, 329
- Allowable species, 3, 4, 14, 32, 37, 43, 47, 48, 132, 208, 219, 222, 302
- Application requirements, 21, 30, 34, 39, 40, 78, 79, 81, 207, 209, 211, 212, 213, 246, 294, 295, 297, 298, 312
- Aquaculture permit, xi, 2, 3, 6, 15, 16, 17, 19, 20, 21, 22, 24, 28, 29, 30, 32, 36, 37, 39, 40, 41, 42, 58, 60, 61, 63, 64, 65, 66, 71, 81, 168, 176, 195, 200, 205, 207, 208, 210, 211, 214, 215, 216, 217, 234, 235, 252, 253, 254, 260, 261, 267, 276, 277, 279, 282, 299, 300, 304, 307, 308, 309, 315, 321, 324, 325, 327
- Aquaculture zones, 5, 51, 54, 55, 57, 194, 227, 228, 229, 231, 232, 262, 305, 306
- Aquatic animal health expert, 3, 32, 33, 34, 37, 38, 62, 67, 185, 206, 207, 208, 210, 260, 276, 316, 325
- Assurance bond, 3, 31, 34, 36, 206, 207, 208, 209, 215, 260, 273, 276, 325
- Biological reference point, 6, 69, 70, 74, 75, 77, 80, 81, 115, 240, 243, 244, 246, 263, 310, 311, 312, 328, 364
- Broodstock, 2, 3, 19, 22, 29, 31, 32, 34, 37, 38, 45, 46, 63, 65, 68, 119, 130, 180, 198, 201, 207, 208, 209, 210, 215, 220, 250, 254, 258, 260, 269, 276, 278, 281, 284, 289, 290, 316, 324, 325
- Cage, 33, 37, 38, 48, 49, 50, 60, 67, 71, 73, 90, 91, 117, 118, 119, 120, 127, 128, 132, 133, 169, 189, 194, 209, 224, 225, 226, 234, 254, 278, 296, 304, 318, 332, 358, 360, 361, 362
- Case-by-case review, 2, 5, 26, 48, 52, 53, 208, 224, 226, 227, 228, 229, 231, 232, 251, 257, 258, 262, 263, 272, 273, 280, 282, 283, 284, 303, 305
- Effluents, 25, 52, 186, 187, 237, 278, 353
- EFP, vii, x, 1, 2, 3, 6, 10, 14, 15, 19, 21, 26, 28, 29, 34, 35, 39, 40, 41, 50, 58, 61, 65, 66, 68, 69, 126, 128, 129, 130, 175, 198, 200, 201, 202, 204, 205, 206, 207, 212, 213, 214, 215, 216, 218, 222, 225, 234, 237, 238, 260, 266, 274, 277, 288, 289, 291, 292, 293, 294, 295, 296, 297, 298, 301, 302, 306, 309, 324, 325, 327
- Emergency disaster plan, 3, 32, 34, 37, 207, 208, 209, 238, 254, 276, 316, 325
- Endangered species, 23, 35, 43, 52, 62, 66, 112, 206, 212, 219, 237, 262, 271, 282, 283, 295, 327
- Entanglement, 8, 26, 36, 38, 62, 67, 190, 192, 209, 237, 254, 273, 277, 284
- EPA, vi, vii, x, 3, 10, 22, 26, 27, 31, 33, 38, 61, 64, 65, 66, 169, 173, 175, 185, 186, 188, 195, 206, 209, 211, 252, 253, 261, 267, 272, 273, 277, 278, 284, 332
- Escapement, 2, 3, 4, 6, 26, 37, 59, 60, 61, 65, 66, 76, 77, 109, 128, 180, 194, 208, 222, 224, 227, 233, 234, 237, 252, 262, 270, 273, 276, 280, 281, 296, 326, 327
- Essential fish habitat, 17, 27, 31, 48, 49, 52, 223, 255, 256, 265, 278, 285, 360
- Exempted fishing permit, vii, x, 1, 126, 322, 324, 357

FDA, 3, 31, 38, 61, 65, 128, 170, 185, 211, 238, 252, 267, 296, 309, 346, 4, 3, 5, 6, 7  
 Feed, 3, 10, 25, 38, 54, 62, 66, 102, 118, 119, 122, 126, 128, 129, 133, 134, 185, 186, 189, 191, 195, 196, 209, 211, 215, 237, 252, 261, 265, 271, 276, 278, 296, 325, 362, 2, 3, 2, 1, 2, 3, 4, 5, 7, 8  
 Fishery management unit, vii, 43, 47, 261, 301, 326  
 Fishing mortality, vii, 28, 45, 46, 68, 69, 74, 107, 109, 110, 115, 196, 242, 249, 250, 271, 272, 275, 276, 310  
 FMU, vii, 43, 44, 45, 47, 219, 221, 222, 223, 224, 255, 256, 267, 302  
 Framework procedure, 7, 75, 77, 79, 80, 81, 244, 245, 246, 247, 264, 311, 312, 328  
 Genetically modified, 8, 44, 46, 219, 250, 261, 273, 274, 276, 280, 281, 284, 285, 286  
 Genetically modified organism, 3, 31, 36, 46, 209, 316, 325  
 Highly migratory species, 4, 43, 45, 219, 262, 271, 275, 302, 326  
 HMS, vii, 45, 46, 219, 250, 270, 272, 275  
 Hurricane, 32, 68, 153, 159, 316  
 Law enforcement, 46, 66, 205, 206, 214, 215, 221, 222, 236, 313  
 Marine mammals, 6, 33, 35, 38, 48, 49, 50, 51, 62, 66, 75, 76, 77, 78, 112, 115, 128, 190, 191, 206, 210, 211, 212, 223, 224, 225, 226, 232, 237, 253, 276, 283, 284, 295, 296, 303, 304, 328, 336, 337  
 Marine protected areas, 5, 27, 51, 53, 96, 228, 230, 257, 276, 304, 327, 336  
 Maximum sustainable yield, viii, xi, 1, 16, 69, 255, 310  
 Mitigate, 2, 7, 8, 17, 26, 35, 40, 64, 66, 69, 80, 213, 236, 237, 239, 246, 251, 260, 261, 262, 263, 264, 265, 268, 270, 274, 275, 276, 277, 281, 283, 285, 286, 298, 309, 316, 329  
 MMS, viii, 10, 31, 36, 60, 61, 65, 85, 88, 133, 170, 176, 209, 210, 234, 252, 268, 277, 284, 343, 344, 355, 356, 5, 6  
 Monitoring, 3, 8, 17, 33, 34, 35, 37, 38, 42, 54, 61, 66, 74, 78, 79, 81, 117, 128, 169, 171, 172, 185, 188, 189, 190, 191, 195, 200, 206, 207, 209, 210, 211, 215, 238, 239, 242, 244, 246, 252, 256, 257, 258, 261, 272, 273, 274, 295, 296, 309, 312, 313, 325, 329, 336, 339, 345, 350, 361, 362, 363, 364  
 MSY, vii, viii, xi, 1, 6, 7, 16, 17, 23, 69, 70, 71, 74, 75, 76, 77, 78, 79, 80, 81, 106, 107, 109, 110, 111, 240, 241, 243, 244, 245, 246, 247, 249, 272, 286, 310, 311, 312, 328  
 National Offshore Aquaculture Act, 12, 16, 36, 186, 209, 217, 299  
 National Standard, iv, 17, 18, 23, 25, 35, 36, 45, 59, 72, 150, 151, 220, 242, 248, 249, 250, 251, 252, 253, 254, 259, 271, 320, 352  
 Native, 2, 3, 4, 8, 19, 26, 29, 43, 44, 45, 46, 47, 68, 126, 171, 172, 177, 178, 179, 181, 184, 201, 219, 220, 221, 222, 250, 261, 272, 273, 274, 275, 276, 280, 281, 282, 284, 285, 289, 290, 300, 301, 302, 326, 334, 335, 354, 361  
 Net pen, 4, 6, 27, 33, 38, 47, 48, 49, 50, 51, 52, 53, 57, 59, 60, 92, 132, 169, 173, 191, 209, 210, 223, 224, 225, 226, 228, 229, 233, 234, 236, 262, 279, 281, 284, 303, 304, 307, 315, 332, 354  
 Nutrient, 89, 181, 187, 278, 285, 362  
 Nutrient loading, 26, 57, 89, 229, 271, 285  
 Oil platforms, 342  
 Operational permit, 2, 197, 198, 324  
 Operational requirements, 2, 21, 22, 30, 34, 35, 37, 39, 40, 42, 46, 78, 79, 81, 205, 206, 207, 209, 211, 212, 213, 214, 215, 221, 246, 260, 273, 294, 295, 297, 298, 312, 315, 316, 324, 329

Optimum yield, viii, xi, 1, 7, 16, 17, 23, 45, 69, 248, 249, 255, 256, 270, 279, 310, 328

Overfishing, 7, 9, 17, 23, 25, 27, 45, 70, 72, 74, 105, 106, 107, 108, 109, 110, 111, 115, 144, 196, 242, 248, 249, 250, 253, 254, 255, 258, 259, 269, 270, 271, 272, 275, 311, 328

OY, viii, xi, 1, 6, 7, 16, 17, 23, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 106, 107, 133, 204, 208, 240, 241, 242, 243, 244, 245, 246, 247, 249, 251, 256, 259, 263, 272, 274, 275, 286, 310, 311, 312, 328

pathogen, 3, 6, 27, 34, 37, 38, 62, 65, 67, 182, 184, 207, 210, 215, 327

Permit duration, 3, 41, 42, 216, 217, 218, 261, 273, 299, 325, 1

Permit renewal, 218, 239

Public health, 4, 48, 49, 50, 51, 223, 225, 226, 281, 282, 303, 304, 313, 326

Recordkeeping, 2, 6, 7, 8, 18, 21, 26, 27, 35, 41, 42, 46, 61, 63, 64, 65, 66, 68, 69, 78, 79, 80, 81, 175, 198, 199, 208, 216, 218, 236, 237, 238, 239, 245, 247, 252, 256, 258, 261, 263, 271, 273, 274, 275, 276, 280, 282, 286, 309, 310, 316, 327, 329

Reporting, 2, 6, 7, 15, 18, 21, 22, 26, 27, 29, 33, 35, 37, 38, 41, 42, 46, 61, 63, 64, 65, 66, 68, 69, 78, 79, 80, 81, 129, 175, 198, 199, 201, 203, 208, 209, 210, 216, 218, 221, 236, 237, 238, 239, 245, 247, 252, 253, 256, 258, 261, 263, 264, 271, 273, 274, 275, 276, 280, 282, 286, 289, 291, 292, 295, 297, 309, 310, 314, 316, 325, 327, 329

Restricted access zone, 5, 33, 58, 59, 60, 61, 210, 233, 234, 235, 236, 263, 278, 306, 307, 308, 317, 318, 327

Safety, 4, 14, 28, 38, 48, 49, 50, 51, 53, 59, 60, 87, 96, 97, 170, 185, 198, 200, 223, 225, 226, 228, 234, 249, 254, 255, 257, 281, 282, 288, 303, 304, 313, 326

Siting criteria, 2, 5, 53, 199, 251, 277, 278, 280, 285, 337

Siting permit, 2, 20, 22, 36, 51, 195, 197, 199, 209, 227, 252, 260, 293, 304, 324

Status determination criteria, 6, 69, 70, 75, 107, 240, 243, 246, 263, 270, 310, 311, 328

Threatened species, 4, 31, 43, 208, 219, 254, 262, 271, 283, 315, 326, 331

Transgenic, 3, 4, 8, 26, 27, 31, 34, 35, 36, 37, 44, 46, 74, 206, 207, 208, 209, 222, 250, 260, 273, 276, 280, 282, 285, 316, 325

USCG, ix, 31, 59, 61, 65, 87, 170, 210, 212, 233, 268, 273, 277, 284, 295, 315

User conflicts, 10, 11, 17, 18, 52, 255, 273, 274, 327

## **APPENDIX A - NMFS EXEMPTED FISHING PERMIT (50CFR 600.745)**

### **Sec. 600.745 Scientific research activity, exempted fishing, and exempted educational activity.**

- (a) Scientific research activity. Nothing in this section is intended to inhibit or prevent any scientific research activity conducted by a scientific research vessel. Persons planning to conduct scientific research activities in the EEZ are encouraged to submit to the appropriate Regional Administrator, Director, or designee, 60 days or as soon as practicable prior to its start, a scientific research plan for each scientific cruise. The Regional Administrator, Director, or designee will acknowledge notification of scientific research activity by issuing to the operator or master of that vessel, or to the sponsoring institution, a letter of acknowledgment. This letter of acknowledgment is separate and distinct from any permit required by any other applicable law. If the Regional Administrator, Director, or designee, after review of a research plan, determines that it does not constitute scientific research but rather fishing, the Regional Administrator, Director, or designee will inform the applicant as soon as practicable and in writing. The Regional Administrator, Director, or designee may also make recommendations to revise the research plan to make the cruise acceptable as scientific research activity or recommend the applicant request an EFP. In order to facilitate identification of activity as scientific research, persons conducting scientific research activities are advised to carry a copy of the scientific research plan and the letter of acknowledgment on board the scientific research vessel. Activities conducted in accordance with a scientific research plan acknowledged by such a letter are presumed to be scientific research activity. The presumption may be overcome by showing that an activity does not fit the definition of scientific research [[Page 83]] activity or is outside the scope of the scientific research plan.
- (b) Exempted fishing.--(1) General. A NMFS Regional Administrator or Director may authorize, for limited testing, public display, data collection, exploratory, health and safety, environmental cleanup, and/or hazard removal purposes, the target or incidental harvest of species managed under an FMP or fishery regulations that would otherwise be prohibited. Exempted fishing may not be conducted unless authorized by an EFP issued by a Regional Administrator or Director in accordance with the criteria and procedures specified in this section. The Regional Administrator or Director may charge a fee to recover the administrative expenses of issuing an EFP. The amount of the fee will be calculated, at least annually, in accordance with procedures of the NOAA Handbook for determining administrative costs of each special product or service; the fee may not exceed such costs. Persons may contact the appropriate Regional Administrator or Director to find out the applicable fee. (2) Application. An applicant for an EFP shall submit a completed application package to the appropriate Regional Administrator or Director, as soon as practicable and at least 60 days before the desired effective date of the EFP. Submission of an EFP application less than 60 days before the desired effective date of the EFP may result in a delayed effective date because of review requirements.

