FINAL

AMENDMENT NUMBER 1

TO

THE FISHERY MANAGEMENT PLAN
FOR THE STONE CRAB FISHERY
OF THE GULF OF MEXICO

SEPTEMBER, 1981

GULF OF MEXICO FISHERY MANAGEMENT COUNCIL
LINCOLN CENTER, SUITE 881
5401 WEST KENNEDY BOULEVARD
TAMPA, FLORIDA 33609
2.0 SUMMARY

The harvest of stone crabs in the Gulf of Mexico is managed by the Fishery Management Plan for the Stone Crab Fishery of the Gulf of Mexico (FMP). The FMP has resolved an armed conflict between crab fishermen and trawl fishermen. The FMP was published in the Federal Register on April 3, 1979, and was implemented by the Secretary of Commerce on September 14, 1979. An Environmental Impact Statement (EIS) was prepared on the FMP and was filed with the Environmental Protection Agency (EPA). The FMP is a multiyear plan which remains in effect until amended.

The Gulf of Mexico Fishery Management Council now proposes to amend the FMP to provide for flexibility in amending regulations, to modify the reporting requirements and to delete exceptions pertaining to live bait shrimping.

Although the FMP considers the resource throughout its range from Florida to Texas, the area which is regulated under this FMP is confined to the waters of the west coast of Florida, including the Keys, in the fishery conservation zone (9 nautical to 200 miles). The purpose of restricting the management regime to this area is because very few stone crabs are taken in other areas and no regulation is needed at this time in these areas. The regulations which were different from those in effect by Florida were implemented in the waters of the territorial sea.

Specific Management Objectives of the FMP

(1) Provide for an orderly stone crab fishery by reducing conflict between stone crab and shrimp fishermen.

The conflict which erupted into violence during the 1977-1978 season is the prime reason for development of the plan at that time. The proposed regulations of the plan which were selected to achieve this objective were developed with input by both shrimp and crab fishermen in an attempt to resolve the conflict as fairly as possible.

(2) Establish an effective statistical reporting system.

The FMP would require user groups to report information relative to harvesting and utilization of the resource which is essential to effective fishery conservation and management.

(3) Attain full utilization of the resource.

This is an expanding fishery and the management regime provides for growth and development. However, minimal restrictions which are necessary for stock conservation are applied.

(4) Promote uniformity of regulations throughout the management area.

The Council, State of Florida, and National Park Service will have standardized regulations for the fishery when it serves a useful purpose to do so.

Maximum Sustainable Yield (MSY)

The MSY for the stone crab fishery of the west coast of Florida was calculated to be 2.4 million pounds. The largest commercial harvest of stone crabs was during the 1977-1978 season when 2.1 million pounds were landed. The scientific biological information in the plan indicates that harvest from the fishery is still well below the actual amount of annual harvest that can be taken without resulting in overfishing and decline in abundance of future annual crops. The MSY stated here is the best mathematical estimate (as required by law) based on current available catch data through the 1979-1980 season.
Optimum Sustainable Yield (OY)

The OY is designated as all harvested adult stone crabs in the management area between October 5 and May 15 that have a claw size of 7.0 centimeters (2-3/4 inches) or greater. (This will be approximately 2.4 million pounds of claw weight.)

Management Measures included in the FMP are as follows:

1.0 Harvest practices

1.1 Minimum claw size of 2-3/4 inches.
1.2 Declawed crab bodies should be returned to the water and not landed.
1.3 All vessels and boats are required to shade the live crab box from direct sunlight.
1.4 Harvest of both claws allowed.
1.5 It is illegal to pull another person's traps.

2.0 Fishing season

2.1 Closed season between May 15 and October 15.
2.2 The grace period for trap placement is ten days prior to the season and for recovery is five days after the season.
2.3 Legal to pull traps only during daylight hours.

3.0 Gear restrictions

3.1 Degradable panels required in nondeteriorating traps.

4.0 Vessel enumeration

4.1 All fishing vessels or boats in the FCZ must be enumerated.
4.2 Fishermen be classified as full-time or part-time.

5.0 Information reporting

5.1 Monthly dealer/processor reporting of pounds, value, size class of fishermen's and processed products.
5.2 Monthly submission of daily trip tickets by all fishermen reporting catch, traps pulled daily, number of traps and catch zone.

6.0 Steps to resolve the gear conflict

6.1 Establish a line of separation.
6.2 Prohibit shrimp trawling inshore of the line January 1 to May 20.
6.3 Distribute charts and description of line including loran coordinates.
6.4 Allow limited supervised exploratory shrimp fishing inside of line January 1 to May 20.

6.5 Recommend state adoption of 6.1 and 6.2 in territorial waters.

6.6 Permit live bait shrimping inshore of line.

6.7 Require identification markings on live bait vessels.

Alternatives for Amendment Number 1 are:

A. No Action. If no action were taken, the FMP would remain unchanged. This would preclude modifying the line of separation in a timely manner in order to provide a more equitable solution to the conflict. Unnecessary commitments of human resources would be continued by fishermen and federal agencies in data collection and analysis and for enforcement. Although, bonafide live bait shrimping is not likely to occur in the FCZ inshore of the line during January to May because productive shrimping areas are available inshore of the FCZ (nine nautical miles), this potential loophole may be abused by others creating renewed conflict and loss of production of adult shrimp. Further, the measure and regulation are in conflict with the provisions of the shrimp plan.

B. Delete All FMP Provisions. This action would result in significant adverse impacts to the environment, user groups and resources.

C. Delete All Reporting Requirements. The data to be collected in the preferred alternative is necessary for stock assessment (dealer reports) and for monitoring assessment of the line (fishermen reports).

D. Specify Specific Areas for Live Bait Shrimping. This action is not necessary as this activity is regulated under the provisions of the shrimp plan and as no prohibitions are placed on this activity elsewhere in the Gulf FCZ or in state waters.

E. Delete the provisions establishing the "line of separation" and incorporate in lieu thereof a procedure whereby these provisions could be reinstated by field order if the conflict erupts. While this alternative appears to have some merit from a cost savings standpoint, the Council does not believe it to be a viable option and feels that resolution of the resulting conflicts would be much more expensive. Testimony at public hearings has indicated to a degree the conditions responsible for the armed conflict still exist, even though shrimping is presently prohibited inshore of the line from January 1 to May 20, as a result of violation of the existing provisions. The Council has concluded that the provisions would have to be reinstated annually to prevent armed conflict. This conclusion is supported by public testimony and through discussions with advisory panel members.

If the conflict involved only local crabbers and local shrimp fishermen possibly this alternative would work, as generally these persons respect the others gear and right of access. However, as many of the shrimp vessels are from out of state ports, ranging from North Carolina to Texas, the likelihood of obtaining voluntary compliance and respect of each other's rights is severely limited.

Since the existing provisions establishing the line have been very successful in resolving the conflict, and since most of the indications are that the alternative action would result in immediate resumption of the conflict, it is not considered a viable alternative at this
time. Another basic problem with such an alternative is that its implementation could be manipulated by a minority group of crabbers who could take action to cause implementation early in the season when the measure is not really necessary to prevent gear losses.

F. Provide a procedure for amending the regulations setting the terms and conditions of the "line of separation." Such future changes would be through use of the regulatory amendment process. The proposed action would provide flexibility to the FMP by incorporating a provision for amendment in the future of the regulation setting the position of the line of separation if needed. The proposed action would allow modification of the line of separation within a period of 90 to 120 days, rather than the 280 days required for plan and regulation amendment. Since there are only 225 days between the end of one fishing season and implementation of the line of separation closure in the next season, modification by plan amendment is not practical.

The action would apply to the line established in the plan to resolve the conflict between user groups. Shrimping is prohibited shoreward of the line during the period January 1st to May 20th. The line was set based on the economic and sociological impacts on the two user groups affected. Based on the available information, the line was set as equitably as possible. Data collected through monitoring the fishery and through research may provide information to allow a more equitable solution through modification of the closure period or the position of the line. This proposed action would allow the Council and Regional Director of NMFS to do so in a timely manner.

G. Modify the reporting requirements of the FMP to specify that mandatory reporting shall be required only of those participants in the fishery who are randomly selected to report, rather than by all participants in the fishery. This action would decrease the reporting burden on the fishermen and government sector while still providing adequate information for management purposes.

H. Delete the exception for live bait shrimping. The proposed action would delete any reference from the plan and regulations. Such activity would be managed under the provisions of the shrimp plan.

