

## 2.0 ALTERNATIVES INCLUDING THE PROPOSED ACTION

### 2.1 Development of the Alternatives and How the Alternatives are Structured

As discussed above in Section 1.3, the alternatives for revising the specifications and management measures development process were initially discussed in December 2001 and January/February 2002 meetings of the Groundfish Multi-Year Management Committee. The Committee developed six alternatives intended to represent a reasonable range of alternative management regimes for addressing the issues discussed under Section 1.0, Purpose and Need. At its April 2002 meeting, the Council eliminated one alternative from consideration and made the five remaining alternatives available for public review. That eliminated alternative and other alternatives not considered in this document are briefly detailed in Section 2.3 of this document. At its June 2002 meeting, the Council asked for an analysis of a secondary issue relevant to each of the multi-year management alternatives – whether and how multi-year management options would make use of multi-year OYs.

### 2.2 Issue 1 – Process Alternatives

Each of the five following process alternatives provides the following components:

- Either an annual or biennial framework for setting specifications and management measures.
- The number of Council meetings used in developing specifications and management measures and the months in which those meetings would be held.
- The start date of the fishing year.
- A schedule for conducting new and updated groundfish stock assessments.

Table 2.2.1 Summary of Process Alternatives

	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Annual or Biennial	Annual	Biennial	Biennial	Biennial	Biennial
Council Meetings	September November	April June September	November March/April June	June September November	June September
Fishing Year Start Date	January 1	March 1	January 1	May 1	March 1
Stock Assessments	one-third assessed each year	Two-year science schedule: one year to develop and refine models, second year to update all assessments and add new assessments.			

**Process Alternative 1 (No Action)**

*The theme of Process Alternative 1 is to continue with the current annual management cycle, giving priority to the specifications and management measures process over other Council activities.*

- Specifications and management measures set annually for a one-year period.
- Two Council meetings, with proposed specifications and management available at Meeting 1 and Council final action at Meeting 2.

**\*\*This two-meeting process (usually September and November meetings) was standard for the 1990-2001 specifications and management measures. For the 2002 specifications, the Council adopted a three-meeting process, with proposed specifications available in June, proposed management measures available in September, and final Council action on all items in November. For 2003, the Council has had to revert to a two-meeting process (June, September) to allow a public notice and comment period prior to an expected March 1, 2003 finalization. For the purposes of this analysis, the two-meeting process will be considered the No Action alternative. \*\***

- January 1 fishing year start date.
- Stock assessments for each assessed species are conducted once every three years. In other words, one-third of all assessed stocks receive assessment updates each year

Table 2.2.2 Alternative 1, status quo/no action

1 <sup>st</sup> third of all assessed stocks			2 <sup>nd</sup> third of all assessed stocks			3 <sup>rd</sup> third of all assessed stocks		
<i>Survey</i>	<i>Assessed</i>	<i>Harvest</i>	<i>Survey</i>	<i>Assessed</i>	<i>Harvest</i>	<i>Survey</i>	<i>Assessed</i>	<i>Harvest</i>
Year 1	Year 2	Year 3						
Year 1	Year 2	Year 4	Years 1-2	Year 3	Year 4			
Year 1	Year 2	Year 5	Years 1-2	Year 3	Year 5	Years 1-3	Year 4	Year 5
Years 2-4	Year 5	Year 6	Years 1-2	Year 3	Year 6	Years 1-3	Year 4	Year 6
Years 2-4	Year 5	Year 7	Years 2-5	Year 6	Year 7	Years 1-3	Year 4	Year 7
Years 2-4	Year 5	Year 8	Years 2-5	Year 6	Year 8	Years 4-6	Year 7	Year 8
Years 5-7	Year 8	Year 9	Years 2-5	Year 6	Year 9	Years 4-6	Year 7	Year 9

**Process Alternative 2 (biennial, three-meeting, March 1 start)**

*The theme of Process Alternative 2 is to maximize time for stock assessment scientists, Council staff, and NMFS staff to prepare documentation needed to implement specifications and management measures. Additionally, biennial management is intended to allow the Council time to focus its work in alternate years on issues other than specifications and management measures.*

- Specifications and management measures set biennially for a two-year period.
- Three Council meetings, with proposed specifications available in April (Meeting 1,) proposed management measures available in June (Meeting 2,) and Council final action in September (Meeting 3.)
- March 1 fishing year start date.
- Stock assessments for each assessed species are conducted every other year.