The application package must include payment of any required fee as specified by paragraph (b)(1) of this section, and a written application that includes, but is not limited to, the following information: (i) The date of the application. (ii) The applicant's name, mailing address, and telephone number. (iii) A statement of the purposes and goals of the exempted fishery for which an EFP is needed, including justification for issuance of the EFP. (iv) For each vessel to be covered by the EFP, as soon as the information is available and before operations begin under the EFP: (A) A copy of the USCG documentation, state license, or registration of each vessel, or the information contained on the appropriate document. (B) The current name, address, and telephone number of the owner and master, if not included on the document provided for the vessel. (v) The species (target and incidental) expected to be harvested under the EFP, the amount(s) of such harvest necessary to conduct the exempted fishing, the arrangements for disposition of all regulated species harvested under the EFP, and any anticipated impacts on marine mammals or endangered species. (vi) For each vessel covered by the EFP, the approximate time(s) and place(s) fishing will take place, and the type, size, and amount of gear to be used. (vii) The signature of the applicant. (viii) The Regional Administrator or Director, as appropriate, may request from an applicant additional information necessary to make the determinations required under this section. An incomplete application or an application for which the appropriate fee has not been paid will not be considered until corrected in writing and the fee paid. An applicant for an EFP need not be the owner or operator of the vessel(s) for which the EFP is requested. (3) Issuance. (i) The Regional Administrator or Director, as appropriate, will review each application and will make a preliminary determination whether the application contains all of the required information and constitutes an activity appropriate for further consideration. If the Regional Administrator or Director finds that any application does not warrant further consideration, both the applicant and the affected Council(s) will be notified in writing of the reasons for the decision. If the Regional Administrator or Director determines that any application warrants further consideration, notification of receipt of the application will be published in the *Federal Register* with a brief description of the proposal, and the intent of NMFS to issue an EFP. Interested persons will be given a 15- to 45-day opportunity to comment and/or comments will be requested during public testimony at a Council meeting. The notification may establish a cut-off date for [[Page 84]] receipt of additional applications to participate in the same, or a similar, exempted fishing activity. The Regional Administrator or Director also will forward copies of the application to the Council(s), the USCG, and the appropriate fishery management agencies of affected states, accompanied by the following information: (A) The effect of the proposed EFP on the target and incidental species, including the effect on any TAC. (B) A citation of the regulation or regulations that, without the EFP, would prohibit the proposed activity. (C) Biological information relevant to the proposal, including appropriate statements of environmental impacts, including impacts on marine mammals and threatened or endangered species. (ii) If the application is complete and warrants additional consultation, the Regional Administrator or Director may consult with the appropriate Council(s) concerning the permit application during the period in which comments have been requested. The Council(s) or the Administrator or Regional Administrator shall notify the applicant in advance of any meeting at which the application will be considered, and offer the applicant the opportunity to appear in support of the application. (iii) As soon as practicable after receiving responses from the agencies

identified in paragraph (b)(3)(i) of this section, and/or after the consultation, if any, described in paragraph (b)(3)(ii) of this section, the Regional Administrator or Director shall notify the applicant in writing of the decision to grant or deny the EFP, and, if denied, the reasons for the denial. Grounds for denial of an EFP include, but are not limited to, the following: (A) The applicant has failed to disclose material information required, or has made false statements as to any material fact, in connection with his or her application; or (B) According to the best scientific information available, the harvest to be conducted under the permit would detrimentally affect the well-being of the stock of any regulated species of fish, marine mammal, or threatened or endangered species in a significant way; or (C) Issuance of the EFP would have economic allocation as its sole purpose; or (D) Activities to be conducted under the EFP would be inconsistent with the intent of this section, the management objectives of the FMP, or other applicable law; or (E) The applicant has failed to demonstrate a valid justification for the permit; or (F) The activity proposed under the EFP could create a significant enforcement problem. (iv) The decision of a Regional Administrator or Director to grant or deny an EFP is the final action of NMFS. If the permit, as granted, is significantly different from the original application, or is denied, NMFS may publish notification in the *Federal Register* describing the exempted fishing to be conducted under the EFP or the reasons for denial. (v) The Regional Administrator or Director may attach terms and conditions to the EFP consistent with the purpose of the exempted fishing, including, but not limited to: (A) The maximum amount of each regulated species that can be harvested and landed during the term of the EFP, including trip limitations, where appropriate. (B) The number, size(s), name(s), and identification number(s) of the vessel(s) authorized to conduct fishing activities under the EFP. (C) The time(s) and place(s) where exempted fishing may be conducted. (D) The type, size, and amount of gear that may be used by each vessel operated under the EFP. (E) The condition that observers, a vessel monitoring system, or other electronic equipment be carried on board vessels operated under an EFP, and any necessary conditions, such as pre-deployment notification requirements. (F) Reasonable data reporting requirements. (G) Other conditions as may be necessary to assure compliance with the purposes of the EFP, consistent with the objectives of the FMP and other applicable law. (H) Provisions for public release of data obtained under the EFP that are consistent with NOAA confidentiality of statistics procedures set out in subpart E. An applicant may be required to waive the right to confidentiality of information gathered while conducting exempted fishing as a condition of an EFP. (4) Duration. Unless otherwise specified in the EFP or a superseding notice or regulation, an EFP is effective for no longer than 1 year, unless revoked, suspended or modified. EFPs may be renewed following the application procedures in this section. (5) Alteration. Any permit that has been altered, erased, or mutilated is invalid. (6) Transfer. EFPs issued under this section are not transferable or assignable. An EFP is valid only for the vessel(s) for which it is issued. (7) Inspection. Any EFP issued under this section must be carried on board the vessel(s) for which it was issued. The EFP must be presented for inspection upon request of any authorized officer. (8) Sanctions. Failure of a permittee to comply with the terms and conditions of an EFP may be grounds for revocation, suspension, or modification of the EFP with respect to all persons and vessels conducting activities under the EFP. Any action taken to revoke, suspend, or modify an EFP for enforcement purposes will be governed by 15 CFR part 904, subpart D. (c) Reports. (1) Persons conducting scientific research activity are requested to

submit a copy of any cruise report or other publication created as a result of the cruise, including the amount, composition, and disposition of their catch, to the appropriate Science and Research Director. (2) Persons fishing under an EFP are required to report their catches to the appropriate Regional Administrator or Director, as specified in the EFP. (d) Exempted educational activities--(1) General. A NMFS Regional Administrator or Director may authorize, for educational purposes, the target or incidental harvest of species managed under an FMP or fishery regulations that would otherwise be prohibited. The decision of a Regional Administrator or Director to grant or deny an exempted educational activity authorization is the final action of NMFS. Exempted educational activities may not be conducted unless authorized in writing by a Regional Administrator or Director in accordance with the criteria and procedures specified in this section. Such authorization will be issued without charge. (2) Application. An applicant for an exempted educational activity authorization shall submit to the appropriate Regional Administrator or Director, at least 15 days before the desired effective date of the authorization, a written application that includes, but is not limited to, the following information: (i) The date of the application. (ii) The applicant's name, mailing address, and telephone number. (iii) A brief statement of the purposes and goals of the exempted educational activity for which authorization is requested, including a general description of the arrangements for disposition of all species collected. (iv) Evidence that the sponsoring institution is a valid educational institution, such as accreditation by a recognized national or international accreditation body. (v) The scope and duration of the activity. (vi) For each vessel to be covered by the authorization: (A) A copy of the U.S. Coast Guard documentation, state license, or registration of the vessel, or the information contained on the appropriate document. (B) The current name, address, and telephone number of the owner and master, if not included on the document provided for the vessel. (vii) The species and amounts expected to be caught during the exempted educational activity. (viii) For each vessel covered by the authorization, the approximate time(s) and place(s) fishing will take place, and the type, size, and amount of gear to be used. (ix) The signature of the applicant. (x) The Regional Administrator or Director may request from an applicant additional information necessary to make the determinations required [[Page 86]] under this section. An incomplete application will not be considered until corrected in writing. (3) Issuance. (i) The Regional Administrator or Director, as appropriate, will review each application and will make a determination whether the application contains all of the required information, is consistent with the goals, objectives, and requirements of the FMP or regulations and other applicable law, and constitutes a valid exempted educational activity. The applicant will be notified in writing of the decision within 5 working days of receipt of the application. (ii) The Regional Administrator or Director may attach terms and conditions to the authorization, consistent with the purpose of the exempted educational activity, including, but not limited to: (A) The maximum amount of each regulated species that may be harvested. (B) The time(s) and place(s) where the exempted educational activity may be conducted. (C) The type, size, and amount of gear that may be used by each vessel operated under the authorization. (D) Reasonable data reporting requirements. (E) Such other conditions as may be necessary to assure compliance with the purposes of the authorization, consistent with the objectives of the FMP or regulations. (F) Provisions for public release of data obtained under the authorization, consistent with NOAA confidentiality of statistics procedures in subpart E. An applicant may be required to waive

the right to confidentiality of information gathered while conducting exempted educational activities as a condition of the authorization. (iii) The authorization will specify the scope of the authorized activity and will include, at a minimum, the duration, vessel(s), species and gear involved in the activity, as well as any additional terms and conditions specified under paragraph (d)(3)(ii) of this section. (4) Duration. Unless otherwise specified, authorization for an exempted educational activity is effective for no longer than 1 year, unless revoked, suspended, or modified. Authorizations may be renewed following the application procedures in this section. (5) Alteration. Any authorization that has been altered, erased, or mutilated is invalid. (6) Transfer. Authorizations issued under this paragraph (d) are not transferable or assignable. (7) Inspection. Any authorization issued under this paragraph (d) must be carried on board the vessel(s) for which it was issued or be in possession of the applicant to which it was issued while the exempted educational activity is being conducted. The authorization must be presented for inspection upon request of any authorized officer. Activities that meet the definition of fishing, despite an educational purpose, are fishing. An authorization may allow covered fishing activities; however, fishing activities conducted outside the scope of an authorization for exempted educational activities are illegal. [61 FR 32540, June 24, 1996, as amended at 63 FR 7075, Feb. 12, 1998].

## **APPENDIX B – NATIONAL OFFSHORE AQUACULTURE ACT OF 2007 SUMMARY AND H.R. 2010 IH APRIL 24, 2007 INTRODUCED BILL**

The National Oceanic and Atmospheric Administration (NOAA), an agency within the U.S. Department of Commerce, is working to enhance/increase domestic seafood supply to meet the growing demand for all seafood products. Currently, over 80 percent of the seafood Americans consume is imported, and at least half of those imports are farmed seafood. Additional U.S. aquaculture can help the nation reduce its \$8 billion seafood trade deficit, provide additional jobs and revenue for coastal communities, and meet the growing consumer demand for safe, healthy seafood.

Right now, most U.S. marine aquaculture products come from shellfish, which are grown onshore or in coastal areas. However, new technology and equipment, and the promising results of open ocean aquaculture demonstration projects in state waters, are leading to opportunities for seafood farming further from the coast, in federal waters three to 200 miles off shore. The federal waters of the U.S. Exclusive Economic Zone cover 3.4 million square miles of ocean and hold promise for this new type of aquaculture.

While there are many potential benefits to offshore aquaculture, there are also barriers blocking the expansion of aquaculture into federal waters. Currently, there is no clear authority for the permitting of offshore aquaculture in federal waters. To address this challenge, the Administration will propose the *National Offshore Aquaculture Act of 2007* early in the 110<sup>th</sup> Congress. If enacted, the Act will establish the legal framework regarding permits, enforcement, and monitoring of aquaculture in federal waters. Specifically, the bill will:

- Authorize the Secretary of Commerce to issue offshore aquaculture permits.
- Require the Secretary of Commerce to establish environmental requirements.
- Require the Secretary of Commerce to work with other federal agencies to develop and implement a streamlined and coordinated permitting process for offshore aquaculture.
- Exempt permitted offshore aquaculture from fishing regulations that restrict size, season and harvest methods.
- Authorize the establishment of a research and development program for marine aquaculture.
- Authorize funding to carry out the Act and provide for enforcement of the Act.

The 2007 proposal includes requirements to ensure that offshore aquaculture proceeds in an environmentally responsible manner that is consistent with stated policy to protect wild stocks and the quality of marine ecosystems and is compatible with other uses of the marine environment. The intent of the Act is to complement rather than supersede

existing resource management authorities, so it specifically provides for coordination and consultation with other federal agencies, Fishery Management Councils, and coastal states.

In addition, the research and development provision of the act would authorize NOAA to fund the scientific research and the technology development necessary to help all types of domestic marine aquaculture to expand.

On a broad scale, the proposal will provide the necessary regulatory certainty to facilitate expansion of aquaculture in federal waters, where there is significant potential for development of the U.S. aquaculture industry. New technologies have been developed to better withstand extreme conditions of the offshore ocean environment, allowing this expansion to occur. By adopting these technologies, the United States can boost production of valuable marine species while creating jobs that contribute to economic development and the revitalization of depressed coastal communities. Additional domestic supplies of nutritious seafood can reduce pressure on wild fisheries. By adopting rigorous environmental standards for aquaculture, the United States can establish its leadership in development of sustainable uses of marine ecosystems, as an example for our trade partners, while leveling the playing field for U.S. fishery products. Because of competing uses, community interest, and ocean conditions, offshore aquaculture will be better suited to some areas of the country than others. However, the most immediate challenge is to establish clear rules to allow this type of aquaculture and, ultimately, allow the nation to take advantage of this new opportunity for seafood production in federal waters. At the same time, the federal government must ensure that human health, the marine environment, and wild stocks are protected.

Source: [www.noaa.gov/aquaculture](http://www.noaa.gov/aquaculture)

110th CONGRESS  
1st Session  
**H. R. 2010**

To provide the necessary authority to the Secretary of Commerce for the establishment and implementation of a regulatory system for offshore aquaculture in the United States Exclusive Economic Zone, and for other purposes.

**IN THE HOUSE OF REPRESENTATIVES**

**April 24, 2007**

Mr. RAHALL (for himself and Ms. BORDALLO) (both by request): introduced the following bill; which was referred to the Committee on Natural Resources, and in addition to the Committees on Ways and Means and Foreign Affairs, for a period to be subsequently determined by the Speaker, in each case for consideration of such provisions as fall within the jurisdiction of the committee concerned

**A BILL**

To provide the necessary authority to the Secretary of Commerce for the establishment and implementation of a regulatory system for offshore aquaculture in the United States Exclusive Economic Zone, and for other purposes.

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,*

**SECTION 1. SHORT TITLE.**

This Act may be cited as the 'National Offshore Aquaculture Act of 2007'.

**SEC. 2. FINDINGS.**

(a) It is the policy of the United States to:

- (1) Support an offshore aquaculture industry that will produce food and other valuable products, protect wild stocks and the quality of marine ecosystems, and be compatible with other uses of the Exclusive Economic Zone;
- (2) Encourage the development of environmentally responsible offshore aquaculture by authorizing offshore aquaculture operations and research;
- (3) Establish a permitting process for offshore aquaculture that encourages private investment in aquaculture operations and research, provides opportunity for public comment, and addresses the potential risks to and impacts (including cumulative impacts) on marine ecosystems, human health and safety, other ocean uses, and coastal communities from offshore aquaculture;
- (4) Promote, through public-private partnerships, research and development in marine aquaculture science, technology, and related social, economic, legal, and environmental management disciplines that will enable marine aquaculture operations to achieve operational objectives while protecting marine ecosystem quality.

(b) Offshore aquaculture activities within the Exclusive Economic Zone of the United States constitute activities with respect to which the United States has proclaimed sovereign rights and jurisdiction under Presidential Proclamation 5030 of March 10, 1983.

### **SEC. 3. DEFINITIONS.**

As used in this Act--

(a) The term 'coastal State' means a state of the United States in, or bordering on, the Atlantic, Pacific, or Arctic Ocean, the Gulf of Mexico, or Long Island Sound. The term also includes Puerto Rico, the Virgin Islands, Guam, the Commonwealth of the Northern Mariana Islands, the Trust Territories of the Pacific Islands, and American Samoa.

(b) The term 'coastline' means the line of ordinary low water along that portion of the coast that is in direct contact with the open sea and the line marking the seaward limit of inland waters.

(c) The term 'Exclusive Economic Zone' means, unless otherwise specified by the President in the public interest in a writing published in the *Federal Register*, a zone, the outer boundary of which is 200 nautical miles from the baseline from which the breadth of the territorial sea is measured, except as established by a maritime boundary treaty in force, or being provisionally applied by the United States or, in the absence of such a treaty where the distance between the United States and another nation is less than 400 nautical miles, a line equidistant between the United States and the other nation. Without affecting any Presidential Proclamation with regard to the establishment of the United States territorial sea or Exclusive Economic Zone, the inner boundary of that zone is--

(1) a line coterminous with the seaward boundary of each of the several coastal States, as defined in 43 U.S.C. 1312;

(2) a line three marine leagues from the coastline of the Commonwealth of Puerto Rico;

(3) a line three geographical miles from the coastlines of American Samoa, the United States Virgin Islands, and Guam;

(4) for the Commonwealth of the Northern Mariana Islands--

(A) its coastline, until such time as the Commonwealth of the Northern Mariana Islands is granted authority by the United States to regulate all fishing to a line seaward of its coastline, and

(B) upon the United States' grant of such authority, the line established by such grant of authority; and

(5) for any possession of the United States not referred to in subparagraph

(2), (3), or (4), the coastline of such possession.

Nothing in this definition shall be construed as diminishing the authority of the Department of Defense, the Department of the Interior or any other Federal department or agency.

(d) The term 'lessee' means any party to a lease, right-of-use and easement, or right-of-way, or an approved assignment thereof, issued pursuant to the Outer Continental Shelf Lands Act, 43 U.S.C. 1331 et seq.