The original exception for live bait shrimping was made because this activity was allowed in some areas of state waters inshore of the line of separation. Subsequent to this action, the plan for the shrimp fishery has been implemented and has established a sanctuary or shrimp nursery ground in the FCZ where all shrimping is prohibited throughout the year. A portion of the line of separation (point D to point E, Figure 12-2) also serves as the boundary of the nursery ground. The State of Florida prohibits all shrimping in the nursery ground by state statute, but allows live bait shrimping in other areas under certain restrictions. The exception in the Stone Crab FMP results in a conflict with the provisions of the shrimp plan. Traditionally, no bait shrimping has occurred in the FCZ inshore of the line, but has been restricted to the territorial sea. The shrimp plan allows continuation of this activity in the territorial sea. The shrimp plan and EIS documents the impacts of this prohibition.

A detailed discussion of these alternatives is provided in Section 12.0 of Amendment Number 1.
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4.0 INTRODUCTION

This Amendment Number 1 to the Stone Crab FMP is designed to accomplish the following:

(1) provide a procedure for amending the regulations setting the terms and conditions of the "line of separation." Such future changes would be through use of the regulatory amendment process;

(2) modify the reporting requirements of the FMP to specify that mandatory reporting shall be required only of those participants in the fishery who are randomly selected to report, rather than by all participants in the fishery and to modify regulations to permit shoreside enforcement of reporting requirements rather than at-sea enforcement;

(3) delete the exception for live bait shrimping which will be managed under the provisions of the shrimp plan;

(4) to make such editorial changes to the FMP and regulations to accomplish the above changes, to update and analyze the statistical information on stock assessment in the FMP, and to correct other editorial deficiencies.
Amendment Number 1 updates the statistical information in this section through the 1979-1980 fishing season. These data do not change the conclusions of the section or necessitate changes in the text other than clarifying statements referring to these new data. The proposed changes in this section are as follows:

Subsection (II) Abundance and Present Condition: should be modified in the second paragraph which discusses present condition by adding the following statements: "Sullivan (1979) concluded that the stone crab population is successfully withstanding current fishing pressure. Zuboy and Snell (1980) concluded that the stone crab stock is apparently healthy and the current management regime (under the plan) seems sufficient."

This same subsection in the third paragraph which discusses size distribution of claws should be modified by adding the following statement and a revised Table 5-1 as follows: "The trend toward less jumbos and more large size claws continued through the 1979-1980 season where 67.8 percent of landings reported by dealers were classified as large (Table 5-1)."


<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Small</td>
<td>20</td>
<td>35</td>
<td>34</td>
<td>-</td>
</tr>
<tr>
<td>Medium</td>
<td>40</td>
<td>22</td>
<td>24</td>
<td>32^5</td>
</tr>
<tr>
<td>Large</td>
<td>24</td>
<td>32</td>
<td>39</td>
<td>68</td>
</tr>
<tr>
<td>Jumbo</td>
<td>16</td>
<td>11</td>
<td>3</td>
<td>-</td>
</tr>
<tr>
<td>(N)</td>
<td>7,025</td>
<td>2,746</td>
<td>6,772</td>
<td>(dealer reports)</td>
</tr>
</tbody>
</table>

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1. Claw sizes are approximate as they are sorted visually by fish house personnel according to criteria described by Savage, et al. (1975).
2. Data from Savage, et al. (1975).
3. Carapace width frequencies converted to claw sizes using data and conversion equations from Sullivan (in press).
4. Data from Zuboy and Snell (1980).
5. Includes some small claws.
Subsection (iv) Estimate of Maximum Sustainable Yield (MSY) should be modified under paragraph (B) Stock Assessment by adding the following statements, a revised Table 5-2 and revised Figures 5-4 and 5-5, as follows: "More current data for the 1978-1979 and 1979-1980 fishing seasons were used to reassess MSY (Zuboy and Snell, 1980). The new MSY figure did not differ statistically from the MSY stated in this plan and no change is proposed."

Table 5-2. Catch and effort statistics for the west coast of Florida stone crab fishery.

<table>
<thead>
<tr>
<th>Season</th>
<th>Catch* millions of pounds</th>
<th>Traps thousands</th>
<th>Catch Per** Trap (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1962-1963</td>
<td>.30</td>
<td>14,6</td>
<td>20.6</td>
</tr>
<tr>
<td>1963-1964</td>
<td>.35</td>
<td>15.0</td>
<td>23.3</td>
</tr>
<tr>
<td>1964-1965</td>
<td>.35</td>
<td>21.0</td>
<td>16.7</td>
</tr>
<tr>
<td>1965-1966</td>
<td>.45</td>
<td>19.7</td>
<td>22.8</td>
</tr>
<tr>
<td>1966-1967</td>
<td>.40</td>
<td>43.2</td>
<td>9.3</td>
</tr>
<tr>
<td>1967-1968</td>
<td>.55</td>
<td>39.3</td>
<td>14.0</td>
</tr>
<tr>
<td>1968-1969</td>
<td>.60</td>
<td>55.9</td>
<td>10.7</td>
</tr>
<tr>
<td>1969-1970</td>
<td>.70</td>
<td>36.0</td>
<td>19.4</td>
</tr>
<tr>
<td>1970-1971</td>
<td>.85</td>
<td>60.8</td>
<td>14.0</td>
</tr>
<tr>
<td>1971-1972</td>
<td>.95</td>
<td>73.7</td>
<td>12.9</td>
</tr>
<tr>
<td>1972-1973</td>
<td>.90</td>
<td>113.3</td>
<td>7.9</td>
</tr>
<tr>
<td>1973-1974</td>
<td>1.25</td>
<td>143.0</td>
<td>8.7</td>
</tr>
<tr>
<td>1974-1975</td>
<td>1.00</td>
<td>159.1</td>
<td>6.3</td>
</tr>
<tr>
<td>1975-1976</td>
<td>1.15</td>
<td>193.2</td>
<td>6.0</td>
</tr>
<tr>
<td>1976-1977</td>
<td>1.45</td>
<td>213.8</td>
<td>6.8</td>
</tr>
<tr>
<td>1977-1978</td>
<td>2.10</td>
<td>264.3</td>
<td>8.0</td>
</tr>
<tr>
<td>1978-1979</td>
<td>1.85</td>
<td>222.0</td>
<td>8.3</td>
</tr>
<tr>
<td>1979-1980</td>
<td>1.93</td>
<td>297.6</td>
<td>6.5</td>
</tr>
</tbody>
</table>

* Catch is claw weight. Claw weight is 1/2 whole weight.

** Fishermen believe that catch per trap has decreased because of the increased number of traps and because of the practice of setting traps in areas of low potential to reserve fishing rights.

Figure 5-4. Effort in the west coast of Florida stone crab fishery.
Figure 5-5. Catch in the west coast of Florida stone crab fishery.
6.0 DESCRIPTION OF HABITAT OF STOCKS COMPRISING THE MANAGEMENT UNIT

No data are available which would necessitate a change to this section of the FMP.

7.0 FISHERIES MANAGEMENT JURISDICTION, LAWS, AND POLICIES

No data are available which would necessitate a change to this section of the FMP.

8.0 DESCRIPTION OF FISHING ACTIVITIES AFFECTING THE STOCK COMPRISING THE MANAGEMENT UNIT

Amendment Number 1 updates the statistical information in this section through the 1979-1980 fishing season. These data do not change conclusions in the section or necessitate changes in text other than clarifying statements referring to the new data. The proposed changes in this section are as follows:

Table 8-1 is modified to include more current data. These data show the same continuing trend, i.e., continued increases in the number of traps with fluctuations in number of vessels, boats, and fishermen, but with an overall increase in participants with time.

Subsection (1) History of Exploitation is modified to add a new paragraph as follows:

"(C) Fishing Effort and Success in Relation to the Line of Separation. Data on fishing effort and success in relation to the line of separation were collected following implementation of the plan (Zuboy and Snell, 1980). These data are reported by zone as depicted in Figure 8-1. These data show that as the season opened fishing effort (Table 8-3) and the majority of the catch (Table 8-4) were concentrated in the nearshore waters of the territorial sea (Zone 1). As the season progressed more of the effort and catch was in and came from the FCZ (Zone 2), until by February the majority of effort and catch was in the FCZ. With the exception of the first month, effort and catch in Zone 3 (outside the line of separation) remained essentially stable at 6.5 and 7.0 percent, respectively. This trend continued through the period that shrimp vessels were excluded from trawling inshore of the line of separation. Catch per unit effort (Table 8-5) remained generally highest for Zone 2 through the fishing season and was generally higher for Zone 1 than for Zone 3."

Figures 8-1 through 8-5 of this Section of the FMP and text references to these figures should be subsequently renumbered as 8-2 through 8-6.
Table 8-1. Gulf of Mexico stone crab fishery. Number of vessels, boats, fishermen and traps, 1961-1980.