- (e) The term 'marine species' means finfish, mollusks, crustaceans, marine algae, and all other forms of marine life, excluding marine mammals and birds.
- (f) The term 'offshore aquaculture' means all activities, including the operation of offshore aquaculture facilities, involved in the propagation and rearing, or attempted propagation and rearing, of marine species in the United States Exclusive Economic Zone.
- (g) The term 'offshore aquaculture facility' means: 1) an installation or structure used, in whole or in part, for offshore aquaculture; or 2) an area of the seabed or the subsoil used for offshore aquaculture of living organisms belonging to sedentary species.
- (h) The term 'offshore aquaculture permit' means an authorization issued under section 4(b) to raise specified marine species in a specific offshore aquaculture facility within a specified area of the Exclusive Economic Zone.
- (i) The term 'person' means any individual (whether or not a citizen or national of the United States), any corporation, partnership, association, or other non-governmental entity (whether or not organized or existing under the laws of any State), and State, local or tribal government or entity thereof, and, except as otherwise specified by the President in writing, the Federal Government or an entity thereof, and, to the extent specified by the President in writing, a foreign government or an entity thereof.
- (j) The term 'Secretary' means the Secretary of Commerce.

#### **SEC. 4. OFFSHORE AQUACULTURE PERMITS.**

##### **(a) General-**

(1) The Secretary shall establish, through rulemaking, in consultation as appropriate with other relevant Federal agencies, coastal States, and regional fishery management councils established under section 302 of the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1852), a process to make areas of the Exclusive Economic Zone available to eligible persons for the development and operation of offshore aquaculture facilities, which shall include:

- (A) Procedures and criteria necessary to issue and modify permits under this Act;
- (B) Procedures to coordinate the offshore aquaculture permitting process, and related siting, operations, environmental protection, monitoring, enforcement, research, and economic and social activities, with similar activities administered by other Federal agencies and coastal States;
- (C) Consideration of the potential environmental, social, economic, and cultural impacts of offshore aquaculture and inclusion, where appropriate, of permit conditions to address negative impacts;
- (D) Public notice and opportunity for public comment prior to issuance of offshore aquaculture permits;
- (E) Procedures to monitor and evaluate compliance with the provisions of offshore aquaculture permits, including the collection

of biological, chemical and physical oceanographic data, and social, production, and economic data; and

(F) Procedures for transferring permits from the original permit holder to a person meeting the eligibility criteria in section 4(b)(2)(A) and able to satisfy the requirements for bonds or other guarantees prescribed under section 4(c)(3).

(2) The Secretary shall prepare an analysis under the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.) with respect to the process for issuing permits.

(3) The Secretary shall periodically review the procedures and criteria for issuance of offshore aquaculture permits and modify them as appropriate, in consultation as appropriate with other Federal agencies, the coastal States, and regional fishery management councils, based on the best available science.

(4) The Secretary shall consult as appropriate with other Federal agencies and coastal States to identify the environmental requirements that apply to offshore aquaculture under existing laws and regulations. The Secretary shall establish through rulemaking, in consultation with appropriate Federal agencies, coastal States, and regional fishery management councils established under section 302 of the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1852), additional environmental requirements to address environmental risks and impacts associated with offshore aquaculture, to the extent necessary. The environmental requirements shall address, but are not limited to:

(A) risks to and impacts on natural fish stocks and fisheries, including safeguards needed to conserve genetic resources, to prevent or minimize the transmission of disease or parasites to wild stocks, and to prevent the escape of marine species that may cause significant environmental harm;

(B) risks to and impacts on marine ecosystems; biological, chemical and physical features of water quality and habitat; marine species, marine mammals and birds;

(C) cumulative effects of the aquaculture operation and other aquaculture operations in the vicinity of the proposed site;

(D) environmental monitoring, data archiving, and reporting by the permit holder;

(E) requirements that marine species propagated and reared through offshore aquaculture be species native to the geographic region unless a scientific risk analysis shows that the risk of harm to the marine environment from the offshore culture of non-indigenous or genetically modified marine species is negligible or can be effectively mitigated; and

(F) maintaining record systems to track inventory and movement of fish or other marine species in the offshore aquaculture facility or harvested from such facility, and, if necessary, tagging,

marking, or otherwise identifying fish or other marine species in the offshore aquaculture facility or harvested from such facility.

(5) The Secretary, in cooperation with other Federal agencies, shall:

(A) Collect information needed to evaluate the suitability of sites for offshore aquaculture; and

(B) Monitor the effects of offshore aquaculture on marine ecosystems and implement such measures as may be necessary to protect the environment. Measures may include, but are not limited to, temporary or permanent relocation of offshore aquaculture sites, a moratorium on additional sites within a prescribed area, and other appropriate measures as determined by the Secretary.

(b) Permits- Subject to the provisions of subsection (e), the Secretary may issue offshore aquaculture permits under such terms and conditions as the Secretary shall prescribe. Permits issued under this Act authorize the permit holder to conduct offshore aquaculture consistent with the provisions of this Act, regulations issued under this Act, any specific terms, conditions and restrictions applied to the permit by the Secretary, and other applicable law.

(1) PROCEDURES FOR ISSUANCE OF PERMITS-

(A) The applicant for an offshore aquaculture permit shall submit an application to the Secretary specifying the proposed location and type of operation, the marine species to be propagated or reared, or both, at the offshore aquaculture facility, and other design, construction, and operational information, as specified by regulation.

(B) Within 120 days after determining that a permit application is complete and has satisfied all applicable statutory and regulatory requirements, as specified by regulation, the Secretary shall issue or deny the permit. If the Secretary is unable to issue or deny a permit within this time period, the Secretary shall provide written notice to the applicant indicating the reasons for the delay and establishing a reasonable timeline for issuing or denying the permit.

(2) PERMIT CONDITIONS-

(A) An offshore aquaculture permit holder must (i) be a resident of the United States, (ii) be a corporation, partnership or other entity organized and existing under the laws of a State or the United States, or (iii) if neither (i) or (ii) applies, to the extent required by the Secretary by regulation after coordination with the Secretary of State, waive any immunity, and consent to the jurisdiction of the United States and its courts, for matters arising in relation to such permit, and appoint and maintain agents within the United States who are authorized to receive and respond to any legal process issued in the United States with respect to such permit holder.

(B) Subject to the provisions of subsection (e), the Secretary shall establish the terms, conditions, and restrictions that apply to

offshore aquaculture permits, and shall specify in the permits the duration, size, and location of the offshore aquaculture facility.

(C) Except for projects involving pilot-scale testing or farm-scale research on aquaculture science and technologies and offshore aquaculture permits requiring concurrence of the Secretary of the Interior under subsection 4(e)(1), the permit shall have a duration of 20 years, renewable thereafter at the discretion of the Secretary in up to 20-year increments. The duration of permits requiring concurrence of the Secretary of the Interior under subsection 4(e)(1) shall be developed in consultation as appropriate with the Secretary of the Interior, except that any such permit shall expire no later than the date that the lessee, or the lessee's operator, submits to the Secretary of the Interior a final application for the decommissioning and removal of an existing facility upon which an offshore aquaculture facility is located.

(D) At the expiration or termination of an offshore aquaculture permit for any reason, the permit holder shall remove all structures, gear, and other property from the site, and take other measures to restore the site as may be prescribed by the Secretary.

(E) Failure to begin offshore aquaculture operations within a reasonable period of time, or prolonged interruption of offshore aquaculture operations, may result in the revocation of the permit.

(3) If the Secretary determines that issuance of a permit is not in the national interest, the Secretary may decline to issue such a permit or may impose such conditions as necessary to address such concerns.

(c) Fees and Other Payments-

(1) The Secretary is authorized to establish, through regulations, application fees and annual permit fees. Such fees shall be deposited as offsetting collections in the Operations, Research, and Facilities (ORF) account. Fees may be collected and made available only to the extent provided in advance in appropriation Acts.

(2) The Secretary may reduce or waive applicable fees or other payments established under this section for facilities used primarily for research.

(3) The Secretary shall require the permit holder to post a bond or other form of financial guarantee, in an amount to be determined by the Secretary as sufficient to cover any unpaid fees, the cost of removing an offshore aquaculture facility at the expiration or termination of an offshore aquaculture permit, and other financial risks as identified by the Secretary.

(d) Compatibility With Other Uses-

(1) The Secretary shall consult as appropriate with other Federal agencies, coastal States, and regional fishery management councils to ensure that offshore aquaculture for which a permit is issued under this section is compatible with the use of the Exclusive Economic Zone for navigation, fishing, resource protection, recreation, national defense (including military readiness), mineral exploration and development, and other activities.

(2) The Secretary shall not authorize permits for new offshore aquaculture facilities within 12 miles of the coastline of a coastal State if that coastal State has submitted a written notice to the Secretary that the coastal State opposes such activities. This provision will not apply to permit applications received by the Secretary prior to the date the notice is received from a coastal State. A coastal State that transmitted such notice to the Secretary under this paragraph may revoke that notice in writing at any time.

(3) Federal agencies implementing this Act, persons subject to this Act, and coastal States seeking to review permit applications under this Act shall comply with the applicable section of the Coastal Zone Management Act (i.e., 16 U.S.C. 1456(c)(1), (c)(3)(A), (c)(3)(B) or (d)) and its corresponding Federal regulations.

(4) Offshore aquaculture conducted in accordance with permits issued pursuant to this Act is excluded from the definition of 'fishing' in the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1802(15)). The Secretary shall ensure, to the extent practicable, that offshore aquaculture does not interfere with conservation and management measures promulgated under the Magnuson-Stevens Fishery Conservation and Management Act.

(5) The Secretary may promulgate regulations that the Secretary finds to be reasonable and necessary to protect offshore aquaculture facilities, and, where appropriate, shall request that the Secretary of the department in which the Coast Guard is operating establish navigational safety zones around such facilities. In addition, in the case of any offshore aquaculture facility described in section 4(e)(1), the Secretary of the department in which the Coast Guard is operating shall consult with the Secretary of the Interior before designating such a zone.

(6) After consultation with the Secretary, the Secretary of State, and the Secretary of Defense, the Secretary of the department in which the Coast Guard is operating may designate a zone of appropriate size around and including any offshore aquaculture facility for the purpose of navigational safety. In such a zone, no installations, structures, or uses will be allowed that are incompatible with the operation of the offshore aquaculture facility. The Secretary of the department in which the Coast Guard is operating may define, by rulemaking, activities that are allowed within such a zone.

(7)(A) Subject to paragraph (B), if the Secretary, after consultation with Federal agencies as appropriate and after affording the permit holder notice and an opportunity to be heard, determines that suspension, modification, or revocation of a permit is in the national interest, the Secretary may suspend, modify, or revoke such permit.

(B) If the Secretary determines that an emergency exists that poses a risk to the safety of humans, to the marine environment or marine species, or to the security of the United States and that requires suspension, modification, or

revocation of a permit, the Secretary may suspend, modify, or revoke the permit for such time as the Secretary may determine necessary to meet the emergency. The Secretary shall afford the permit holder a prompt post-suspension or post-modification opportunity to be heard regarding the suspension, modification, or revocation.

(8) Permits issued under this Act do not supersede or substitute for any other authorization required under applicable Federal or State law or regulation.

(e) Actions Affecting the Outer Continental Shelf-

(1) The Secretary shall obtain the concurrence of the Secretary of the Interior on permits for offshore aquaculture facilities located:

(A) on leases, right-of-use and easements, or rights of way authorized or permitted under the Outer Continental Shelf Lands Act, as amended (43 U.S.C. 1331, et seq.), or

(B) within 1 mile of any other facility permitted or for which a plan has been approved under the Outer Continental Shelf Lands Act.

(2) Offshore aquaculture may not be located on facilities subject to section 4(e)(1)(A) without the prior consent of the lessee, its designated operator, and owner of the facility.

(3) The Secretary of the Interior shall review and approve any agreement between a lessee, designated operator, and owner of a facility subject to this subsection and a prospective aquaculture operator to ensure that it is consistent with the Federal lease terms, Department of the Interior regulations, and the Secretary of the Interior's role in the protection of the marine environment, property, or human life or health. An agreement under this subsection shall be part of the information reviewed pursuant to the Coastal Zone Management Act review process described in subsection 4(e)(4) and shall not be subject to a separate Coastal Zone Management Act review.

(4) Coordinated Coastal Zone Management Act review

(A) If the applicant for an offshore aquaculture facility that will utilize a facility subject to this subsection is required to submit to a coastal State a consistency certification for its aquaculture application under section 307(c)(3)(A) of the Coastal Zone Management Act (16 U.S.C. 1456(c)(3)(A)), the coastal State's review under the Coastal Zone Management Act and corresponding Federal regulations shall also include any modification to a lessee's approved plan or other document for which a consistency certification would otherwise be required under applicable Federal regulations, including changes to its plan for decommissioning any facilities, resulting from or necessary for the issuance of the offshore aquaculture permit, provided that information related to such modifications or changes is received by the coastal State at the time the coastal State receives the offshore

aquaculture permit applicant's consistency certification. In this case, lessees are not required to submit a separate consistency certification for any such modification or change under section 307(c)(3)(B) of the Coastal Zone Management Act (16 U.S.C. 1456(c)(3)(B)) and the coastal State's concurrence or objection, or presumed concurrence, under section 307(c)(3)(A) of the Coastal Zone Management Act (16 U.S.C. 1456(c)(3)(A)) in a consistency determination for the offshore aquaculture permit, shall apply to both the offshore aquaculture permit and to any related modifications or changes to a lessee's plan approved under the Outer Continental Shelf Lands Act.

(B) If a coastal State is not authorized by section 307(c)(3)(A) of the Coastal Zone Management Act (16 U.S.C. 1456(c)(3)(A)) and corresponding Federal regulations to review an offshore aquaculture application submitted under this Act, then any modifications or changes to a lessee's approved plan or other document requiring approval from the Department of the Interior, shall be subject to coastal State review pursuant to the requirements of section 307(c)(3)(B) of the Coastal Zone Management Act (16 U.S.C. 1456(c)(3)(B)), if a consistency certification for those modifications or changes is required under applicable Federal regulations.

(5) For offshore aquaculture located on facilities subject to this subsection, the aquaculture permit holder and all parties that are or were lessees of the lease on which the facilities are located during the term of the offshore aquaculture permit shall be jointly and severally liable for the removal of any construction or modifications related to aquaculture operations if the aquaculture permit holder fails to do so and bonds established under this Act for aquaculture operations prove insufficient to cover those obligations. This subsection does not affect obligations to decommission facilities under the Outer Continental Shelf Lands Act.

(6) For aquaculture projects or operations subject to this subsection, the Secretary of the Interior is authorized to:

(A) Promulgate such rules and regulations as are necessary and appropriate to carry out the provisions of this subsection;

(B) Require and enforce such additional terms or conditions as the Secretary of the Interior deems necessary to protect the marine environment, property, or human life or health to ensure the compatibility of aquaculture operations with all activities for which permits have been issued under the Outer Continental Shelf Lands Act;

(C) Issue orders to the offshore aquaculture permit holder to take any action the Secretary of the Interior deems necessary to ensure safe operations on the facility to protect the marine environment, property, or human life or health. Failure to comply with the

Secretary of the Interior's orders will be deemed to constitute a violation of the Outer Continental Shelf Lands Act; and  
(D) Enforce all requirements contained in such regulations, lease terms and conditions and orders pursuant to the Outer Continental Shelf Lands Act.

## **SEC. 5. RESEARCH AND DEVELOPMENT.**

- (a) In consultation as appropriate with other Federal agencies, the Secretary may establish and conduct an integrated, multidisciplinary, scientific research and development program to further marine aquaculture technologies that are compatible with the protection of marine ecosystems.
- (b) The Secretary is authorized to conduct research and development in partnership with offshore aquaculture permit holders.
- (c) The Secretary, in collaboration with the Secretary of Agriculture, shall conduct research to reduce the use of wild fish in aquaculture feeds, including but not limited to the substitution of seafood processing wastes, cultured marine algae and microbial sources of nutrients important for human health and nutrition, agricultural crops, and other products.