<table>
<thead>
<tr>
<th>Year or Season</th>
<th>Vessels (5 tons or over)</th>
<th>Boats (less than 5 tons)</th>
<th>No. of full-time Fishermen*</th>
<th>No. of part-time Fishermen*</th>
<th>No. of traps***</th>
</tr>
</thead>
<tbody>
<tr>
<td>1961</td>
<td>0</td>
<td>69</td>
<td>66</td>
<td>15</td>
<td>13,608</td>
</tr>
<tr>
<td>1962</td>
<td>0</td>
<td>70</td>
<td>66</td>
<td>17</td>
<td>14,610</td>
</tr>
<tr>
<td>1963</td>
<td>1</td>
<td>65</td>
<td>67</td>
<td>15</td>
<td>14,906</td>
</tr>
<tr>
<td>1964</td>
<td>2</td>
<td>78</td>
<td>93</td>
<td>17</td>
<td>20,974</td>
</tr>
<tr>
<td>1965</td>
<td>4</td>
<td>71</td>
<td>57</td>
<td>30</td>
<td>19,960</td>
</tr>
<tr>
<td>1966</td>
<td>8</td>
<td>92</td>
<td>121</td>
<td>10</td>
<td>43,243</td>
</tr>
<tr>
<td>1967</td>
<td>11</td>
<td>84</td>
<td>108</td>
<td>19</td>
<td>39,328</td>
</tr>
<tr>
<td>1968</td>
<td>18</td>
<td>108</td>
<td>158</td>
<td>9</td>
<td>55,870</td>
</tr>
<tr>
<td>1969</td>
<td>14</td>
<td>93</td>
<td>125</td>
<td>18</td>
<td>35,975</td>
</tr>
<tr>
<td>1970</td>
<td>15</td>
<td>143</td>
<td>151</td>
<td>40</td>
<td>60,800</td>
</tr>
<tr>
<td>1971</td>
<td>20</td>
<td>122</td>
<td>173</td>
<td>14</td>
<td>73,685</td>
</tr>
<tr>
<td>1972</td>
<td>32</td>
<td>157</td>
<td>251</td>
<td>22</td>
<td>113,300</td>
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<tr>
<td>1973</td>
<td>35</td>
<td>162</td>
<td>292</td>
<td>16</td>
<td>142,999</td>
</tr>
<tr>
<td>1974</td>
<td>40</td>
<td>185</td>
<td>327</td>
<td>16</td>
<td>159,076</td>
</tr>
<tr>
<td>1975</td>
<td>55</td>
<td>186</td>
<td>337</td>
<td>26</td>
<td>193,201</td>
</tr>
<tr>
<td>1976</td>
<td>65</td>
<td>212</td>
<td>429</td>
<td>30</td>
<td>224,251</td>
</tr>
<tr>
<td>1977-1978</td>
<td>61</td>
<td>199</td>
<td>394***</td>
<td>-</td>
<td>264,300</td>
</tr>
<tr>
<td>1978-1979</td>
<td>55</td>
<td>190</td>
<td>375***</td>
<td>-</td>
<td>222,000</td>
</tr>
<tr>
<td>1979-1980</td>
<td>72</td>
<td>219</td>
<td>454***</td>
<td>-</td>
<td>297,600</td>
</tr>
</tbody>
</table>

* "Full-time" fishermen receive more than one-half their annual income from fishing; "part-time" fishermen receive less than one-half.

** Number of traps listed differs from those shown in Table 5-2. This occurs because different sources of statistical information were used and in part because Table 5-2 is based on seasonal information rather than annual information.

*** Includes full- and part-time fishermen.

For fishing North of Fort Myers, use the zone explanation below.

ZONE 1 — TERRITORIAL SEA
(Inside 9 nautical miles)

ZONE 2 — FCZ SHOREWARD OF 8 FATHOMS
(outside 9 nautical miles and less than 8 fathoms)

ZONE 3 — FCZ SEAWARD OF 8 FATHOMS
(outside 9 nautical miles and more than 8 fathoms)

Use above zones for the area of Key West to Fort Myers.
Table 8-3. Percent of stone crab traps pulled in each zone (derived from logbooks), October, 1979 to May, 1980.

<table>
<thead>
<tr>
<th>Month</th>
<th>Zone 1</th>
<th>Zone 2</th>
<th>Zone 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>October</td>
<td>66</td>
<td>29</td>
<td>5</td>
</tr>
<tr>
<td>November</td>
<td>63</td>
<td>30</td>
<td>7</td>
</tr>
<tr>
<td>December</td>
<td>54</td>
<td>39</td>
<td>7</td>
</tr>
<tr>
<td>January</td>
<td>54</td>
<td>40</td>
<td>6</td>
</tr>
<tr>
<td>February</td>
<td>46</td>
<td>48</td>
<td>6</td>
</tr>
<tr>
<td>March</td>
<td>50</td>
<td>44</td>
<td>6</td>
</tr>
<tr>
<td>April</td>
<td>48</td>
<td>45</td>
<td>7</td>
</tr>
<tr>
<td>May</td>
<td>37</td>
<td>56</td>
<td>7</td>
</tr>
</tbody>
</table>

Note: See Figure 8-1 for location of zones.

Source: Zuboy and Snell (1980).

Table 8-4. Percent of stone crab catch taken in each zone (derived from logbooks), October, 1979 to May, 1980.

<table>
<thead>
<tr>
<th>Month</th>
<th>Zone 1</th>
<th>Zone 2</th>
<th>Zone 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>October</td>
<td>64</td>
<td>32</td>
<td>4</td>
</tr>
<tr>
<td>November</td>
<td>55</td>
<td>37</td>
<td>8</td>
</tr>
<tr>
<td>December</td>
<td>48</td>
<td>43</td>
<td>9</td>
</tr>
<tr>
<td>January</td>
<td>51</td>
<td>43</td>
<td>6</td>
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<tr>
<td>February</td>
<td>40</td>
<td>55</td>
<td>5</td>
</tr>
<tr>
<td>March</td>
<td>40</td>
<td>52</td>
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</tr>
<tr>
<td>April</td>
<td>36</td>
<td>58</td>
<td>6</td>
</tr>
<tr>
<td>May</td>
<td>26</td>
<td>66</td>
<td>8</td>
</tr>
</tbody>
</table>

Note: See Figure 8-1 for location of zones.

Source: Zuboy and Snell (1980).
Table 8-5. Catch per trap haul by zone, October, 1979 to May, 1980.

<table>
<thead>
<tr>
<th>Month</th>
<th>Zone 1</th>
<th>Zone 2</th>
<th>Zone 3</th>
<th>Average All Zones</th>
</tr>
</thead>
<tbody>
<tr>
<td>October</td>
<td>.70</td>
<td>.78</td>
<td>.60</td>
<td>.72</td>
</tr>
<tr>
<td>November</td>
<td>.55</td>
<td>.77</td>
<td>.74</td>
<td>.63</td>
</tr>
<tr>
<td>December</td>
<td>.49</td>
<td>.62</td>
<td>.66</td>
<td>.55</td>
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<tr>
<td>January</td>
<td>.49</td>
<td>.56</td>
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<td>.53</td>
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<tr>
<td>February</td>
<td>.45</td>
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<td>March</td>
<td>.58</td>
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<td>April</td>
<td>.46</td>
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<td>.61</td>
</tr>
<tr>
<td>May</td>
<td>.50</td>
<td>.83</td>
<td>.70</td>
<td>.70</td>
</tr>
<tr>
<td>Grand Averages</td>
<td>.53</td>
<td>.72</td>
<td>.65</td>
<td>.62</td>
</tr>
</tbody>
</table>

Note: See Figure 8-1 for location of zones.

Source: Zuboy and Snell (1980).
9.0 DESCRIPTION OF ECONOMIC CHARACTERISTICS OF THE FISHERY

Amendment Number 1 updates the statistical information in this section through the 1979-1980 fishing season. These data do not change the conclusions of the section or necessitate changes in the text other than clarifying statements referring to these new data. The proposed changes to this section are as follows:

Subsection (1) Domestic Harvesting Sector Subpart (3) Stone crab prices should be modified by adding the following sentences to the second paragraph modifying Table 9-1 as follows: "New data (Zuboy and Snell, 1980) show a much greater rate of increase in exvessel value (Table 9-1). The exvessel value in 1979-1980 was 379 percent higher than for 1962-1963 while the increase in the consumer price Index during this period was only 140 percent."