## **SEC. 6. ADMINISTRATION.**

- (a) The Secretary shall promulgate such regulations as are necessary and appropriate to carry out the provisions of this Act. The Secretary may at any time amend such regulations, and such regulations shall, as of their effective date, apply to all operations conducted pursuant to permits issued under the provisions of this Act, regardless of the date of the issuance of such permit.
- (b) The Secretary shall have the authority to enter into and perform such contracts, leases, grants, or cooperative agreements as may be necessary to carry out the purposes of this Act and on such terms as the Administrator of the National Oceanic and Atmospheric Administration deems appropriate.
- (c) For purposes related to the enforcement of this Act, the Secretary is authorized to use, with their consent and with or without reimbursement, the land, services, equipment, personnel, and facilities of any department, agency or instrumentality of the United States, or of any state, local government, Indian tribal government, Territory or possession, or of any political subdivision thereof, or of any foreign government or international organization.
- (d) Authority to Utilize Grant Funds
  - (1) Except as provided in paragraph (2), the Secretary is authorized to apply for, accept, and obligate research grant funding from any Federal source operating competitive grant programs where such funding furthers the purpose of this Act.
  - (2) The Secretary may not apply for, accept, or obligate any grant funding under paragraph (1) for which the granting agency lacks authority to grant funds to Federal agencies, or for any purpose or subject to conditions that are prohibited by law or regulation.

- (3) Appropriated funds may be used to satisfy a requirement to match grant funds with recipient agency funds, except that no grant may be accepted that requires a commitment in advance of appropriations.
- (4) Funds received from grants shall be deposited in the National Oceanic and Atmospheric Administration account that serves to accomplish the purpose for which the grant was awarded.

(e) Nothing in this Act shall be construed to displace, supersede, or limit the jurisdiction, responsibilities or rights of any Federal or State agency, or Indian Tribe or Alaska Native organization, under any Federal law or treaty.

(f) The Constitution, laws, and treaties of the United States shall apply to an offshore aquaculture facility located in the Exclusive Economic Zone for which a permit has been issued or is required under this Act and to activities in the Exclusive Economic Zone connected, associated, or potentially interfering with the use or operation of such facility, in the same manner as if such facility were an area of exclusive Federal jurisdiction located within a State. Nothing in this Act shall be construed to relieve, exempt, or immunize any person from any other requirement imposed by an applicable Federal law, regulation, or treaty. Nothing in this Act shall be construed to confer citizenship to a person by birth or through naturalization or to entitle a person to avail himself of any law pertaining to immigration, naturalization, or nationality.

(g) The law of the nearest adjacent coastal State, now in effect or hereafter adopted, amended, or repealed, is declared to be the law of the United States, and shall apply to any offshore aquaculture facility for which a permit has been issued pursuant to this Act, to the extent applicable and not inconsistent with any provision or regulation under this Act or other Federal laws and regulations now in effect or hereafter adopted, amended, or repealed. All such applicable laws shall be administered and enforced by the appropriate officers and courts of the United States. For purposes of this subsection, the nearest adjacent coastal State shall be that State whose seaward boundaries, if extended beyond 3 nautical miles, would encompass the site of the offshore aquaculture facility. State taxation laws shall not apply to offshore aquaculture facilities in the Exclusive Economic Zone.

## **SEC. 7. AUTHORIZATION OF APPROPRIATIONS.**

There are authorized to be appropriated to the Secretary \$4,052,000 in fiscal year 2008 and thereafter such sums as may be necessary for purposes of carrying out the provisions of this Act.

## **SEC. 8. UNLAWFUL ACTIVITIES.**

It is unlawful for any person--

- (a) to falsify any information required to be reported, communicated, or recorded pursuant to this Act or any regulation or permit issued under this Act, or to fail to submit in a timely fashion any required information, or to fail to report to the Secretary immediately any change in circumstances that has the effect of rendering any such information false, incomplete, or misleading;

- (b) to engage in offshore aquaculture within the Exclusive Economic Zone of the United States or operate an offshore aquaculture facility within the Exclusive Economic Zone of the United States, except pursuant to a valid permit issued under this Act;
- (c) to refuse to permit an authorized officer to conduct any lawful search or lawful inspection in connection with the enforcement of this Act or any regulation or permit issued under this Act;
- (d) to forcibly assault, resist, oppose, impede, intimidate, or interfere with an authorized officer in the conduct of any search or inspection in connection with the enforcement of this Act or any regulation or permit issued under this Act;
- (e) to resist a lawful arrest or detention for any act prohibited by this section;
- (f) to interfere with, delay, or prevent, by any means, the apprehension, arrest, or detection of another person, knowing that such person has committed any act prohibited by this section;
- (g) to import, export, sell, receive, acquire or purchase in interstate or foreign commerce any marine species in violation of this Act or any regulation or permit issued under this Act;
- (h) upon the expiration or termination of any aquaculture permit for any reason, fail to remove all structures, gear, and other property from the site, or take other measures, as prescribed by the Secretary, to restore the site;
- (i) to violate any provision of this Act, any regulation promulgated under this Act, or any term or condition of any permit issued under this Act; or
- (j) to attempt to commit any act described in subsections (a), (b), (g), (h) or (i).

## **SEC. 9. ENFORCEMENT PROVISIONS.**

- (a) Duties of Secretaries- Subject to sections 4(e)(6)(B) and (D), this Act shall be enforced by the Secretary and the Secretary of the department in which the Coast Guard is operating.
- (b) Powers of Enforcement-
  - (1) Any officer who is authorized pursuant to subsection (a) of this section by the Secretary or the Secretary of the department in which the Coast Guard is operating to enforce the provisions of this Act may--
    - (A) with or without a warrant or other process--
      - (i) arrest any person, if the officer has reasonable cause to believe that such person has committed or is committing an act prohibited by section 8 of this Act;
      - (ii) search or inspect any offshore aquaculture facility and any related land-based facility;
      - (iii) seize any offshore aquaculture facility (together with its equipment, records, furniture, appurtenances, stores, and cargo), and any vessel or vehicle, used or employed in aid of, or with respect to which it reasonably appears that such offshore aquaculture facility was used or employed in aid of, the violation of any provision of this Act or any regulation or permit issued under this Act;

(iv) seize any marine species (wherever found) retained, in any manner, in connection with or as a result of the commission of any act prohibited by section 8 of this Act;  
(v) seize any evidence related to any violation of any provision of this Act or any regulation or permit issued under this Act;

(B) execute any warrant or other process issued by any court of competent jurisdiction; and

(C) exercise any other lawful authority.

(2) Any officer who is authorized pursuant to subsection (a) of this section by the Secretary or the Secretary of the department in which the Coast Guard is operating to enforce the provisions of this Act may make an arrest without a warrant for (i) an offense against the United States committed in his presence, or (ii) for a felony cognizable under the laws of the United States, if he has reasonable grounds to believe that the person to be arrested has committed or is committing a felony. Any such authorized person may execute and serve a subpoena, arrest warrant or search warrant issued in accordance with Rule 41 of the Federal Rules of Criminal Procedure, or other warrant of civil or criminal process issued by any officer or court of competent jurisdiction for enforcement of the Act, or any regulation or permit issued under this Act.

(c) Issuance of Citations- If any authorized officer finds that a person is engaging in or has engaged in offshore aquaculture in violation of any provision of this Act, such officer may issue a citation to that person.

(d) Liability for Costs- Any person who violates this Act, or a regulation or permit issued under this Act, shall be liable for the cost incurred in storage, care, and maintenance of any marine species or other property seized in connection with the violation.

## **SEC. 10. CIVIL ENFORCEMENT AND PERMIT SANCTIONS.**

### **(a) Civil Administrative Penalties-**

(1) Any person who is found by the Secretary, after notice and opportunity for a hearing in accordance with section 554 of Title 5, United States Code, to have violated this Act, or a regulation or permit issued under this Act, shall be liable to the United States for a civil penalty. The amount of the civil penalty under this paragraph shall not exceed \$200,000 for each violation. Each day of a continuing violation shall constitute a separate violation.

(2) COMPROMISE OR OTHER ACTION BY THE SECRETARY- The Secretary may compromise, modify, or remit, with or without conditions, any civil administrative penalty which is or may be imposed under this section and that has not been referred to the Attorney General for further enforcement action.

(b) Civil Judicial Penalties- Any person who violates any provision of this Act, or any regulation or permit issued thereunder, shall be subject to a civil penalty not to exceed \$250,000 for each such violation. Each day of a continuing violation

shall constitute a separate violation. The Attorney General, upon the request of the Secretary, may commence a civil action in an appropriate district court of the United States, and such court shall have jurisdiction to award civil penalties and such other relief as justice may require. In determining the amount of a civil penalty, the court shall take into account the nature, circumstances, extent, and gravity of the prohibited acts committed and, with respect to the violator, the degree of culpability, any history of prior violations and such other matters as justice may require. In imposing such penalty, the district court may also consider information related to the ability of the violator to pay.

(c) Permit Sanctions-

(1) In any case in which--

- (A) an offshore aquaculture facility has been used in the commission of an act prohibited under section 8 of this Act;
- (B) the owner or operator of an offshore aquaculture facility or any other person who has been issued or has applied for a permit under section 4 of this Act has acted in violation of section 8 of this Act;
- or
- (C) any amount in settlement of a civil forfeiture imposed on an offshore aquaculture facility or other property, or any civil penalty or criminal fine imposed under this Act or imposed on any other person who has been issued or has applied for a permit under any fishery resource statute enforced by the Secretary, has not been paid and is overdue, the Secretary may--
  - (i) revoke any permit issued with respect to such offshore aquaculture facility or applied for by such a person under this Act, with or without prejudice to the issuance of subsequent permits;
  - (ii) suspend such permit for a period of time considered by the Secretary to be appropriate;
  - (iii) deny such permit; or
  - (iv) impose additional conditions and restrictions on such permit.

(2) In imposing a sanction under this subsection, the Secretary shall take into account--

- (A) the nature, circumstances, extent, and gravity of the prohibited acts for which the sanction is imposed; and
- (B) with respect to the violator, the degree of culpability, any history of prior violations, and such other matters as justice may require.

(3) Transfer of ownership of an offshore aquaculture facility, by sale or otherwise, shall not extinguish any permit sanction that is in effect or is pending at the time of transfer of ownership. Before executing the transfer of ownership of an offshore aquaculture facility, by sale or otherwise, the owner shall disclose in writing to the prospective transferee the existence of any permit sanction that will be in effect or pending with respect to the offshore aquaculture facility at the time of the transfer. The Secretary may

waive or compromise a sanction in the case of a transfer pursuant to court order.

(4) In the case of any permit that is suspended under this subsection for nonpayment of a civil penalty or criminal fine, the Secretary shall reinstate the permit upon payment of the penalty or fine and interest thereon at the prevailing rate.

(5) No sanctions shall be imposed under this subsection unless there has been prior opportunity for a hearing on the facts underlying the violation for which the sanction is imposed, either in conjunction with a civil penalty proceeding under this section or otherwise.

(d) Injunctive Relief- Upon the request of the Secretary, the Attorney General of the United States is authorized to commence a civil action for appropriate relief, including a permanent or temporary injunction, for any violation of any provision of this Act, or regulation or permit issued under this Act.

(e) Hearing- For the purposes of conducting any investigation or hearing under this section or any other statute administered by the National Oceanic and Atmospheric Administration which is determined on the record in accordance with the procedures provided for under section 554 of Title 5, the Secretary may issue subpoenas for the attendance and testimony of witnesses and the production of relevant papers, books, and documents, and may administer oaths. Witnesses summoned shall be paid the same fees and mileage that are paid to witnesses in the courts of the United States. In case of contempt or refusal to obey a subpoena served upon any person pursuant to this subsection, the district court of the United States for any district in which such person is found, resides, or transacts business, upon application by the United States and after notice to such person, shall have jurisdiction to issue an order requiring such person to appear and give testimony before the Secretary or to appear and produce documents before the Secretary, or both, and any failure to obey such order of the court may be punished by such court as a contempt thereof. Nothing in this Act shall be construed to grant jurisdiction to a district court to entertain an application for an order to enforce a subpoena issued by the Secretary of Commerce to the Federal Government or any entity thereof.

(f) Jurisdiction- The United States district courts shall have original jurisdiction of any action under this section arising out of or in connection with the construction or operation of aquaculture facilities, and proceedings with respect to any such action may be instituted in the judicial district in which any defendant resides or may be found, or in the judicial district of the adjacent coastal State nearest the place where the cause of action arose. For the purpose of this section, American Samoa shall be included within the judicial district of the District Court of the United States for the District of Hawaii. Each violation shall be a separate offense and the offense shall be deemed to have been committed not only in the district where the violation first occurred, but also in any other district as authorized by law.

(g) Collection- If any person fails to pay an assessment of a civil penalty after it has become a final and unappealable order, or after the appropriate court has entered final judgment in favor of the Secretary, the matter may be referred to the

Attorney General, who may recover the amount (plus interest at currently prevailing rates from the date of the final order). In such action the validity, amount and appropriateness of the final order imposing the civil penalty shall not be subject to review. Any person who fails to pay, on a timely basis, the amount of an assessment of a civil penalty shall be required to pay, in addition to such amount and interest, attorney's fees and costs for collection proceedings and a quarterly nonpayment penalty for each quarter during which such failure to pay persists. Such nonpayment penalty shall be in an amount equal to 20 percent of the aggregate amount of such persons penalties and nonpayment penalties which are unpaid as of the beginning of such quarter.

(h) Nationwide Service of Process- In any action by the United States under this title, process may be served in any district where the defendant is found, resides, transacts business or has appointed an agent for the service of process, and for civil cases may also be served in a place not within the United States in accordance with Rule 4 of the Federal Rules of Civil Procedure.

## **SEC. 11. CRIMINAL OFFENSES.**

(a) Any person (other than a foreign government or any entity of such government) who knowingly commits an act prohibited by subsections 8(c), (d), (e), or (f) of the Act, shall be imprisoned for not more than five years or shall be fined not more than \$500,000 for individuals or \$1,000,000 for an organization, or both; except that if in the commission of any such offense the individual uses a dangerous weapon, engages in conduct that causes bodily injury to any officer authorized to enforce the provisions of this title, or places any such officer in fear of imminent bodily injury, the maximum term of imprisonment is not more than ten years.

(b) Any person (other than a foreign government or any entity of such government) who knowingly violates any other provision of section 8, except subsections 8(c), (d), (e) or (f), of the Act, or any provision of any regulation promulgated pursuant to this title or any permit issued under this title, shall be imprisoned for not more than five years, or shall be fined not more than \$500,000 for an individual or \$1,000,000 for an organization, or both.

(c) The United States district courts shall have original jurisdiction of any action arising under this section out of or in connection with the construction or operation of aquaculture facilities, and proceedings with respect to any such action may be instituted in the judicial district in which any defendant resides or may be found. For the purpose of this section, American Samoa shall be included within the judicial district of the District Court of the United States for the District of Hawaii. Each violation shall be a separate offense and the offense shall be deemed to have been committed not only in the district where the violation first occurred, but also in any other district as authorized under law.

## **SEC. 12. FORFEITURES.**

(a) Criminal Forfeiture- A person who is convicted of an offense in violation of section 11 of this Act shall forfeit to the United States--

- (1) any property, real or personal, constituting or traceable to the gross proceeds obtained, or retained, as a result of the offense including, without limitation, any marine species (or the fair market value thereof) taken or retained in connection with or as a result of the offense; and
- (2) any property, real or personal, used or intended to be used to commit or to facilitate the commission of the offense, including, without limitation, any offshore aquaculture facility or vessel, including its structure, equipment, furniture, appurtenances, stores, and cargo, and any vehicle or aircraft.

Pursuant to title 28, United States Code, section 2461(c), the provisions of section 413 of the Controlled Substances Act (21 U.S.C. 853) with the exception of subsection (d) of that section, shall apply to criminal forfeitures under this section.

(b) Civil Forfeiture- The following shall be subject to forfeiture to the United States and no property right shall exist in them:

- (1) any property, real or personal, constituting or traceable to the gross proceeds obtained, or retained, as a result of a violation of any provision of section 8 or subsection 4(b)(2)(D) of this Act, including, without limitation, any marine species (or the fair market value thereof) taken or retained in connection with or as a result of the violation; and
- (2) any property, real or personal, used or intended to be used to commit or to facilitate the commission of any such violation, including, without limitation, any offshore aquaculture facility or vessel, including its structure, equipment, furniture, appurtenances, stores, and cargo, and any vehicle or aircraft.

Civil forfeitures under this section shall be governed by the procedures set forth in title 18, United States Code, Chapter 46.

(c) Rebuttable Presumption- In any criminal or civil forfeiture proceeding under this section, there is a rebuttable presumption that all marine species found within an offshore aquaculture facility and seized in connection with a violation of section 8 of this Act were taken or retained in violation of this Act.

### **SEC. 13. SEVERABILITY AND JUDICIAL REVIEW.**

(a) Severability- If any provision of this chapter or the application thereof to any person or circumstances is held invalid, the validity of the remainder of this chapter and of the application of such provision to other persons and circumstances shall not be affected thereby.

(b) Judicial Review-

(1) IN GENERAL- Judicial review of any action taken by the Secretary under this chapter shall be in accordance with sections 701 through 706 of Title 5, except that--

(A) review of any final agency action of the Secretary taken pursuant to section 11(a) or (c) of this title may be had only by the filing of a complaint by an interested person in the United States District Court for the appropriate district; any such complaint must be filed within 30 days of the date such final agency action is taken; and

(B) review of all other final agency actions of the Secretary under this chapter may be had only by the filing of a petition for review by an interested person in the Circuit Court of Appeals of the United States for the Federal judicial district in which such person resides or transacts business which is directly affected by the action taken; such petition shall be filed within 120 days from the date such final action is taken.

(2) LIMITATION OF JUDICIAL REVIEW- Final agency action with respect to which review could have been obtained under paragraph (1)(B) of this subsection shall not be subject to judicial review in any civil or criminal proceeding for enforcement.

(3) AWARDS OF LITIGATION COSTS- In any judicial proceeding under paragraph (1) of this subsection, the court may award costs of litigation (including reasonable attorney and expert witness fees) to any prevailing party whenever it determines that such award is appropriate.

*END*

## **APPENDIX C - GULF COUNCIL'S MARINE AQUACULTURE POLICY**

The Gulf of Mexico Fishery Management Council (Council) defines marine aquaculture as the cultivation of marine plants or animals for food or other purposes. Recognizing that marine aquaculture presents both potential benefits as well as potential negative impacts, it is the policy of the Council to encourage environmentally responsible marine aquaculture; the Council encourages consideration of the following guidelines:

### **a. Cultured Species:**

The Council recommends that genetic stocks native to the Gulf of Mexico and the geographic area in which they would be cultured receive priority as candidate culture species. Non-native species should be used only after thorough investigation has demonstrated no detrimental impacts on native species. The Council opposes use of non-native species in marine aquaculture systems unless demonstrated there would be no detrimental impacts on native species. The Council particularly opposes use of non-native species in open water environments where escapement can occur. The Council opposes the collection of juvenile native species for grow out.

Collection of native wild brood stock should be regulated in order to prevent overfishing cultured species stocks, and provision should be made to aid enforceability of possession, landing, and marketing of fish that would be illegal if wild caught fish.

Strategies should be adopted to minimize the potential that the genetic fitness (including both genetic variation and genetic composition) of wild populations would be diminished by marine aquaculture activities and escapement from marine aquaculture activities.

An invoice should accompany all cultured species through each sales transaction, including transactions at the place of the final sale to the consumer to verify the origin of the cultured species.

### **b. Habitat:**

To ensure that marine aquaculture activities are environmentally responsible, the following considerations should be made with respect to habitat in that:

- (1) Existing inland and offshore habitats important to marine fisheries should be protected from physical alterations or degradation;
- (2) A baseline assessment should be conducted as part of the permitting process; and
- (3) Sensitive areas, including habitat areas of particular concern, should be avoided.

c. Research:

The Council recommends the marine aquaculture industry demonstrate, in part, its stewardship of Gulf waters by:

- (1). Actively educating its member institutions about necessary regulations and permits;
- (2). Actively participating in research and monitoring to improve the understanding of marine aquaculture's relationship to coastal and marine ecosystems; and
- (3). Participating in cooperative research to enhance knowledge of cultured species.

d. Location, Design, and Operation:

Marine aquaculture operations should be located, designed, operated, and monitored to prevent adverse impacts to estuaries, marine habitats and native fishery stocks. Impacts that cannot be prevented must be fully mitigated in-kind.

Conditions should be maintained to sustain healthy, diverse, native biological communities without the production of nuisance, toxic, or oxygen-demanding conditions.

Standard operating procedures should contain methods to prevent escapement, accidental transport, or release of cultured organisms.

Marine aquaculture operations should be conducted in accordance with a management plan that incorporates a routine monitoring program. The plan should be approved prior to the beginning of operations as part of the permitting process and modified as needed in accordance with adaptive management principles and based on the results of the monitoring program.

Marine aquaculture operations should develop an "emergency plan" that covers natural disasters such as tropical storms, floods, and hurricanes.

Ingress and egress of native wild organisms in natural and public waters should not be impeded by physical or water quality barriers.

Marine aquaculture operations in the EEZ should minimize disruption of navigation in natural or public waters.

Marine aquaculture facility locations should avoid areas of high commercial and recreational fishing activities.

Marine aquaculture facilities should avoid or at least minimize conflicts with or restrictions on recreational, for-hire, or commercial fishing activities.

When designing land-based marine aquaculture facilities, settling ponds, man-made wetlands, or other appropriate technologies should be used to allow for suspended solids

to settle out, allow the nutrient load to dissipate, and reduce overall discharge velocities prior to being discharged into the receiving water body.

As part of the permit process, measures should be established to deal with intentional or unintentional facility or property abandonment or other environmental liability to ensure that sites can be reclaimed without public expense and with minimal risk of long-term impact.

As part of the permitting process procedures should be established to deal with: removal of damaged equipment from the permitted site; recovery of equipment that may be unintentionally transported from the permitted site; and restoration of habitats that may be damaged by marine aquaculture activities, whether at the permitted site or elsewhere.

Mechanisms should be developed to ensure that marine aquaculture facilities and operations avoid harmful effects to both wild aquatic and terrestrial organisms.

e. Water Quality:

Marine aquaculture facilities should be designed, maintained, and operated in such a manner that avoids impacts to the local environment by utilizing water conservation practices and discharging effluent that protects existing designated use of receiving water and meets applicable state and federal water quality guidelines.

Marine aquaculture facilities should develop, implement, and monitor best management practices to conserve water and improve effluent water quality.

Comprehensive marine aquaculture facility waste management practices should be required to minimize negative impacts of discharge from the facility.

f. Health Management and Disease Control:

Marine aquaculture activities should:

1. Minimize impacts of disease outbreaks if they occur;
2. Create and implement health evaluation programs and policies that prevent the importation or release of disease pathogens or parasites of regulatory concern. These policies should support development and utilization of technologies to identify and control disease organisms;
3. Develop effective disease control, quarantine, and inventory destruction procedures to prevent the spread of disease to public waterways, native species, and other marine aquaculture facilities;
4. Create and implement health management strategies for marine aquaculture organisms in cooperation with states, federal agencies, industry, veterinarians, and scientists; and

5. Use only FDA approved therapeutic and chemical treatments as part of best management practices.

## **APPENDIX D – ALTERNATIVES CONSIDERED DURING THE SCOPING AND PUBLIC REVIEW PROCESS, BUT REJECTED FROM DETAILED STUDY IN THE FISHERY MANAGEMENT PLAN.**

### **1. Require all permit applicants to indicate the actions they will take to comply with the provisions of the Council’s Marine Aquaculture Policy that are applicable to offshore aquaculture.**

Discussion: Actions and preferred alternatives considered in this FMP are consistent with the Council’s Marine Aquaculture Policy. Permittees will be required to abide by numerous requirements outlined in the Council’s Aquaculture Policy, including: using species native to the Gulf of Mexico, minimizing impacts of disease outbreaks, conducting routine monitoring, appropriately siting facilities, and protecting important habitat. In addition, Action 3 includes additional plans permittees must submit to NOAA Fisheries Service in order to ensure animal health is appropriately managed, genetic impacts on wild stocks are limited, environmental impacts are monitored, plans are in place for emergencies, and practices for collecting and spawning of broodstock.

### **2. Require permits for both persons (or firms) spawning brood stock and those raising fingerlings or juveniles in the EEZ.**

Discussion: Action 1 discusses the types of permits that would be required for conducting aquaculture in the EEZ. The Council’s preferred alternative (Alternative 2) would only require an operating permit, while Alternative 3 (Action 1) would require both an operating and a siting permit. The permit for operating a facility in the EEZ would authorize collection of broodstock. Additionally, numerous application and operational requirements in Action 2 would place the onus on the permit applicant/permittee to certify that hatchery broodstock are tagged, fin clips or other genetic material from broodstock are submitted to NOAA Fisheries Service, and juveniles used for growout are certified as native, non-genetically modified and non-transgenic species. The applicant or permittee would also be required to submit contact information pertaining to hatcheries.

### **3. Permits should be issued 3 years or 7 years.**

Discussion: Action 2 discusses the various permit durations considered by the Council. These range from 1 year (EFP) to an indefinite time period. The Council also considered permit durations of 5, 10 and 20 years. Permit durations of 3 and 7 years are within the range of possible permit durations considered within this FMP.

### **4. All fish landed or harvested from the facility should be reported quarterly to NMFS (by species and pounds) or the permit will not be renewed.**

Discussion: Action 8 requires aquaculture permittees to maintain and make available to NOAA Fisheries during inspection or upon request harvest and sale records. There is no timeframe for providing this information, although such information would be a part of

the annual report submitted to NOAA Fisheries Service. Additionally, Action 2, requires NOAA Fisheries Service be notified prior to harvest, transport, and landing of cultured fish. Requiring quarterly reports was deemed unnecessary since most fish species will require greater than three months to grow to marketable sizes.

**5. Require a program approved by NMFS and EPA to monitor the dissolved oxygen, carbon dioxide, ammonia and other water quality parameters around the marine aquaculture facility.**

Discussion: Water quality standards and monitoring requirements are required by the EPA and NOAA Fisheries Service does not have the authority to require water quality monitoring for aquaculture facilities. Action 8 requires permittees to provide NOAA Fisheries Service with copies of monitoring reports from other federal agencies. Action 2 requires operations to conduct feed management and monitoring practices in compliance with EPA regulations at 40 CFR 451.21. Standards and monitoring requirements will be specified in the NPDES permit issued by the EPA, in consultation with NOAA Fisheries Service and other state and federal agencies.

**6. Require each permittee to specify their operational plans for dealing with hurricanes, vessel collision, fire, and structure damage.**

Discussion: Action 2 requires permittees to submit to NOAA Fisheries Service a copy of their emergency disaster plan. The plan shall include, but is not limited to: procedures for preparing allowable aquaculture systems, offshore aquaculture equipment, and cultured organisms in the event of a disaster.

**7. Prohibit the use of species that are threatened, endangered, candidates for threatened species or species for which wild harvest is prohibited.**

Discussion: No species currently managed by the Council and proposed for aquaculture are threatened or endangered or considered candidates for threatened or endangered status. Nassau grouper and speckled hind are listed as a Species of Concern by NOAA Fisheries Service and the harvest of red drum, goliath grouper, and Nassau grouper in the Gulf of Mexico EEZ is prohibited. Red drum is abundant in state waters and marine stock enhancement of this species has been occurring in Texas and Florida for many years. Goliath grouper is no longer overfishing, but its overfished status is unknown. This species was removed from NOAA Fisheries Service' Species of Concern list in 2006. Nassau grouper is not undergoing overfishing and its overfished status is unknown. The Council did not want to prohibit species that are suitable for aquaculture, but that are currently prohibited from harvest (in particular red drum). To ensure wild stocks of these species are not illegally harvested, the Council developed numerous operational, reporting, and recordkeeping requirements (see Actions 2 and 8) that permittees would have to abide by. Regardless of what species is or is not allowed for harvest, NOAA Fisheries will need to conduct consultations under the ESA to determine if aquaculture operations will adversely affect endangered or threatened species.

**8. Quarterly reports will be filed with NOAA Fisheries Service on:**

- **substrate and water quality monitoring;**
- **disease outbreak;**
- **any use of medicinal therapeutics;**
- **summaries of events related to escapement of fish, damage to cages or pens and marine mammal and endangered species interaction during that quarter.**

Discussion: Action 8 requires permittees to report all incidents of suspected disease episodes with 24 hours of diagnosis to NOAA Fisheries Service. Similarly, permittees must report major escapement and entanglements or interactions with endangered species and marine mammals within 24 hours of discovery. Major escapement is defined as the escape of 5 percent or more of the cultured organisms in a seven consecutive day period. For all other reporting requirements an annual standardized report will be required for each aquaculture facility. Requiring an annual, rather than quarterly report, was deemed more appropriate since the amount of time to raise most cultured species to marketable size is greater than three months and NOAA Fisheries Service will be notified immediately (within 24 hours) if major escapement, disease outbreaks, or entanglements and interactions occur. Additionally, facilities will be required to abide by FDA regulations when using medicinal therapeutics and EPA standards for pollution discharge and monitoring. These requirements fall outside the authority of NOAA Fisheries Service.

**9. Describe plans for one or more of the following:**

- **physical maintenance of the facility;**
- **preventing localized biological oxygen demand (BOD)**
- **localized hypoxic conditions.**

Discussion: The EPA establishes standards for water pollution discharge and monitoring. Requiring plans for preventing BOD and localized hypoxic conditions is outside the authority of NOAA Fisheries Service. However, Action 2 does require permittees to comply with EPA feed management and monitoring practices. Standards and monitoring requirements will be specified in the NPDES permit issued by the EPA, in consultation with NOAA Fisheries Service and other state and federal agencies.

Physical maintenance of facilities is considered a normal business practice. Proper maintenance will potentially increase productivity of a facility and minimize the risk of system failure and fish escapement. Requiring a plan for physically maintaining a facility was deemed unnecessary, since it will be to the benefit of the operator/permittee to properly maintain their facility.

**10. Allow the aquaculture of all marine species native to the Gulf of Mexico, except highly migratory species.**

Discussion: The Council believed it was important to include highly migratory species for use in aquaculture. Although the Council does not have the authority to regulate

highly migratory species, Action 4, Alternative 4 states that the Council will send a letter to NOAA Fisheries Service requesting development of concurrent rulemaking to allow aquaculture of highly migratory species.

#### **11. Allow the aquaculture of all marine species managed by the Council.**

Discussion: The Council concluded that shrimp would not be cultured in the EEZ since they are normally raised in coastal ponds in jurisdiction of the states, e.g., about 1 million pounds are raised annually in Texas waters. The regional fishery management councils in the Southeast all prohibit harvest of corals except for scientific purposes. Allowance for aquaculture would increase the likelihood that coral will be illegally harvested for the aquarium trade.

#### **12: Describe plans for the following:**

- i. Limit genetic impacts on wild Gulf stocks. Required components of the plan would include: 1) the source of brood fish for fingerling production by geographic area, 2) the frequency broodstock are replaced, and 3) whether any cultured fish will be raised to sexual maturity.**
- ii. Aquatic animal health management. Required components of the aquatic health management plan would include: 1) identification of an animal health management expert and frequency of visits, 2) procedures for notifying NOAA of reportable disease, 3) procedures for pre-stocking health inspections of aquatic animals, and 4) freezing or refrigerating diseased animals so they are available for inspection. “Diseased” animals are those infested with parasites and/or infected by bacteria or virus.**
- iii. Collecting and spawning brood stock and rearing fingerlings. Required components of the plan would include: 1) a description of the culture facility; 2) the number, species, and size of broodstock proposed to be captured and the methods/gears used for capturing, holding, and transporting broodstock; 3) anticipated size to which fingerlings will be raised; and 4) a list of names and addresses for spawning and rearing facilities used to obtain fingerlings and any relevant aquaculture permit numbers.**
- iv. Environmental monitoring. Required components of the plan would include: 1) a plan for interactions with threatened or endangered species, 2) a description of how environmental impacts would be monitored, and 3) compliance with EPA standards.**

Discussion: The above plans have been replaced with specific regulatory requirements in Actions 2 and 8 in response to NOAA General Counsel and public comments. The above plans did not include any criteria for determining adequacy and there was concern that these plans would greatly vary in quality and content from one applicant/permittee to the next. Specific regulatory requirements now identified in the FMP will allow for greater standardization during review of permit applications.