<table>
<thead>
<tr>
<th>Stone Crab Season</th>
<th>Landings* (pounds claws)</th>
<th>Value of Landings* (current dollars)</th>
<th>Exvessel Price of Claws (current dollars)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1962-1963</td>
<td>300,000</td>
<td>211,200</td>
<td>0.704</td>
</tr>
<tr>
<td>1963-1964</td>
<td>350,000</td>
<td>219,100</td>
<td>0.626</td>
</tr>
<tr>
<td>1964-1965</td>
<td>350,000</td>
<td>216,300</td>
<td>0.618</td>
</tr>
<tr>
<td>1965-1966</td>
<td>450,000</td>
<td>348,300</td>
<td>0.774</td>
</tr>
<tr>
<td>1966-1967</td>
<td>400,000</td>
<td>333,600</td>
<td>0.834</td>
</tr>
<tr>
<td>1967-1968</td>
<td>550,000</td>
<td>532,400</td>
<td>0.968</td>
</tr>
<tr>
<td>1968-1969</td>
<td>600,000</td>
<td>561,600</td>
<td>0.936</td>
</tr>
<tr>
<td>1969-1970</td>
<td>700,000</td>
<td>777,000</td>
<td>1.11</td>
</tr>
<tr>
<td>1970-1971</td>
<td>850,000</td>
<td>867,000</td>
<td>1.02</td>
</tr>
<tr>
<td>1971-1972</td>
<td>950,000</td>
<td>950,000</td>
<td>1.00</td>
</tr>
<tr>
<td>1972-1973</td>
<td>900,000</td>
<td>1,107,000</td>
<td>1.23</td>
</tr>
<tr>
<td>1973-1974</td>
<td>1,250,000</td>
<td>1,700,000</td>
<td>1.56</td>
</tr>
<tr>
<td>1974-1975</td>
<td>1,000,000</td>
<td>1,460,000</td>
<td>1.46</td>
</tr>
<tr>
<td>1975-1976</td>
<td>1,150,000</td>
<td>1,920,500</td>
<td>1.67</td>
</tr>
<tr>
<td>1976-1977</td>
<td>1,450,000</td>
<td>2,595,500</td>
<td>1.79</td>
</tr>
<tr>
<td>1977-1978</td>
<td>2,100,000</td>
<td>3,822,000</td>
<td>1.82</td>
</tr>
<tr>
<td>1978-1979</td>
<td>1,850,000</td>
<td>**</td>
<td>**</td>
</tr>
<tr>
<td>1979-1980</td>
<td>1,931,000</td>
<td>5,135,400</td>
<td>2.66</td>
</tr>
</tbody>
</table>


* Based on reports of stone crab dealers. Therefore, does not include sales by crabbers direct to retailers and consumers or the catch of individuals for personal use or recreation.

** Not available
Subpart (F) of this same subsection should be modified as follows:

(F) Total and average gross income from harvesting

'Total gross income of the fleet is the exvessel value reported in Table 9-1. It was about 5.135 million dollars for the 1979-1980 stone crab season. The best indications are that 291 vessels and 454 crabbers were paid the 5,135 million dollars. Therefore, the vessel gross income for the 1979-1980 season averaged about $17,647, Table 9-4. Without deducting for the vessel costs, the average gross for the 454 crabbers was about $11,311. The number of traps fished was estimated at 297,600. The average gross income per trap was $17.26. This analysis was based on processor-dealer reports (Zuboy and Snell, 1980) and does not include crabbers who sell directly to the retail trade such as restaurants.'


<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross Income</td>
<td>3.822 mil.</td>
<td>5.135 mil.</td>
</tr>
<tr>
<td>Number vessels and boats</td>
<td>250*</td>
<td>291</td>
</tr>
<tr>
<td>Number commercial crabbers</td>
<td>500*</td>
<td>454</td>
</tr>
<tr>
<td>Number traps</td>
<td>264,300</td>
<td>297,600</td>
</tr>
<tr>
<td>Averages</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross Income per vessel</td>
<td>$15,288</td>
<td>$17,647</td>
</tr>
<tr>
<td>Gross Income per crabber</td>
<td>7,644</td>
<td>11,311</td>
</tr>
<tr>
<td>Gross Income per trap</td>
<td>14.46</td>
<td>17.26</td>
</tr>
</tbody>
</table>

Source:

** Zuboy and Snell, 1980.

Average gross unadjusted income for the 1979-1980 season increased by 115 percent for vessels, by 148 percent for crabbers and by 119 percent over these values for 1977-1978.'

Subpart (G) of this same subsection should be modified so that the third paragraph and supporting Table 9-6 read as follows:

"In terms of gross income in current dollars per trap, indications are that commercial crabbers are receiving only slightly more gross income per trap today (1980) as in the 1962-1963 season. However, the current dollar figures are inflated values and not comparable to the 1962-1963 season. The deflated value, real-dollars, for the 1979-1980 season is about forty percent of the current value or about $7.25 per trap for the season. The indications in Table 9-6 vary in such a manner that leads one to question the reliability of base data. This is a data base which must be strengthened in terms of completeness and expanded to include other essential economic values such as cost data and net returns."
<table>
<thead>
<tr>
<th>Year</th>
<th>Number Traps</th>
<th>Landings (pounds claws)</th>
<th>Landings/traps (pounds claws)</th>
<th>Value of landings (current dollars)</th>
<th>Exvessel Price of claws (current dollars)</th>
<th>Value of landings per Trap (current dollars)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1962-1963</td>
<td>14,600</td>
<td>300,000</td>
<td>20.5</td>
<td>211,200</td>
<td>0.704</td>
<td>14.47</td>
</tr>
<tr>
<td>1963-1964</td>
<td>15,000</td>
<td>350,000</td>
<td>23.3</td>
<td>219,100</td>
<td>0.626</td>
<td>14.61</td>
</tr>
<tr>
<td>1964-1965</td>
<td>21,000</td>
<td>350,000</td>
<td>16.7</td>
<td>216,300</td>
<td>0.618</td>
<td>10.30</td>
</tr>
<tr>
<td>1965-1966</td>
<td>19,700</td>
<td>450,000</td>
<td>22.8</td>
<td>348,300</td>
<td>0.744</td>
<td>17.68</td>
</tr>
<tr>
<td>1966-1967</td>
<td>43,200</td>
<td>400,000</td>
<td>9.3</td>
<td>333,600</td>
<td>0.834</td>
<td>7.72</td>
</tr>
<tr>
<td>1967-1968</td>
<td>39,300</td>
<td>550,000</td>
<td>14.0</td>
<td>532,400</td>
<td>0.968</td>
<td>13.55</td>
</tr>
<tr>
<td>1968-1969</td>
<td>55,900</td>
<td>600,000</td>
<td>10.7</td>
<td>561,600</td>
<td>0.936</td>
<td>10.05</td>
</tr>
<tr>
<td>1969-1970</td>
<td>36,000</td>
<td>700,000</td>
<td>19.4</td>
<td>777,000</td>
<td>1.11</td>
<td>21.58</td>
</tr>
<tr>
<td>1970-1971</td>
<td>60,800</td>
<td>850,000</td>
<td>14.0</td>
<td>867,000</td>
<td>1.02</td>
<td>14.26</td>
</tr>
<tr>
<td>1971-1972</td>
<td>73,700</td>
<td>950,000</td>
<td>12.9</td>
<td>950,000</td>
<td>1.00</td>
<td>12.89</td>
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<td>1972-1973</td>
<td>113,300</td>
<td>900,000</td>
<td>7.9</td>
<td>1,107,000</td>
<td>1.23</td>
<td>9.77</td>
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<tr>
<td>1973-1974</td>
<td>143,000</td>
<td>1,250,000</td>
<td>8.7</td>
<td>1,700,000</td>
<td>1.36</td>
<td>11.89</td>
</tr>
<tr>
<td>1974-1975</td>
<td>159,100</td>
<td>1,000,000</td>
<td>6.3</td>
<td>1,460,000</td>
<td>1.46</td>
<td>9.18</td>
</tr>
<tr>
<td>1975-1976</td>
<td>193,200</td>
<td>1,150,000</td>
<td>5.6</td>
<td>1,920,000</td>
<td>1.67</td>
<td>9.94</td>
</tr>
<tr>
<td>1976-1977</td>
<td>213,800</td>
<td>1,450,000</td>
<td>6.8</td>
<td>2,595,500</td>
<td>1.79</td>
<td>12.14</td>
</tr>
<tr>
<td>1977-1978</td>
<td>264,300</td>
<td>2,100,000</td>
<td>7.9</td>
<td>3,822,000</td>
<td>1.82</td>
<td>14.46</td>
</tr>
<tr>
<td>1978-1979</td>
<td>222,000</td>
<td>1,850,000</td>
<td>8.3</td>
<td>*</td>
<td>*</td>
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<tr>
<td>1979-1980</td>
<td>287,600</td>
<td>1,931,000</td>
<td>6.5</td>
<td>5,135,400</td>
<td>2.66</td>
<td>17.26</td>
</tr>
</tbody>
</table>


* Not Available.
10.0 DESCRIPTION OF BUSINESS, MARKETS, AND ORGANIZATIONS ASSOCIATED WITH THE FISHERY
No data are available which would necessitate a change to this section of the FMP.

11.0 DESCRIPTION OF SOCIAL AND CULTURAL FRAMEWORK OF DOMESTIC FISHERMEN AND THEIR COMMUNITIES
No data are available which would necessitate a change to this section of the FMP.
12.0 DETERMINATION OF OPTIMUM YIELD

(i) Specification of the Fishery and Management Unit

No data are available which would necessitate a change in this subsection of the FMP.

(ii) Specific Management Objectives

No data available and none of the recommended alternatives of Amendment Number 1 necessitate a change in the management objectives.

In consideration of all biological, economic, social and ecological factors the following are specific management objectives appropriate for the Gulf of Mexico stone crab fishery:

1. Provide for orderly conduct of the stone crab fishery in the management area to reduce conflict between stone crab fishermen and other fishermen in the area.

2. Establish an effective fishery statistical reporting system for monitoring the stone crab fishery.

3. Attain full utilization of the stone crab resource in the management area.

4. Promote uniformity of regulations throughout the management area.

(iii) Description of Alternatives and

(iv) Analysis of Beneficial and Adverse Impacts of Potential Management Options

The following management measures are included in the FMP:

1. Harvest

   a. Adopt the minimum claw size (7.0 centimeters (2-3/4 inches) propodus) presently required under Florida statutes (Figure 12-1). Life history information given in Section 5, and explanatory information given in Section 12(v) suggests harvest of stone crabs with claws this size will both provide for a highly acceptable market product and allow sufficient spawning prior to harvest. Orderly enforcement is also enhanced by specifying this claw size identical to that required by Florida statutes.

   b. Require that declawed stone crabs and crabs with undersized claws be returned to the water, not landed. This objective is recommended not only in FCZ, but also in Everglades National Park waters. The Council will request that the Florida statute that requires declawed bodies to "be returned immediately to the water" be amended to read "be returned to the water, not landed." Processing practices require that crabs be kept aboard and declared on the way to shore. This is because claws cannot be refrigerated before cooking without adversely affecting the quality.

   c. Require that all vessels and boats fishing stone crabs in the FCZ be required to shade the live crab box from direct sunlight. Shading will eliminate some mortality among crabs being held aboard the vessel and thereby increase survival of crabs returned to the water after declawing.

   d. Allow harvest of both claws as is allowed under Florida statutes. Considering the harvest mortality information available, harvest of both claws is the wise management practice.
e. Make it illegal to pull another person's pots (traps) in the FCZ and restrict the pulling of traps to daylight hours.

2. Fishing season

The closed season for taking of stone crabs in the FCZ each year shall be between May 15 and October 15. Life history information indicates this closed season will allow harvest of crabs only during the time when minimum spawning occurs. This season is also fully compatible with present Florida statutes, therefore, will allow orderly management and minimize enforcement problems. The FCZ open season for stone crabs shall include a grace period which allows that traps be placed in the water ten days prior to the season opening and be allowed in the water until five days after the season closes.

3. Gear Limitations

Require degradable escape panels in plastic or other nondeteriorating stone crab traps. The purpose of this recommendation is to prevent unnecessary mortality in lost traps which continue to fish unattended.

4. Registration

All vessels fishing for stone crabs in the FCZ be enumerated for the purpose of collection of data necessary to properly manage the fishery. Vessels shall be designated:

1. Commercial, full or part time
2. Recreational

5. Information to be reported by fishermen and processors/dealers

a. Dealer/processors shall be required to report pounds of stone crabs handled, value, and size classes of claws.

b. Fishermen shall be required to submit daily trip tickets reporting catch, traps pulled daily, total number of traps being fished and the zone where traps are being fished. To implement a statistical system covering all segments of the stone crab resource, the Department of Commerce should coordinate their system with the system now in use by Everglades National Park.

6. Steps recommended to avoid gear conflicts

a. Establish a "line of separation" starting in the Florida Keys at Snipe Point (Point F defined on Chart 11420 as 24° 41.9'N and 81° 40.5'W) proceeding northwesterly to Point E (defined as 24° 54.5'N and 81° 50.5'W) thence northeasterly along a line on a compass bearing of approximately 010° magnetic to Point D (25° 09.0'N and 81° 47.6'W) thence northwesterly along the 8 fathom line on a compass bearing of approximately 344.5° magnetic to Point C (described as 26° 0.0'N and 82° 04.0'W) and thence northeasterly to 6 fathoms along a line on a bearing of approximately 016° magnetic to Point B (26° 16.0'N and 81° 58.5'W) and thence northwesterly along a line on a compass bearing of approximately 311° magnetic to Point A (26° 36.4'N and 82° 24.3'W) and thence east to Captiva Pass (Figure 12-2). The specific location of Points A through F are as follows:
Point | Location
--- | ---
A | lat. 26° 36.4'N long. 82° 24.3'W
B | lat. 26° 16.0'N long. 81° 58.5'W
C | lat. 26° 00.0'N long. 82° 04.0'W
D | lat. 25° 09.0'N long. 81° 47.6'W
E | lat. 24° 54.5'N long. 81° 50.5'W
F | lat. 24° 41.9'N long. 81° 40.5'W

b. Prohibit shrimp trawling inshore of the line January 1 to May 20.

c. Distribute charts and a description of the line including loran coordinates.

d. Allow limited supervised exploratory shrimp fishing inside of line, January 1 to May 20.

e. Recommend state adoption of trawling prohibition in territorial waters (within line).

f. Permit live bait shrimping inshore of line.

g. Require identification marking for live bait vessels to facilitate enforcement.

The Alternatives of Amendment Number 1 are:

A. **No Action.** If no action were taken, the FMP would remain unchanged. This would preclude modifying the line of separation in a timely manner in order to provide a more equitable solution to the conflict. Unnecessary commitments of human resources would be continued by fishermen and federal agencies in data collection and analysis and for enforcement. Although bonafide live bait shrimping does not occur in the FCZ inshore of the line during January to May, because productive shrimping areas are available inshore of the FCZ (nine nautical miles), this potential loophole may be abused by others creating renewed conflict and loss of production of adult shrimp. Further, the measure and regulation are in conflict with the provisions of the shrimp plan which prohibits live bait shrimping.

B. **Delete All FMP Provisions.** This action would result in significant adverse impacts to the environment, user groups and resources.

C. **Delete All Reporting Requirements.** The data to be collected in the preferred alternative is necessary for stock assessment (dealer reports) and for monitoring assessment of the line (fishermen reports).

D. **Specify Specific Areas for Live Bait Shrimping.** This action is not necessary as this activity is regulated under the provisions of the Shrimp FMP and as no prohibitions are placed on this activity elsewhere in the Gulf FCZ or in state waters.

E. **Delete the provisions establishing the "line of separation" and incorporate in lieu thereof a procedure whereby these provisions could be reinstated by field order if the conflict erupts.** While this alternative appears to have some merit from a cost savings standpoint, the Council does not believe it to be a viable option and feels that resolution of the conflict can be achieved without this approach.
resulting conflicts would be much more expensive. Testimony at public hearings has indicated to a degree the conditions responsible for the armed conflict still exist, even though shrimping is presently prohibited inshore of the line from January 1 to May 20, as a result of violation of the existing provisions. The Council has concluded that the provisions would have to be reinstated annually to prevent armed conflict. This conclusion is supported by public testimony and through discussions with advisory panel members.

If the conflict involved only local crabbers and local shrimp fishermen possibly this alternative would work, as generally these persons respect the others gear and right of access. However, as many of the shrimp vessels are from out of state ports, ranging from North Carolina to Texas, the likelihood of obtaining voluntary compliance and respect of each other's rights is severely limited.

Since the existing provisions establishing the line have been very successful in resolving the conflict, and since most of the indications are that the alternative action would result in immediate resumption of the conflict, it is not considered a viable alternative at this time. Another basic problem with such an alternative is that its implementation could be manipulated by a minority group of crabbers who could take action to cause implementation early in the season when the measure is not really necessary to prevent gear losses.

E. Provide a procedure for amending the regulations setting the terms and conditions of the "line of separation" as follows:

"NMFS shall collect information on the catches and fishing effort of the shrimp and stone crab fisheries in relation to the areas inshore and offshore of the line of separation and such other information as may be relevant. It is recommended that NMFS conduct controlled exploratory fishing for shrimp and crabs inshore and offshore of the line. This information shall be assessed by NMFS and Council staff and these findings shall be presented to the Stone Crab and Shrimp Advisory Subpanels, as well as to the Regional Director, the Council and its Committees. Based on the assessment of this information and recommendations by the above mentioned entities, and if the biological, social and economic considerations support a change, the Regional Director may change the position of the line of separation or the period during which shrimping is prohibited inshore of the line by the regulatory amendment process. Any such change in position of the line of separation shall be consistent with Management Objective 1, provide for orderly conduct of the stone crab fishery in the management area in order to reduce conflict between stone crab fishermen and other fishermen in the area, and Management Objective 3, attain full utilization of the stone crab resource in the management area, the provisions of the Magnuson Fishery Conservation and Management Act and other applicable law.