**13. Allow cages and net pens for finfish, spiny lobster, and stone crab culture and floating longlines and ropes for shellfish, algae, and sponge culture in the Gulf of Mexico EEZ.**

Discussion: Allowable species proposed for aquaculture include finfish, spiny lobster, and stone crabs. None of these species could be grown on longlines or ropes; therefore, this alternative was rejected by the Council.

**14. Prohibit marine aquaculture within X feet (X meters) of oil and gas platforms.**

Discussion: The Council discussed this alternative at their April 2008 meeting. Comments during public hearings expressed concerns about mercury contamination resulting from aquaculture occurring at or near oil and gas platforms. Because oil and gas platforms will likely serve as an important infrastructure for many offshore aquaculture operations, the Council moved this alternative to considered, but rejected. Although there is much debate and disagreement about the effects of oil and gas platforms on marine fish and mercury contamination, the results of research to date indicate oil and gas platforms do not generally elevate levels of mercury in fish and other seafood. The following is an excerpt from the MMS website at: <http://www.gomr.mms.gov/homepg/regulate/environ/mercury.html>.

*Mercury is a naturally occurring element that exists in sediments, rocks, oil, and coal. Mercury also occurs naturally in very small quantities in barite, a major component of drilling fluids used by the offshore oil and gas industry. However, this mercury is locked in the barite grains and not easily transferred to the marine life, which live around the platforms. Methylmercury is primarily created from mercury by a chemical process controlled by bacteria and only occurs when the right conditions exist. There is no evidence that mercury from drilling muds changes into methylmercury. Disposal of drilling fluids only occurs during drilling operations. Oil companies cannot discharge drilling fluids without a discharge permit from EPA. In the barite used to make drilling fluids, the EPA requires that the concentration of mercury be no more than one part per million (see [estimate of annual discharge](#)). This reduces the addition of mercury to the environment to values similar to the concentration of mercury found in marine sediments throughout the Gulf of Mexico.*

*The MMS study, [Gulf of Mexico Offshore Operations Monitoring Experiment \(GOOMEX\)](#), was completed in 1995. In 1996 the results of this study were published in a peer reviewed dedicated volume of the Canadian Journal of Fisheries and Aquatic Sciences. This study examined three OCS platforms and included the analyses of over 700 sediment samples and over 800 tissue samples from shrimp, crabs, marine worms, clams, fish livers, and fish stomach contents. Results of the analyses documented that total mercury is not concentrated to any greater extent in organisms living near the platforms (less than 100 meters away) when compared to those living far away from the platforms (over 3000 meters). From these results the scientists concluded that platforms do not contribute to higher mercury levels in marine organisms.*

*The Minerals Management Service, MMS, recognizes that mercury (and specifically methylmercury) in the environment is a global issue and a global problem. While the issue of mercury in seafood in the Gulf of Mexico is the subject of an increasing amount of research particularly because of global and regional inputs, the results of research to date generally supports the conclusion that oil and gas platforms do not play a significant role in elevating levels of mercury in fish and other seafood.*

**15. Establish general siting criteria to be applied on a case-by-case basis for siting marine aquaculture facilities. Siting criteria would include, but not be limited to the items in Table 6.7-1, and the requirements of ACOE, MMS, EPA, NOAA Fisheries Service, and other regulatory agencies with authority in the EEZ as applied to aquaculture.**

Discussion: These alternatives were replaced with more specific siting requirements in the Council's preferred alternative in Action 6. In particular, aquaculture operations can not be sited in marine reserves, marine protected areas, HAPCs, NOS marine sanctuaries, coral areas, SMZs, and permitted artificial reef zones. Additionally, aquaculture operations must be sited at least 1.6 nautical miles apart and the size of the aquaculture site must be twice as large as the area encompassed by all allowable aquaculture systems to allow fallowing and rotation of cages. Lastly, NOAA Fisheries Service would be provided authority to conduct case-by-case reviews of proposed marine aquaculture sites. These siting requirements are in addition to any requirements considered by the ACOE.

**16. The proxy for MSY should be equal to: a) 4 million pounds, b) 8 million pounds**

Discussion: These MSY proxies were considered to low to develop a viable aquaculture industry in the Gulf of Mexico. MSY will likely be set equal to OY. Proxies for OY range from 16-190 million pounds annually. It is estimated OY levels less than 64 million pounds would support 5-20 aquaculture operations over the next 10 years.

**17. The proxy for MSY is equal to X million pounds. MSY will be estimated by first using GIS to determine the allowable areas for aquaculture in the Gulf of Mexico EEZ given the siting criteria specified in Action 6. Next, the maximum number of aquaculture operations that could be sited in this area will be determined. The resulting value will then be multiplied by the average expected production of each facility to determine MSY. GIS analyses are currently underway to estimate MSY.**

Discussion: The Council discussed this alternative at the April 2008 meeting and did not consider this a reasonable approach for estimating MSY. The Council believed the estimate of MSY generated from this alternative would have been far greater than the level of production they would initially like to authorize in the Gulf of Mexico. Therefore, the Council moved this alternative to considered but rejected in favor of more precautionary alternatives for setting MSY and OY.

**18. Major escapement is defined as the escape of 5 percent or more of the cultured organisms in a seven consecutive day period. A permittee shall provide NOAA**

**Fisheries Service with the following information if major escapement occurs or is suspected of having occurred: permit number, contact person and phone number, location of escapement, reason(s) for escapement and the number, type of species, size, and percent of cultured organisms that escaped, and actions being taken to address the escapement.**

Discussion: During the June 2008 Council meeting, the Council revised the definition for major escapement. The above definition for major escapement was replaced by the definition now contained within Action 8, Preferred Alternative 2(c)(1). The new preferred escapement definition contained in this FMP pertains to both escapement from individual allowable aquaculture systems, as well as escapement from all allowable aquaculture systems at an aquaculture site. The above definition pertained only to the cumulative escapement of cultured organisms from all allowable aquaculture systems at a specific site. The timeframes for determining escapement was also longer (7 days vs. 24 hours) for the above definition when compared with the newly preferred definition.

## APPENDIX E – EXPLANATION OF ECONOMIC TERMS

**Cointegrated variables:** These are pairs of nonstationary variables that wander in such a way that they do not drift too far apart because they share a common trend. Examples are imports and exports, prices and wages, spot and future prices, and the price of cod and prices of other groundfish species. The common trend may cause strong multicollinearity, which may motivate a researcher to ignore one of the variables despite the loss of useful information. Nonstationary variables are variables that do not have a fixed mean and constant variance.

**Cointegration analysis:** A statistical analysis used to test for and estimate the co-movement of cointegrated variables. This co-movement is interpreted as a long-run equilibrium relationship.

**Common property:** Property that is owned by two or more individuals. Every member of the group that owns the property has equal right of ownership and can exclude non-members from use or consumption of that property.

**Compensation principle:** The amount that those who gain from a change could pay those who lose to fully compensate them for their losses.

**Complementary goods:** Goods (commodities) that are used together, like coffee and cream. A positive cross-price flexibility means the two goods are complementary goods; a percentage increase in the supply of coffee causes a percentage increase in the price of cream. Similarly, a negative cross-price elasticity of demand means the two goods are complementary goods; a percentage decrease in the price of coffee causes a percentage increase in the quantity demanded of cream.

**Constant returns to scale:** Output changes in the same proportion as inputs. For example, when a firm doubles inputs and, in so doing, doubles output, there are constant returns to scale.

**Consumer surplus:** The difference between the maximum a person (consumer) is willing and able to pay for a good (commodity) and the amount the person actually pays to acquire that good. It also represents the difference between the maximum amount that persons (consumers) are willing and able to pay for a good and the amount they actually pay to acquire that good.

**Cross price elasticity of demand:** The sensitivity of a change in the quantity demanded for a good (commodity) to a change in the price of another good. It is expressed as the percentage change in the quantity demanded for a good caused by a percentage change in the price of another good.

**Cross-price flexibility:** The sensitivity of a change in the price of a commodity for a change in the supply of another commodity. It is expressed as the percentage change in

the price of a commodity caused by a percentage change in the supply of another commodity.

**Decreasing returns to scale:** Output changes in a smaller proportion than inputs. For example, when a firm doubles inputs and, in so doing, output less than doubles, there are decreasing returns to scale.

**Differentiated products:** Products that are similar, but not identical, and satisfy the same need.

**Economic efficiency:** Economic efficiency is achieved when the cost of producing a particular level of output is as low as possible.

**Economic profit:** A firm's total revenue less its total explicit and implicit costs.

**Economic rent:** The difference between what a resource is paid for its use in production and the payment that was necessary to bring that resource into production.

**Explicit costs:** Explicit costs are accounting costs, such as wages, bait, diesel fuel, and depreciation of a fishing vessel.

**External benefits:** Beneficial side effects borne by those not directly involved in the production or consumption of a commodity.

**External costs:** Harmful side effects borne by those not directly involved in the production or consumption of a commodity.

**Externality:** An unintended cost or benefit that is imposed on people and that results from the economic activity of another. An unintended cost is called a negative externality, while an unintended benefit is called a positive externality.

**Goods:** Commodities of which more is preferred to less.

**Implicit costs:** Implicit costs are related to foregone benefits and are often referred to as opportunity costs. For example, an implicit cost of using a vessel to target a particular species is the revenue that could have been earned by targeting a different species.

**Increasing returns to scale:** Output changes at a larger portion than inputs. For example, when a firm doubles inputs and, in so doing, more than doubles output, there are increasing returns to scale.

**Inputs:** Factors of production or resources that are used to produce goods and services. Examples of inputs are labor, cages, and fish feed.

**Internal or private costs:** The costs imposed by an entity on itself.

**Internal or private benefits:** The benefits that an entity bestows upon itself.

**Long run:** The duration of time in which all inputs can be varied.

**Market failure:** The inability of a market to allocate resources efficiently. The market is unable to maximize social net benefits. Social costs may be greater than private costs.

**Net National Benefits:** Without externalities, it is the sum of consumer surplus plus producer surplus, which is a measure of the aggregate net benefits to both consumers and producers. However, with externalities, it is the sum of consumer surplus plus producer surplus plus third-party surplus.

**Opportunity cost:** The opportunity cost of supplying a production input, such as one's labor, for a particular use is the lost benefit of supplying that input to the next best alternative.

**Own-price elasticity of demand:** The sensitivity of a change in the quantity demanded for a good (commodity) to a change in the price of that good. It is expressed as the percentage change in the quantity demanded for a good caused by a percentage change in the price of that good.

**Price elasticity of demand:** The sensitivity of a change in the quantity demanded for a good (commodity) to a change in the price. It is expressed as the percentage change in the quantity demanded for a good caused by a percentage change in the price.

**Price elasticity of supply:** The sensitivity of a change in the quantity supplied of a good for a change in price. It is expressed as the percentage change in the quantity supplied caused by a percentage change in the price.

**Price flexibility:** The sensitivity of a change in the price of a commodity for a change in supply. It is expressed as the percentage change in the price of a commodity caused by a percentage change in supply.

**Private benefits:** See internal benefits.

**Private costs:** See internal costs.

**Private good:** A good or service for which consumption by one or more individuals excludes others from consuming that same good and reduces the amount available for others to consume.

**Private property:** Property owned by an individual who has the right to exclude others from using it. In law, private property is defined as property protected from public appropriation – over which the owner has exclusive and absolute rights.

**Producer surplus:** The difference between the price that a producer actually receives and the minimum price that the producer would have to receive to supply a given level of output. It also represents the difference between the price that producers receive for selling a given level of output and the minimum amount that they would have to receive to supply that level of output.

**Property:** A resource, good or service that can be used or consumed. In law, property is defined as the right to possess, use, and enjoy a determinate thing.

**Property right:** A bundle of rules that convey certain powers to the owner of the right. A property right has *exclusivity* if the owner can prevent others from using the property. It has *flexibility* if the owner can change the mode or purpose of using the resource. It has *divisibility* if the owner can subdivide the property. It has *transferability* if the owner can sell or give others all or a portion of the property. It has *durability* (or duration) if the owner permanently owns the property; and it has *enforceability* when the owner's property right is protected by government.

**Public good:** A commodity or service for which consumption by some individuals neither: 1) excludes others from consuming that good or service, nor 2) reduces the amount available for others to consume. Climate is an example of a public good.

**Public property:** Property that is owned by a local, state or federal government, and whose use cannot be restricted to any one individual.

**Public trust doctrine:** This is the principle that the government must preserve certain resources, such as navigable waters, for public use and maintain those resources for the public's use.

**Pure property right:** A bundle of rules that grant the owner of the property the exclusive authority to determine how a resource is used and

**Quasi-property rights:** Quasi-property rights are limited property rights, such as Individual Transfer Quotas (ITQs) and enterprise allocations. In law, quasi is defined as seemingly but not actually; in some sense; resembling; nearly.

**Risk:** When there is risk, one's choice of action does not determine the outcome with certainty. Instead there is a set of random possible outcomes. In other words, risk is the possibility of different outcomes occurring when the probability of different outcomes is known.

**Short run:** The duration of time in which the quantity of at least one input cannot be varied.

**Social benefits:** The sum of internal benefits and external benefits. These are the benefits borne by society as a whole.

**Social costs:** The sum of internal costs plus external costs. These are the costs incurred by society as a whole.

**Social welfare function:** A hypothetical relationship that weighs each individual's well-being or utility in some fashion, then adds up the utilities to obtain an aggregate (social welfare) function that is used to compare alternative equilibria.

**Social welfare optimization:** It is assumed that the social optimum or social welfare maximization is the equilibrium price and output level that maximizes the sum of consumer surplus plus producer surplus.

**Strong cross-price flexibility:** Occurs when a one percentage change in the supply of a commodity causes a large percentage change in the price of another commodity.

**Strong property rights:** Property rights that rank high in exclusivity, flexibility, divisibility, transferability, durability, and enforceability. See property rights for definitions of these terms.

**Substitute goods:** Goods (commodities) that replace each other, such as farmed raised shrimp and wild shrimp. A negative cross-price flexibility means the two goods are substitute goods; a percentage increase in the supply of farmed raised shrimp causes a percentage decrease in the price of wild shrimp. Similarly, a positive cross-price elasticity of demand means the two goods are substitutes; a percentage decrease in the price of farmed shrimp causes a percentage decrease in the quantity demanded of wild shrimp.

**Third party:** A person whom is unintentionally affected by an externality produced by the economic activity of another. For example, a person that owns a house on a river is a third party when the value of that person's house is affected by the pollution produced by a firm upstream.

**Third-party surplus:** Surplus that is experienced by a third party (or third parties), which is created by positive and negative externalities and therefore not captured in the market.

**Total domestic surplus:** The sum of consumer surplus of domestic consumers and producer surplus of domestic firms. It is the surplus that occurs when the level of domestic production of a good or service exceeds the level of domestic consumption of that good or service.

**Total surplus:** The sum of consumer surplus plus producer surplus plus third-party surplus.

**Technical efficiency:** Technical efficiency is achieved when the amount produced with a particular combination of inputs is the maximum amount that can be produced with that combination of inputs.

**Utility:** The ability of a good or service to satisfy a want.

**Utility function:** A hypothetical mathematical relationship that expresses the levels of satisfaction that a person receives from consuming combinations of goods and services, including leisure time.

**Weak cross-price flexibility:** Occurs when a one percentage change in the supply of a commodity causes a small percentage change in the price of another commodity.

**Weak property rights:** Property rights that rank low in exclusivity, flexibility, divisibility, transferability, durability, and enforceability. See property rights for definitions of these terms.