The Council considers that any change under this process may have a significant federal impact on the human environment; therefore, an environmental assessment will be prepared and public hearings will be held on the proposed change(s) as published in the Federal Register. If the change is deemed to have a significant impact on the human environment, a supplemental EIS will be prepared. The Council's intent
is that this procedure be used to modify the position of the line or time period, but not be used to eliminate the line or closure period. Such actions will be taken only by plan amendment."

The proposed action would provide flexibility to the FMP by incorporating a provision for amendment in the future of the regulation setting the position of the line of separation if needed. The proposed action would allow modification of the line of separation within a period of 90 to 120 days, rather than the 280 days required for plan and regulation amendment. Since there are only 225 days between the end of one fishing season and implementation of the line of separation closure in the next season, modification by plan amendment is not practical.

The action would apply to the line established in the plan to resolve the conflict between user groups. Shrimping is prohibited shorward of the line during the period January 1st to May 20th. The line was set based on the economic and sociological impacts on the two user groups affected. Based on the available information, the line was set as equitably as possible. Data collected through monitoring the fishery and through research may provide information to allow a more equitable solution through modification of the closure period or the position of the line. This proposed action would allow the Council and Regional Director of NMFS to do so in a timely manner.

The proposed action for incorporating a procedure for modifying the line of separation has no impact on the fishery resources or physical environment. The procedure for holding public hearings and preparation of an environmental assessment (EA) or a supplementary EIS if it is utilized to modify the regulation by amendment. The procedure does provide the flexibility that allows more rapid action to alleviate the economic impacts on one or both user groups affected if data collected by monitoring or research define such impacts to be adverse or provide information for a more equitable solution. Other than providing for more timely response, the proposed action does not impact the human environment and any impacts as a result of proposed regulation changes will be described in the EA or SEIS.

G. Modify the reporting requirements of the FMP to specify that mandatory reporting shall be required only of those participants in the fishery who are randomly selected to report, rather than by all participants in the fishery as follows:

"The plan shall require a mandatory reporting system, with participation limited to random samples sufficient for fishery management needs from (1) recreational boats; (2) commercial fishing boats and vessels and, (3) processors and wholesalers, or others purchasing stone crabs.

NMFS is requested to develop a data collection and analysis system designed to provide usable data on: levels and frequency of participation in the stone crab fishery; levels of catch; size composition of the catch; catch per unit of effort; incidental catches of other species; indicators of the economic value of the fishery, and catch and effort in relation to the line of separation."

The proposed modification of reporting requirement has no impact on fishery resources or the physical environment. NMFS and the Council's Scientific and Statistical Committee have concluded that data required for stock assessment can be obtained from the dealers and processors on a more effective and accurate basis utilizing the current NMFS port agent system.
Data needed to assess the line and other management parameters can be collected on an accurate and more cost-effective basis by requiring reporting by a randomly selected sample of participants.

The proposed action would have a beneficial impact on the human environment by reducing the reporting burden (a time and effort impact) on the fishermen and by reducing the irretrievable commitment of federal resources by reducing the data processing and collection requirement and by facilitating shoreside enforcement.

No adverse impacts will occur since this option reduces existing reporting requirements from a 100 percent level of participation to approximately the 25 percent level of participation.

H. Delete the exception for live bait shrimping. The proposed action would delete any reference from the plan and regulations. Such activity would be managed under the provisions of the shrimp plan.

The original exception for live bait shrimping was made because this activity was allowed in some areas of state waters inshore of the line of separation. Subsequent to this action, the plan for the shrimp fishery has been implemented and has established a sanctuary or shrimp nursery ground in the FCZ where all shrimping is prohibited throughout the year. A portion of the line of separation (point D to point E) also serves as the boundary of the nursery ground. The State of Florida prohibits all shrimping in the nursery ground by state statute, but allows live bait shrimping in other areas under certain restrictions. The exception in the Stone Crab FMP results in a conflict with the provisions of the shrimp plan. Traditionally, no bait shrimping has occurred in the FCZ inshore of the line, but has been restricted to the territorial sea. The shrimp plan allows continuation of this activity in the territorial sea.

The proposed action to delete reference to live bait shrimping inshore of the line in the FCZ during the period January 1st to May 20th is expected to have no impact on the fishery resources, physical environment or human environment as currently no shrimping for live bait occurs in this portion of the FCZ. As the proposed action allows this activity to continue under the provisions of the shrimp plan in state waters, no change in current impacts on the environment will occur. The proposed action forecloses the possibility under present regulations of adverse impacts on the fishery resources and human environment from occurring in the future if the exemption for live bait shrimping was utilized to harvest large amounts of juvenile shrimp from the nursery area. Adverse impacts on the human environment could occur through resumption of the gear conflict, if a large number of vessels changed to the type of gear allowed for bait shrimping. The shrimp plan and EIS further document the impact of this prohibition which is summarized above.

(v) Trade-offs Between the Beneficial and Adverse Impacts of the Preferred Management Options

It is recommended that Amendment Number 1, Alternatives F, G, and H be adopted as the preferred management options. Alternative F will have a beneficial impact by providing a mechanism for future change in the regulations setting the terms and conditions of the "line of separation" through the regulatory amendment process. In carrying out the monitoring responsibility for the FMP, the Council will initiate research through the NMFS Southeast Fisheries Center during FY 1982 to assess the biological parameters related to the position of the line and the duration of the prohibition on trawling inshore of the line. This alternative will allow modification of the line and closure by changing the regulations should this research or other monitoring information demonstrate that such a modification would result in a more equitable solution to the continuing conflict. The measure is designed to assure that public hearings
will be held on any proposed change and that a Supplemental EIS will be prepared if the change is deemed a significant impact on the human environment; therefore, any potential adverse impacts would be fully documented and subject to public comment.

Alternative G, which would completely replace the current text of Management Measure 5 of the FMP, will have a beneficial impact by reducing the reporting burden on fishermen and the government sector which is presently imposed by the FMP. No adverse impacts will occur.

Alternative H would have no impact since live bait shrimping is prohibited in the FCZ inshore of the line of separation by the shrimp plan and since no live bait shrimping occurs in the area. This Alternative would delete Management Measure 6. of the FMP.

(vi) Specification of Optimum Yield

No data available necessitates a change in this specification. Amendment Number 1 would, however, substitute the word "harvested" for "harvestable" in this specification to correctly reflect Council intent.
13.0 MEASURES, REQUIREMENTS, CONDITIONS OR RESTRICTIONS SPECIFIED TO ATTAIN THE MANAGEMENT OBJECTIVES

No data available nor any changes proposed by Amendment Number 1 necessitate changes in this section. Specific management measures are included in Section 12.0 and Section 13.0 discusses the measures.

14.0 SPECIFICATION AND SOURCE OF PERTINENT FISHERY DATA

No data available nor any changes proposed by Amendment Number 1 necessitate changes in this section. The statistical reporting requirements are included in Section 12.0.

15.0 RELATIONSHIP OF THE RECOMMENDED MEASURES TO EXISTING APPLICABLE LAWS AND POLICIES

No data available nor any changes proposed by Amendment Number 1 necessitate changes in this section as they relate to existing management resources. The relationship of the preferred alternatives of Amendment 1 to applicable law and policy is as follows:

Coastal Zone Management Act of 1972

The area and fishermen affected by the measures proposed under Amendment 1 are limited by the management area which includes only those waters off the west coast of Florida, including the Keys. The State of Florida does not have an approved coastal zone management plan, therefore, a consistency determination is not necessary.

Paperwork Reduction Act

A review of this amendment indicates that the proposed measure on reporting will reduce and tend to minimize the paperwork burden on small businesses (fishermen and dealers), as well as to reduce and minimize the cost to the federal government of collecting and maintaining information. This measure would reduce the reporting requirement that presently requires reporting by all participants in the fishery to a level requiring approximately 25 percent of participants to report. No change is proposed in the reporting forms which were previously approved by OMB and which have been used in the fishery since 1979.

Regulatory Flexibility Act (5 U.S.C. 601 et seq.)

A review of this amendment indicates that there will be no significant economic impacts from its implementation on small business entities in the stone crab fishery. The procedure allowing a change in the location of the "line of separation" or its duration would not necessarily change current economic conditions for small businesses. The change in reporting requirements affects a small number of businesses, in a positive manner, but would not substantially alter present costs, revenues, or productivity; and provisions for live bait shrimping do not alter the status quo but parallel existing regulations under the Shrimp FMP. Therefore, in the absence of significant economic impacts on small business entities a Regulatory Flexibility Analysis is not required. The changes from implementation of this amendment affect businesses equally in the stone crab fishery, all of which are small business entities.
Endangered Species Act of 1973

A review of this amendment indicates that the proposed measures will not jeopardize the continued existence of any threatened or endangered species or result in destruction or adverse modification of habitat determined to be critical to such species. The amendment does not alter the conditions existing when the Initial Section 7 consultation was completed.