## APPENDIX F - STOCKS MANAGED IN COUNCIL FMPs

### Reef Fish FMP

#### Species in the Management Unit

##### Snappers - Lutjanidae Family

Queen Snapper	<i>Etelis oculatus</i>
Mutton Snapper	<i>Lutjanus analis</i>
Schoolmaster	<i>Lutjanus apodus</i>
Blackfin Snapper	<i>Lutjanus buccanella</i>
Red Snapper	<i>Lutjanus campechanus</i>
Cubera Snapper	<i>Lutjanus cyanopterus</i>
Gray (Mangrove) Snapper	<i>Lutjanus griseus</i>
Dog Snapper	<i>Lutjanus jocu</i>
Mahogany Snapper	<i>Lutjanus mahogoni</i>
Lane Snapper	<i>Lutjanus synagris</i>
Silk Snapper	<i>Lutjanus vivanus</i>
Yellowtail Snapper	<i>Ocyurus chrysurus</i>
Wenchman	<i>Pristipomoides aquilonaris</i>
Vermilion Snapper	<i>Rhomboplites aurorubens</i>

##### Groupers - Serranidae Family

Rock Hind	<i>Epinephelus adscensionis</i>
Speckled Hind	<i>Epinephelus drummondhayi</i>
Yellowedge Grouper	<i>Epinephelus flavolimbatus</i>
Red Hind	<i>Epinephelus guttatus</i>
Goliath Grouper	<i>Epinephelus itajara</i>
Red Grouper	<i>Epinephelus morio</i>
Misty Grouper	<i>Epinephelus mystacinus</i>
Warsaw Grouper	<i>Epinephelus nigritus</i>
Snowy Grouper	<i>Epinephelus niveatus</i>
Nassau Grouper	<i>Epinephelus striatus</i>
Black Grouper	<i>Mycteroperca bonaci</i>
Yellowmouth Grouper	<i>Mycteroperca interstitialis</i>
Gag	<i>Mycteroperca microlepis</i>
Scamp	<i>Mycteroperca phenax</i>
Yellowfin Grouper	<i>Mycteroperca venenosa</i>

##### Tilefishes - Malacanthidae (Branchiostegidae) Family

Goldface Tilefish	<i>Caulolatilus crysops</i>
Blackline Tilefish	<i>Caulolatilus cyanops</i>
Anchor Tilefish	<i>Caulolatilus intermedius</i>
Blueline Tilefish	<i>Caulolatilus microps</i>
Tilefish	<i>Lopholatilus chamaeleonticeps</i>

Jacks - Carangidae Family

Greater Amberjack	<i>Seriola dumerili</i>
Lesser Amberjack	<i>Seriola fasciata</i>
Almaco Jack	<i>Seriola rivoliana</i>
Banded Rudderfish	<i>Seriola zonata</i>

Triggerfishes - Balistidae Family

Gray Triggerfish	<i>Balistes capricus</i>
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Wrasses - Labridae Family

Hogfish	<i>Lachnolaimus maximus</i>
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Species in the Management Unit for Data Collection Only

Sand Perches - Serranidae Family

Dwarf Sand Perch	<i>Diplectrum bivattatum</i>
Sand Perch	<i>Diplectrum formosum</i>

**Red Drum FMP**

Species in the Management Unit

red drum	<i>Sciaenops ocellatus</i>
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**Coastal Migratory Pelagics FMP**

Species in the Management Unit

King Mackerel	<i>Scomberomorus cavalla</i>
Spanish Mackerel	<i>Scomberomorus maculatus</i>
Cobia	<i>Rachycentron canadum</i>

Species in the Management Unit for Data Collection Only

Cero	<i>Scomberomorus regalis</i>
Little Tunny	<i>Euthynnus alletteratus</i>
Dolphin	<i>Coryphaena hippurus</i>
Bluefish	<i>Pomatomus saltatrix</i>

Species that may be added to the Management Unit

Wahoo	<i>Acanthocybium solandri</i>
Blackfin tuna	<i>Thunnus atlanticus</i>
Blue runner	<i>Caranx crysos</i>

**Shrimp FMP**

Species in the Management Unit

Brown Shrimp	<i>Farfontepenaues aztecus</i>
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White Shrimp	<i>Litopenaeus setiferus</i>
Pink Shrimp	<i>Farfontopenaeus duorarum</i>
Royal Red Shrimp	<i>Hymenopenaeus robustus</i>

### **Spiny Lobster FMP**

#### Species in the Management Unit

Spiny Lobster	<i>Panulirus argus</i>
Slipper Lobster	<i>Scyllarides nodifer</i>

#### Species in the Management Unit for Data Collection Only

Spotted Spiny Lobster	<i>Panulirus argus</i>
Smooth Tail Lobster	<i>Panulirus laevicauda</i>
Spanish Slipper Lobster	<i>Scyllarides aequinoctialis</i>

### **Stone Crab FMP**

#### Species in the Management Unit

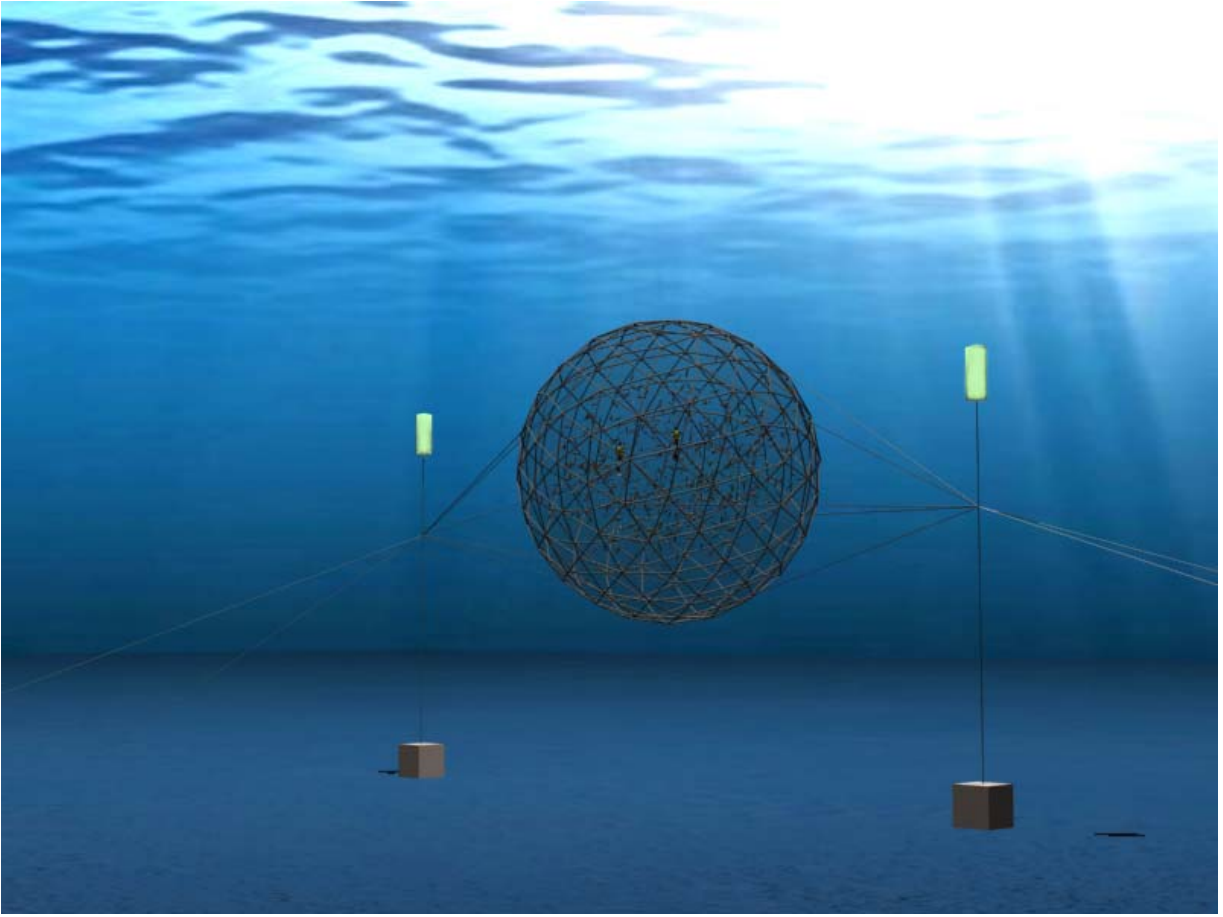
Stone Crab	<i>Menippe mercenaria</i>
Stone Crab (Cedar Key north)	<i>Menippe adina</i>

### **Coral FMP**

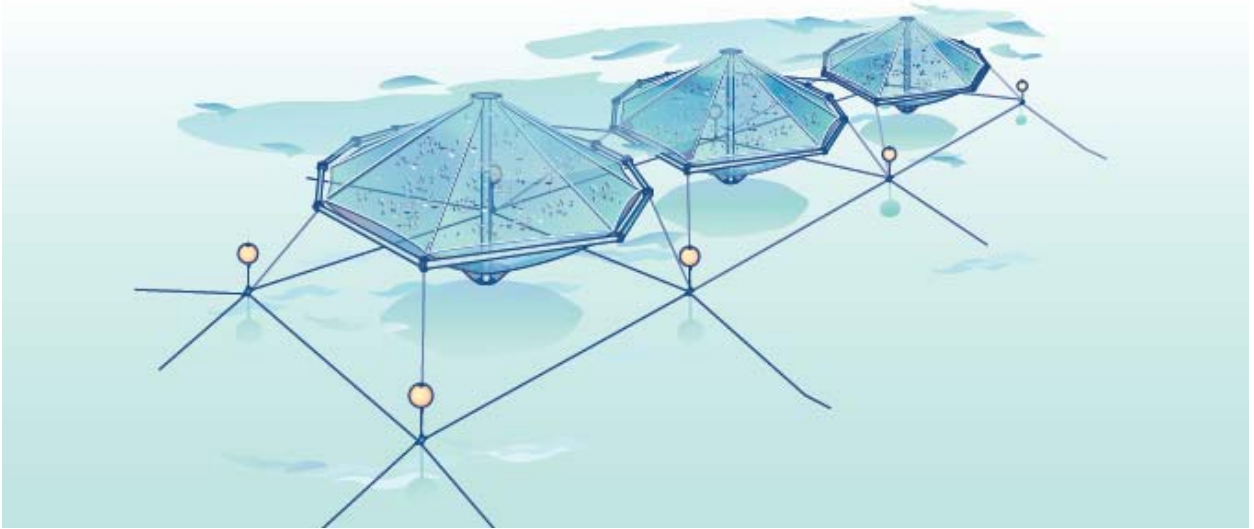
#### Species in the Management Unit (330)

Corals of the Class *Hydrozoa*  
Corals of the Class *Anthozoa*

## APPENDIX G - ILLUSTRATIONS OF CAGES AND PENS



**Figure 1. Illustration of an Aquapod designed by Ocean Farm Technologies,**  
[www.oceanfarmtech.com](http://www.oceanfarmtech.com)



**Figure 2. Illustration of Open Ocean Sea Station by Ocean Spar,**  
[www.oceanspar.com](http://www.oceanspar.com)

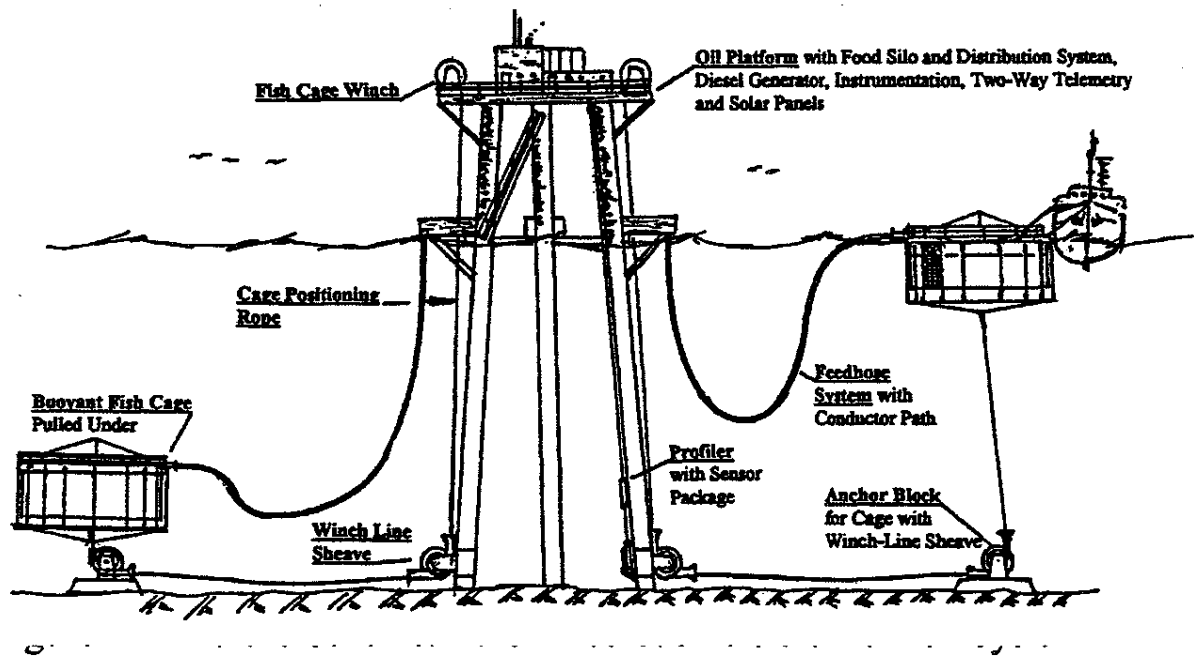


Figure 3: Oil platform with food silo and distribution system, diesel generator, instrumentation, two-way telemetry and solar panels. Source: Offshore Mariculture in the Gulf of Mexico: A Feasibility Report published by the Louisiana Sea Grant College Program, Sea Grant Building, Louisiana State University, Baton Rouge, Louisiana.

## **APPENDIX H - EPA EFFLUENT LIMITATIONS GUIDELINES AND NEW SOURCE PERFORMANCE STANDARDS FOR THE CONCENTRATED AQUATIC ANIMAL PRODUCTION POINT SOURCE CATEGORY**

### **C. What Are the Requirement for the Net Pen Subcategory?**

The following discussion explains the BPT/BAT/BCT limitations and NSPS EPA is promulgating for Net Pen Systems.

#### **1. BPT**

After considering the technology options described in the proposal and the factors specified in Section 304(b)(1)(B) of the Clean Water Act, EPA is establishing nationally applicable effluent limitations for net pen facilities producing 100,000 pounds or more of aquatic animals per year. Today's BPT regulations requires CAAP net pen systems, like CAAP flow-through and recirculating systems, to comply with specified operational practices and management requirements. These requirements are non-numeric effluent limitations based on technologies EPA has evaluated and determined are cost-reasonable, available technologies.

Based on the detailed survey results, EPA estimates that such programs are currently in use at most or all the net pen systems. As a result, the cost to facilities of meeting the BPT requirements is very low. To EPA's knowledge, all existing net pen facilities that are currently covered by NPDES permits are subject to permit requirements comparable to today's limitations. Therefore, EPA concludes that the BPT limits are both technically available and cost reasonable for the net pen subcategory.

EPA rejected the establishment of numeric effluent limitations for net pens for obvious reasons. Because of the nature of the facilities, net pens cannot use physical wastewater control systems except at great cost. Located in open waters, nets are suspended from a floating structure to contain the crop of aquatic animals. Nets are periodically changed to increase the mesh size as the fish grow in order to provide more water circulating inside the pen. The pens are anchored to the water body floor and sited to benefit from tidal and current action to move wastes away from, and bring oxygenated water to, the pen. As a result, these CAAP facilities experience a constant in- and out-flow of water. Development of a system to capture the water and treat the water within the pen would be prohibitively expensive. EPA, therefore, rejected physical treatment systems as the basis for BPT limitations. Instead, EPA is promulgating narrative effluent limitations.

As was the case with flow-through and recirculating systems, feed management programs are a key element of the promulgated requirements for the reasons explained above and in the proposal at [67 FR 57872, 57887](#). Consequently, for the control of solids, the final regulation requires that net pen CAAP facilities minimize the accumulation of uneaten feed beneath the pen through the use of active feed monitoring and management practices. Sec. 451.21(a). These strategies may include either real-time monitoring (e.g., the use of video monitoring, digital scanning sonar, or upweller systems); monitoring of

sediment quality beneath the pens; monitoring of the benthic community beneath the pens; capture of waste feed and feces; or the adoption of other good husbandry practices, subject to the permitting authority's approval.

As noted, feed management systems are effective in reducing the quantity of uneaten feed. Facilities should limit the feed added to the pens to the amount reasonably necessary to sustain an optimal rate of fish growth. In determining what quantity of feed will result in minimizing the discharge of uneaten feed while at the same time sustaining optimal growth, a facility should consider, among others, the following factors: The types of aquatic animals raised, the method used to feed the aquatic animals, the facility's production and aquatic animal size goals, the species, tides and currents, the sensitivity of the benthic community in the vicinity of the pens, and other relevant factors. In some areas, deep water and/or strong tides or currents may prevent significant accumulation of uneaten feed such that active feed monitoring is not needed. Several states with significant numbers of net pens (e.g., Washington, Maine) already require feed management practices, which may include active feed monitoring, to minimize accumulation of feed beneath the pens. Facilities will need to ensure that whatever practices they adopt are consistent with the requirements of their state NPDES program.

In order to implement a feed management system, the facility must also track feed inputs by maintaining records documenting feed and estimates of the numbers and weight of aquatic animals in order to calculate representative feed conversion ratios. Sec. 451.21(g). As previously explained, development of feed conversion ratios are a necessary element in any effective feed management system.

Real-time monitoring represents a widely-used business practice that is employed by many salmonid net pen facilities to reduce feed costs. Net pen systems do not present the same opportunities for solids control as do flow-through or recirculating systems for the obvious reason that ocean water is continuously flowing in and out of the net pens. Therefore, in EPA's view, feed monitoring, including real time monitoring and other practices is an important and cost reasonable practice to control solids discharges.

The final rule includes a narrative limitation requiring CAAP net pen facilities to collect, return to shore, and properly dispose of all feed bags, packaging materials, waste rope and netting. Sec. 451.21(b). This will require that net pen facilities have the equipment (e.g., trash receptacles) to store empty feed bags, packaging materials, waste rope and netting until they can be transported for disposal. EPA is also requiring that net pens minimize any discharges associated with the transporting or harvesting of fish, including the discharge of blood, viscera, fish carcasses or transport water containing blood. Sec. 451.21(c). During stocking or harvesting of fish, some may die. The final limitations require facilities to remove and dispose of dead fish properly on a regular basis to prevent discharge. Discharge of dead fish represents an environmental concern because they may spread disease and attract predators, which could imperil the structural integrity of the containment system. The wastes and wastewater associated with the transport or harvest of fish have high BOD and nutrient concentrations and should be disposed of at a location where they may be properly treated.

The final regulations also require net pen facilities to ensure the proper storage of drugs, pesticides, and feed to avoid spilling these materials and subsequent discharge. See Sec. 451.21(e)(1) of this rule. Facilities must also implement procedures for properly containing, cleaning and disposing of any spilled material. See Sec. 451.21(e)(2) of this rule. As previously discussed, excess feed may present a number of different environmental problems. Preventing spills of feed is consequently important. Additionally, net pens may use different pesticides and drugs in fish production. Preventing their release is similarly important. The final regulation also includes a narrative limitation, similar to that for CAAP flow-through and recirculating systems, requiring that net pen facilities adequately train facility personnel in how to respond to spills and proper clean-up and disposal of spilled material. See Sec. 451.21(h) of this rule.

Next, the final regulation requires regular inspection and maintenance of the net pen Sec. 451.21(f). This would include any system to prevent predators from entering the pen. Net pens are vulnerable to damage from predator attack or accidents that result in the release of the contents of the nets, including fish and fish carcasses. Given the economic incentive to prevent the loss of production, EPA assumes facilities will conduct routine inspections of the nets to ensure they are not damaged and make repairs as soon as any damage is identified. Most net pen facilities are already doing these inspections. However, in evaluating this technology option, EPA estimated costs for increased inspections at every net pen facility in order to ensure that costs are not underestimated.

Like the final BPT limitations for flow-through and recirculating systems, the BPT limitations for net pens do not include any requirements specifically addressing the release of non-native species. The final regulation, however, includes a narrative effluent limitation that requires facilities to implement operational controls that will ensure the production facilities and wastewater treatment structures are being properly maintained. Facilities must conduct routine inspections and promptly repair damage to the production systems or wastewater treatment units. EPA included this requirement to ensure achievement of the other BPT limitations for net pens such as the prohibition on the discharge of feed bags, packaging materials, waste rope and netting at net pens, and the requirement to minimize release of solids, fish carcasses and viscera. This requirement will also aid in preventing the release of other materials including live fish.

## 2 BAT

EPA is establishing BAT at a level equal to BPT for the net pen subcategory. For this subcategory, EPA did not identify any available technologies that are economically achievable that would achieve more stringent effluent limitations than those considered for BPT. Because of the nature of the wastes generated from CAAP net pen facilities, EPA did not identify any advanced treatment technologies or practices to remove additional toxic and nonconventional pollutants that would be economically achievable on a national basis beyond those already considered.

## 3. BCT

EPA evaluated conventional pollutant control technologies and did not identify a more stringent technology for the control of conventional pollutants for BCT limitations than the final requirements considered. Consequently, EPA has not promulgated BCT limitations or standards based on a different technology from that used as the basis for BPT limitations and standards.

#### 4. NSPS

After considering the technology requirements described previously under BPT, and the factors specified in section 306 of the CWA, EPA is promulgating standards of performance for new sources equal to BPT, BAT, and BCT. There are no more stringent best demonstrated technologies available. Because of the nature of the wastes generated and the production system used, EPA has not identified advanced treatment technologies or practices that would be generally affordable beyond those already considered.

Although siting is not specifically addressed with today's standards, proper siting of new facilities is one component of feed management strategies designed to minimize the accumulation of uneaten feed beneath the pens and any associated adverse environmental effects. When establishing new net pen CAAP facilities, consideration of location is critical in predicting the potential impact the net pen will have on the environment. Net pens are usually situated in areas which have good water exchange through tidal fluctuations or currents. Good water exchange ensures good water quality for the animals in the nets. It also minimizes the concentration of pollutants below the nets. In implementing today's rule for new net pen operations, facilities and permit authorities should give careful consideration to siting prior to establishing a new net pen facility.

EPA has concluded that NSPS equal to BAT does not present a barrier to entry. The overall impacts from the effluent limitations guidelines on new source net pens are no more severe than those on existing net pens. The costs faced by new sources generally should be the same as, or lower than, those faced by existing sources. It is generally less expensive to incorporate pollution control equipment into the design at a new facility than it is to retrofit the same pollution control equipment in an existing facility.

Although EPA is not establishing standards of performance for new sources for small cold water facilities (i.e., those producing between 20,000 and 100,000 pounds of aquatic animals per year), such facilities would be subject to existing NPDES regulations and BPT/BAT/BCT permit limits developed using the permit writer's "best professional judgment" (BPJ). EPA, based on its analysis of existing data, determined that new facilities would most often produce 100,000 pounds of aquatic animals or more per year because of the expense of producing the aquatic animals. Generally, the species produced are considered of high value and are produced in such quantities to economically justify the production. For example, one net pen typically holds 100,000 pounds of aquatic animals or more. In reviewing USDA's Census of Aquaculture and EPA's detailed surveys, EPA has not identified any existing commercial net pen facilities producing fewer than 100,000 pounds of aquatic animals per year.

Offshore aquatic animal production is an area of potential future growth. As these types of facilities start to produce aquatic animals, those with 100,000 pounds or more per year will be subject to the new source requirements established for net pens as well as NPDES permitting.

#### **D. What Monitoring Does the Final Rule Require?**

The final rule does not require any effluent monitoring. In the case of net pen facilities, however, it does require CAAPs to adopt active feed monitoring and management practices that will most often include measures to observe the addition of feed to the pen. Net pen facilities subject to today's rule must develop and implement active feed monitoring and management strategies to minimize the discharge of solids and the accumulation of uneaten feed beneath the pen. Many existing net pen facilities use a real-time monitoring system such as video cameras, digital scanning sonar, or upweller systems to accomplish this. With a real-time monitoring system, when uneaten feed is observed falling beneath the pen feeding should stop. Depending on the location and other site-specific factors at the facility, a facility may adopt other measures in lieu of real time monitoring. These may include monitoring of sediment or the benthic community quality beneath the pens, capture of waste feed and feces or other good husbandry practices that are approved by the permitting authority.

#### **E. What Are the Final Rule's Notification, Recordkeeping, and Reporting Requirements?**

The final rule establishes requirements for reporting the use of spilled drugs, pesticides or feed that result in a discharge to waters of the U.S. by CAAP facilities. This provision ensures that, any release of spilled drugs, pesticides and feed to waters of the U.S. are reported to the permitting authorities to provide them with necessary information for any responsive action that may be warranted. This will allow regulatory authorities to reduce or avoid adverse impacts to receiving waters associated with these spills. EPA is requiring that any spill of material that results in a discharge to waters of the U.S. be reported orally to the permitting authority within 24 hours of its occurrence. A written report shall be submitted within 7 days. Facilities are required to report the identity of the material spilled and an estimated amount.

EPA is retaining for the final rule the proposed requirement that CAAP facilities report to the Permitting Authority whenever they apply certain types of drugs under the following conditions. First, the permittee must report drugs prescribed by a veterinarian to treat a species or a disease when prescribed for a use which is not an FDA- approved use (referred to as "extralabel drug use") as described further below. Second, the permittee must report drugs being used in an experimental mode under controlled conditions, known as Investigative New Animal Drugs (INADs). In EPA's view, notifying the Permitting Authority is necessary to ensure that any potential risk to the environment resulting from the use of these drugs can be addressed with site-specific remedies where appropriate. EPA strongly encourages reporting prior to use where feasible, as this provides the Permitting Authority with the opportunity to monitor or control the

discharge of the drugs while the drugs are being applied. EPA has not made this an absolute requirement, however, in recognition of the fact that swift action on the part of veterinarians and operators is sometimes necessary to respond to and contain disease outbreaks.

The reporting requirement applies to the permittee and imposes no obligation on the prescribing veterinarian. The reporting requirement for extralabel drug use is not in any way intended to interfere with veterinarians' authority to prescribe extralabel drugs to treat aquatic animals or other animals in accordance with FFCDA and 40 CFR Part 530. This reporting requirement is promulgated to ensure that permitting authorities are aware of the use at CAAPs of extralabel drugs when such use may result in the release of the drug to waters of the U.S. Because the use is likely to involve adding the drug directly to the rearing unit, EPA believes there is a probability that these drugs may be released to waters of the U.S.

The regulation requires that a permittee must provide a written report to the permitting authority within seven days of agreeing to participate in an INAD study and an oral report preferably in advance of use, but in no event later than seven days after starting to use the INAD. The first written report must identify the drug, method of application, the dosage and what it is intended to treat. The oral report must also identify the drug, method of application, and the reason for its use. Within 30 days after the use of the drug at the facility, the permittee must provide another written report to the permitting authority describing the drug, reason for treatment, date and time of addition, method of addition and total amount added.

EPA has similar reporting requirements for extralabel drug use except that EPA is not requiring a written report in advance of use.

The reporting requirement applies only to those drugs that have not been previously approved for their intended use. Reporting would not be required for EPA registered pesticides and FDA approved drugs for aquatic animal uses when used according to label instructions. Reporting would only be required for INAD drugs and drugs prescribed by a veterinarian for extralabel uses. Because these classes of drugs have not been fully evaluated by FDA for the potential environmental consequences of the use being made of them EPA considers reporting ensures the permitting authority has enough information to make an informed response if environmental problems do occur. EPA has included an exception to the reporting requirement for cases where the INAD or extralabel drug has already been approved under similar conditions for use in another species or to treat another disease and is applied at a dosage that does not exceed the approved dosage. The requirement that the use be under similar conditions is intended to limit the exception to cases where the INAD or extralabel drug use would be expected to produce significantly different environmental impacts from the previously approved use. For example, use of a drug that had been previously approved for a freshwater application, as an INAD in a marine setting would not be considered a similar condition of use, since marine ecosystems may have markedly different vulnerabilities than freshwater ecosystems. Similarly, the use of a drug approved to treat terrestrial animals used as an INAD or

extralabel drug to treat aquatic animals would not be considered a similar condition of use. In contrast, the use of a drug to treat fish in a freshwater system that was previously approved for a different freshwater species would be considered use under similar conditions. EPA has concluded that when a drug is used under similar conditions it is unlikely that the environmental impacts would be different than those that were already considered in the prior approval of the drug.

The reporting requirements with respect to INADs are not burdensome. FDA regulations require that the sponsor of a clinical investigation of a new animal drug submit to the Food and Drug Administration certain information concerning the intended use prior to its use. Therefore, this information will be readily available to any CAAP facility that participates in an INAD investigation. Having advance information will enable the permitting authority to determine whether restrictions should be imposed on the release of such drugs.

EPA is also requiring all CAAP facilities subject to today's regulation to develop and maintain a Best Management Practices plan on site. This plan must describe how the permittee will achieve the required narrative limitations. The plan must be available to the permitting authority upon request. Upon completion of the plan, the permittee must certify to the permitting authority that a plan has been developed.

The proposal included a requirement to implement escape prevention practices at facilities where non-native species are being produced. EPA received comments supporting such controls to prevent the release of non-native species. EPA also received comments arguing against controls in this regulation because other authorities are already dealing with non-native species, and because of the complexities of determining what is a non-native species and when such species may become invasive. For example, species raised by Federal and State authorities for stocking may not be "native," but would not generally impose a threat if escapes occurred.

Today's regulation does not include any requirements specifically addressing the release of non-native species. The regulation, however, includes a requirement for facilities to develop and implement BMPs to ensure the production and wastewater treatment systems are regularly inspected and maintained. Facilities are required to conduct routine inspections and perform repairs to ensure proper functioning of the structures. EPA included this requirement to promote achievement of BPT/BAT limitations on the discharge of feed bags, packaging materials, waste rope and netting at net pens, and on the discharge of solids, including fish carcasses and viscera at all facilities. This requirement, described in more detail in Section VI.D, will also aid in preventing the release of other materials, including live fish.

The final regulation also includes a requirement for facilities to report failures and damage to the structure of the aquatic animal containment system leading to a material discharge of pollutants. EPA realizes that most CAAP facilities take extensive measures to ensure structural integrity is maintained. Nonetheless, failures do occur with potentially serious consequences to the environment. The failure of the containment

system can result in the release of sediment, fish and fish carcasses which, depending on the magnitude of the release, can have significant impacts on the environment. For net pen systems, failures include physical damage to the predator control nets or the nets containing the aquatic animals, which result in a discharge of the contents of the nets. Damage includes abrasion, cutting or tearing of the nets and breakdown of the netting due to rot or ultra-violet exposure. For flow-through and recirculating systems, a failure includes a collapse or damage of a rearing unit or wastewater treatment structure; damage to pipes, valves, and other plumbing fixtures; and damage or malfunction to screens or physical barriers in the system, which would prevent the unit from containing water, sediment, and the aquatic animals. In the event of a reportable failure as defined in the NPDES permit, EPA is requiring CAAP facilities to report to the permit authority orally within 24 hours of discovering a failure and to follow the oral report with a written report no later than seven days after the discovery of the failure. The oral report must include the cause of the failure and the materials that have likely been released. The written report must include a description of the cause of the failure, the time elapsed until the failure was repaired, an estimate of the types and amounts of materials released and the steps that will be taken to prevent a recurrence. Because the determination of what constitutes damage resulting in a "material" discharge varies from one facility to the next, EPA encourages permitting authorities to include more specific reporting requirements defining these terms in the permit. Such conditions might recognize variations in production system type and environmental vulnerability of the receiving waters.

Today's regulation requires record-keeping in conjunction with implementation of a feed management system. As previously explained, EPA is requiring flow-through, recirculating and net pen CAAP facilities subject to today's regulation to keep records on feed amounts and estimates of the numbers and weight of aquatic animals in order to calculate representative feed conversion ratios. The feed amounts should be measured at a frequency that enables the facility to estimate daily feed rates. The number and weight of animals contained in the rearing unit may be recorded less frequently as appropriate. Flow-through and recirculating facilities subject to today's requirements must record the dates and brief descriptions of rearing unit cleaning, inspections, maintenance and repair. Net pen facilities must keep the same types of feeding records as described above and record the dates and brief descriptions of net changes, inspections, maintenance and repairs to the net pens.