In the event any changes in the "line of separation" are proposed under the amendment procedure a determination will be made whether it is necessary to reinitiate Section 7 consultation.

Executive Order 12291

A review of this amendment indicates that the only actual regulatory action being taken is modification of the reporting requirement thereby decreasing the burden on the small business entities and governmental sector. Therefore, it has been concluded by National Marine Fisheries Service that no Regulatory Impact Review (RIR) is required. However, in the event that any changes in the "line of separation" are proposed under the amendment procedure a determination will be necessary as to whether under the proposed action a RIR is required.

16.0 COUNCIL REVIEW AND MONITORING OF THE PLAN

No data available nor any changes proposed by Amendment Number 1 necessitate changes in this section.

17.0 REFERENCES AND RELATED LITERATURE

Additions to the references in the original FMP are:


ENVIRONMENTAL ASSESSMENT

OF

AMENDMENT NUMBER 1

TO

THE FISHERY MANAGEMENT PLAN
FOR THE STONE CRAB FISHERY
OF THE GULF OF MEXICO

SEPTEMBER, 1981

GULF OF MEXICO FISHERY MANAGEMENT COUNCIL
LINCOLN CENTER, SUITE 881
5401 WEST KENNEDY BOULEVARD
TAMPA, FLORIDA 33609
ENVIRONMENTAL ASSESSMENT OF PROPOSED AMENDMENTS TO THE FISHERY MANAGEMENT PLAN AND REGULATIONS FOR THE STONE CRAB FISHERY OF THE GULF OF MEXICO

INTRODUCTION

The harvest of stone crabs in the Gulf of Mexico is managed by the Fishery Management Plan for the Stone Crab Fishery of the Gulf of Mexico (FMP). The FMP has also resolved an armed conflict between crab fishermen and trawl fishermen. The FMP was published in the Federal Register on April 3, 1979, and was implemented by the Secretary of Commerce on September 14, 1979. An Environmental Impact Statement (EIS) was prepared on the FMP and was filed with the Environmental Protection Agency.

The Gulf of Mexico Fishery Management Council (Council) now proposes to amend the FMP to provide for flexibility in amending regulations, to modify the reporting requirements and to delete exceptions pertaining to live bait shrimping. This environmental assessment is prepared pursuant to 40 CFR 1501.3 and 1508.9 and NOAA Directive 02-10, to determine whether an EIS must be prepared on this proposed action pursuant to Section 102(2)(c) of National Environmental Protection Act.

Description of and Need for the Proposed Action

This action amends the FMP and implementing regulations. The proposed amendments would result in the following changes in the FMP and regulations:

(1) provide a procedure for amending the regulations setting the terms and conditions of the "line of separation". Such future changes would be through the use of the regulatory amendment process;

(2) modify the reporting requirements of the FMP to specify that mandatory reporting shall be required only of those participants in the fishery who are randomly selected to report, rather than by all participants in the fishery and to modify regulations to permit shoreside enforcement of reporting requirements rather than at-sea enforcement;

(3) delete the exception for live bait shrimping;

(4) to make such editorial changes to the FMP and regulations to accomplish the above changes and to correct other editorial deficiencies.

Specific proposed amendments to FMP and implementing regulations are as follows:

(1) Line of Separation. The proposed action would provide flexibility to the FMP by incorporating a provision for amendment in the future of the regulation setting the position of the line of separation if needed. The proposed action would allow modification of the line of separation within a period of 90 to 120 days, rather than the 280 days required for plan amendment. Since there are only 225 days between the end of one fishing season and implementation of the line of separation closure in the next season, modification by plan amendment is not practical.
The action would apply to the line established in the FMP to resolve the conflict between user groups. Shrimping is prohibited shoreward of the line during the period January 1st to May 20th. The line was set based on the economic and sociological impacts on the two user groups affected. Based on the available information, the line was set as equitably as possible. Data collected through monitoring the fishery and through research may provide information to allow a more equitable solution through modification of the closure period or the position of the line. This proposed action would allow the Council and Regional Director of National Marine Fisheries Service (NMFS) to do so in a timely manner.

The proposed procedure is as follows:

"NMFS shall collect information on the catches and fishing effort of the shrimp and stone crab fisheries in relation to the areas inshore and offshore of the line of separation and such other information as may be relevant. It is recommended that NMFS conduct controlled exploratory fishing for shrimp and crabs inshore and offshore of the line. This information shall be assessed by NMFS and Council staff and these findings shall be presented to the Stone Crab and Shrimp Advisory Subpanels, as well as to the Regional Director, the Council and its Committees. Based on the assessment of this information and recommendations by the above mentioned entities, and if the biological, social and economic considerations support a change, the Regional Director may change the position of the line of separation or the period during which shrimping is prohibited inshore of the line by the regulatory amendment process. Any such change in position of the line of separation shall be consistent with Management Objective 1, provide for orderly conduct of the stone crab fishery in the management area in order to reduce conflict between stone crab fishermen and other fishermen in the area, and Management Objective 3, attain full utilization of the stone crab resource in the management area, the provisions of the Magnuson Fishery Conservation and Management Act and other applicable law.

The Council considers that any change under this process may have a significant federal impact on the human environment; therefore, an environmental assessment will be prepared and public hearings will be held on the proposed change(s) as published in the Federal Register. If the change is deemed to have a significant impact on the human environment, a supplemental EIS will be prepared. The Council's intent is that this procedure be used to modify the position of the line or time period, but not be used to eliminate the line or closure period. Such actions will be taken only by plan amendment."

(2) Reporting Requirements. The proposed action would modify the reporting requirements to require mandatory reporting by a randomly selected sample of participants rather than reporting by all participants in the fishery. This action would decrease the reporting burden on the fishermen and still provide adequate information for management purposes.

The proposed amendment would incorporate the following reporting system in the FMP, in lieu of the existing system:

"The plan shall require a mandatory reporting system, with participation limited to random samples sufficient for fishery management needs from (1) recreational boats; (2) commercial fishing boats and vessels and, (3) processors and wholesalers, or others purchasing stone crabs."
NMFS is requested to develop a data collection and analysis system designed to provide usable data on: levels and frequency of participation in the stone crab fishery; levels of catch; size composition of the catch; catch per unit of effort; incidental catches of other species; indicators of the economic value of the fishery, and catch and effort in relation to the line of separateion."

(3) **Live Bait Shrimping.** The proposed action would delete any reference from the FMP and regulations. Such activity would be managed under the provisions of the shrimp plan.

The original exception for live bait shrimping was made because this activity was allowed in some areas of state waters inshore of the line of separation. Subsequent to this action, the shrimp plan has been implemented and has established a sanctuary or shrimp nursery ground in the FCZ where all shrimping is prohibited throughout the year. A portion of the line of separation (point D to point E) also serves as the boundary of the nursery ground. The State of Florida prohibits all shrimping in the nursery ground by state statute, but allows live bait shrimping in other areas under certain restrictions. The exception in the FMP results in a conflict with the provisions of the shrimp plan. Traditionally, no bait shrimping has occurred in the FCZ inshore of the line, but has been restricted to the territorial sea. The shrimp plan allows continuation of this activity in the territorial sea.

(4) **Editorial Changes.** In addition to those changes required to amend the FMP to implement the proposed actions, certain other changes are proposed to correct errors in the FMP to implement the proposed actions, certain other changes are proposed to correct errors in the FMP to correctly reflect Council intent. These include the change of "harvestable" to "harvested" in the definition of OY; and insertion of "landed" in reporting regulations was provided to facilitate shore side enforcement.

**ENVIRONMENTAL CONSEQUENCES**

The FMP continues basically unchanged from previous years. The proposed action for incorporating a procedure for modifying the line of separation has no impact on the fishery resources or physical environment. The procedure provides for holding public hearings and preparation of a supplementary EIS if the change results in a significant impact. The procedure does provide the flexibility that allows more rapid action to alleviate the economic impacts on one or both user groups affected if data collected by monitoring or research define such impacts to be adverse or provide information for a more equitable solution. Other than providing for more timely response, the proposed action does not impact the human environment and any impacts as a result of proposed regulation changes will be described in the environmental assessment or SEIS.

The proposed modification of reporting requirement has no impact on fishery resources or the physical environment. NMFS and the Council's Scientific and Statistical Committee have concluded that data required for stock assessment can be obtained from the dealers and processors on a more effective and accurate basis utilizing the current NMFS port agent system. Data needed to assess the line and other management parameters can be collected on an accurate and more cost effective basis by requiring reporting by a randomly selected sample of participants.

The proposed action would have a beneficial impact on the human environment by reducing the reporting burden (a time and effort impact) on the fishermen and by reducing the irretrievable commitment of federal resources by reducing the data processing and collection requirement and by facilitating shore side enforcement.

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The proposed action to delete reference to live bait shrimping inshore of the line in the FCZ during the period January 1st to May 20th is expected to have no impact on the fishery resources, physical environment or human environment as currently no shrimping for live bait occurs in this portion of the FCZ. As the proposed action allows this activity to continue under the provisions of the shrimp plan in state waters, no change in current impacts on the environment will occur. The proposed action forecloses the possibility under present regulations of adverse impacts on the fishery resources and human environment from occurring in the future if the exemption for live bait shrimping was utilized to harvest large amounts of juvenile shrimp from the nursery area. Adverse impacts on the human environment could occur through resumption of the gear conflict, if a large number of vessels changed to the type of gear allowed for bait shrimping. The impacts of the prohibition of live bait shrimping in the FCZ summarized above are discussed further in the shrimp plan and EIS.

The proposed editorial changes have no environmental effects at all.

Alternatives to the Proposed Action

A. **No Action.** If no action were taken, the FMP would remain unchanged. This would preclude modifying the line of separation in a timely manner in order to provide a more equitable solution to the conflict. Unnecessary commitments of human resources would be continued by fishermen and federal agencies in data collection and analysis and for enforcement. Bonafide live bait shrimping is not likely to occur in the FCZ inshore of the line during January to May, because productive shrimping areas are available inshore of the FCZ (nine nautical miles); however, this potential loophole may be abused by others creating renewed conflict and loss of production of adult shrimp. Further, the measure and regulation are in conflict with the provisions of the shrimp plan.

B. **Delete All FMP Provisions.** This action would result in significant adverse impacts to the environment, user groups, and resources.

C. **Delete All Reporting Requirements.** The data to be collected in the proposed revision is necessary for stock assessment (dealer reports) and for monitoring assessment of the line (fishermen reports).

D. **Specify Specific Areas for Live Bait Shrimping.** This action is not necessary as this activity is regulated under the provisions of the shrimp plan and as no prohibitions are placed on this activity elsewhere in the Gulf FCZ or in state waters.

E. **Delete the provisions establishing the "line of separation" and Incorporate In lieu thereof a procedure whereby these provisions could be reinstated by field order if the conflict erupts.** While this alternative appears to have some merit from a cost savings standpoint, the Council does not believe it to be a viable option and feels that resolution of the resulting conflicts would be much more expensive. Testimony at public hearings has indicated to a degree the conditions responsible for the armed conflict still exist, even though shrimping is presently prohibited inshore of the line from January 1 to May 20, as a result of violation of the existing provisions. The Council has concluded that the provisions would have to be reinstated annually to prevent armed conflict. This conclusion is supported by public testimony and through discussions with advisory panel members.
If the conflict involved only local crabbers and local shrimp fishermen possibly this alternative would work, as generally these persons respect the others gear and right of access. However, as many of the shrimp vessels are from out of state ports, ranging from North Carolina to Texas, the likelihood of obtaining voluntary compliance and respect of each other's rights is severely limited.

Since the existing provisions establishing the line have been very successful in resolving the conflict, and since most of the indications are that the alternative action would result in immediate resumption of the conflict, it is not considered a viable alternative at this time. Another basic problem with such an alternative is that its implementation could be manipulated by a minority group of crabbers who could take action to cause implementation early in the season when the measure is not really necessary to prevent gear losses.

CONCLUSIONS

* Mitigating Measures Related to Proposed Action

None

* Unavoidable Adverse Effects

None


Long-term human and resource productivity should be enhanced by reducing reporting requirements and enforcement commitments. Short-term uses remain unchanged.

* Irreversible and Irretrievable Commitment of Resources

These commitments should be decreased by modifying the reporting (and enforcement) requirements.

RECOMMENDATIONS

Having reviewed the environmental assessment and the available information relating to the proposed action, we have determined that there will be no significant environmental impact result from the action.
AMENDMENT NUMBER 2

TO

THE FINAL REGULATIONS

FOR

THE FISHERY MANAGEMENT PLAN
FOR THE STONE CRAB FISHERY
OF THE GULF OF MEXICO

SEPTEMBER, 1981

GULF OF MEXICO FISHERY MANAGEMENT COUNCIL
LINCOLN CENTER, SUITE 881
5401 WEST KENNEDY BOULEVARD
TAMPA, FLORIDA 33609
Purpose

The purpose of this amendment (Number 2) to the regulations is to provide the revisions required by Amendment Number 1 to the FMP and to improve the cost effectiveness of enforcement of measures unchanged by the amendment of the FMP.

THE CHANGES TO THE REGULATIONS


1. In the Preamble, Supplemental Information, subsection on Separation Line is revised to read as follows:

Separation Line.
The Council determined that restricting shrimp fishing was necessary for the management of stone crab fishing and to attain the Council's objective of optimizing harvest from the fishery. These final regulations prescribe a line separating stone crabbers and shrimpers. The line, depicted by the solid line on Figure 1, begins at point B and ends between points E and F at the intersection with Florida's territorial sea.

2. In the Preamble, Supplemental Information, subsection on Optimum Yield is revised to read as follows:

Optimum Yield.
The Council expressed a desire to allow the fishery to continue to expand consistent with sound conservation principles. The optimum yield (OY) in the fishery was developed to allow for such expansion. The OY has been specified as an amount equal to all harvested adult stone crabs in the management area between October 15 and May 15 which have a claw size of 7.0 centimeters (2-3/4 inches) or greater.

3. In the Preamble, Supplemental Information, subsection on Statistical Reporting is revised to read as follows:

Statistical Reporting.
Processors and dealers, selected to report, will be required to report the poundage and value of claws handled, the size classes of the claws, and other incidental information. Each month owners and operators of vessels harvesting stone crabs who are randomly selected to report will be required to report on their catch.

4. In Part 654, Subpart A, §654.5, paragraph 3a is revised to read as follows:

3a Owners and Operators. The owner or operator of any fishing vessel that fishes for stone crabs and any vessel that lands stone crabs or any portion thereof and who are randomly selected to report, shall report the information required by this paragraph to the Center Director each month on forms obtained from the Center Director.
5. In Part 654, Subpart A, §654.5, paragraph (b) is revised to read as follows:

   (b) Dealers and Processors. Any person who receives stone crab claws by way of purchase, barter, trade, or sale from a fishing vessel subject to this Part, and who is selected to report, shall file a monthly report with the Center Director, on forms obtained from the Center Director which shall contain the following information:

6. In Part 654, Subpart A, §654.5, paragraph (c) is revised to read as follows:

   (c) Filing. Reports under this section shall be filed on a form obtained from the Center Director, within ten days after the end of each month in which the stone crab claws were landed, received or harvested.

7. In Part 654, Subpart B, §654.21 is revised to read as follows:

   (a) Traps used in the stone crab fishery must have a biodegradable panel. (See definition in Section 654.2)

   (b) Stone crab traps remaining in the waters of the fishery conservation zone (FCZ) during the period commencing on 0001 hours May 21, and ending on 2400 hours October 4, and which are not being actively fished, may be considered unclaimed or abandoned property and may be disposed in any appropriate manner by the Secretary of Commerce or his or her designee. Owners of stone crab traps which remain in the waters of the FCZ during this period and which are being actively fished shall be subject to appropriate civil penalties.

8. In Part 654, Subpart B, §654.23, paragraph (b) is revised as follows:

   (b) Procedure for modifying the line of separation. NMFS shall collect information on the catches and fishing effort of the shrimp and stone crab fisheries in relation to the areas inshore and offshore of the line of separation and other information as may be relevant. It is recommended that NMFS conduct controlled exploratory fishing for shrimp and crabs inshore and offshore of the line. This information shall be assessed by NMFS and Council staff and these findings shall be presented to the Stone Crab and Shrimp Advisory Subpanels, as well as to the Regional Director, the Council and its Committees. Based on the assessment of this information and recommendations by the above mentioned entities, and if the biological, social and economic considerations support a change, the Regional Director may change the position of the line of separation or the period during which shrimp is prohibited inshore of the line by the regulatory amendment process. Any such change in position of the line of separation shall be consistent with Management Objective 1, provide for orderly conduct of the stone crab fishery in the management area in order to reduce conflict between stone crab fishermen and other fishermen in the area, and Management Objective 3, attain full utilization of the stone crab resource in the management area, the provisions of the Magnuson Fishery Conservation and Management Act and other applicable law.

The Council considers that any change under this process may have a significant federal impact on the human environment; therefore, an environmental assessment will be prepared and public hearings will be held on the proposed change(s) as published in the Federal Register. If the change is deemed to have a significant impact on the human environment, a supplemental EIS will be prepared. The Council's intent is that this procedure be used to modify the position of the line or time period, but not be used to eliminate the line or closure period. Such actions will be taken only by plan amendment.