Table 2.2.3 Alternative 2

Years in which stock surveys are conducted	Year All Stocks Assessed	Years harvest limits are based on that assessment
Year 1	Years 2-3	Years 4-5
Year 2	Years 4-5	Years 6-7
Year 3	Years 4-5	Years 6-7
Year 4	Years 6-7	Years 8-9
Year 5	Years 6-7	Years 8-9

**Process Alternative 3 (biennial, three-meeting, January 1 start), Council preferred**

*The theme of Process Alternative 3 is to maximize time for stock assessment scientists, Council staff, and NMFS staff to prepare documentation needed to implement specifications and management measures **without disrupting historic January 1 season start date**. Additionally, biennial management is intended to allow the Council time to focus its work in alternate years on issues other than specifications and management measures.*

- Specifications and management measures set biennially for a two-year period.
- Three Council meetings, with proposed specifications available in November (Meeting 1,) proposed management measures available in March/April (Meeting 2,) and Council final action in June (Meeting 3.)
- January 1 fishing year start date.
- Stock assessments for each assessed species are conducted every other year.

Table 2.2.4 Alternative 3

Years in which stock surveys are conducted	Year All Stocks Assessed	Years harvest limits are based on that assessment
Year 1	Year 2	Years 4-5
Year 2	Year 4	Years 6-7
Year 3	Year 4	Years 6-7
Year 4	Year 6	Years 8-9
Year 5	Year 6	Years 8-9

**Process Alternative 4 (biennial, three-meeting, May 1 start)**

*The theme of Process Alternative 4 is to minimize the time between stock surveys and the years in which those surveys are used in setting harvest limits, **while also maximizing time for Council staff and NMFS staff to prepare documentation** needed to implement specifications and management measures. Additionally, biennial management is intended to allow the Council time to focus its work in alternate years on issues other than specifications and management measures.*

- Specifications and management measures set biennially for a two-year period.
- Three Council meetings, with proposed specifications available in June (Meeting 1,) proposed management measures available in September (Meeting 2,) and Council final action in November (Meeting 3.)
- May 1 fishing year start date.
- Stock assessments for each assessed species are conducted every other year.

Table 2.2.5 Alternative 4

Years in which stock surveys are conducted	Year All Stocks Assessed	Years harvest limits are based on that assessment
Year 1	Year 2	Years 3-4
Year 2	Year 4	Years 5-6
Year 3	Year 4	Years 5-6
Year 4	Year 6	Years 7-8
Year 5	Year 6	Years 7-8

**Process Alternative 5 (biennial, two-meeting, March 1 start)**

*The theme of Process Alternative 5 is to **minimize the time between stock surveys and the years in which those surveys are used in setting harvest limits.** Additionally, biennial management is intended to allow the Council time to focus its work in alternate years on issues other than specifications and management measures.*

- Specifications and management measures set biennially for a two-year period.
- Two Council meetings, with proposed specifications and management measures available in June (Meeting 1) and Council final action in September (Meeting 2.)
- March 1 fishing year start date.
- Stock assessments for each assessed species are conducted every other year.

Table 2.2.6 Alternative 5

Years in which stock surveys are conducted	Year All Stocks Assessed	Years harvest limits are based on that assessment
Year 1	Year 2	Years 3-4
Year 2	Year 4	Years 5-6
Year 3	Year 4	Years 5-6
Year 4	Year 6	Years 7-8
Year 5	Year 6	Years 7-8

**Table 2.2.7 Groundfish Multi-Year Management Process Alternatives – Summary of Policy Considerations (Y = Year)**

Process Alternative	Science Process *Stock assessments occur Jan-May needed for all options. Different schedule indicated when more time available.*	Data/Stock Assessment Use *May not survey all stocks in all years. Y1 survey data used in Y2 assessment process.*	Council Process *Council process and workload more or less burdensome depending on whether 2- or 3-meeting process*	NMFS Process * 5 months minimum needed for proposed rule, comment period and response time*	Industry Needs/Effects *Where process is 2-years, discipline is needed in 1 <sup>st</sup> fishing year to not push limits higher in Council process – otherwise fewer fish available for 2 <sup>nd</sup> year, possible early closures
<p><b>1. Status quo, 2-meeting annual process, 1/1 start.</b></p> <p>Annual process PFCM meets Sept. (proposed) and Nov. (final), Fishing Year starts Jan 1.</p>	<ul style="list-style-type: none"> <li>• 1/3 of stocks each year (labeled as groups A, B, and C in next box →)</li> <li>• STAR process for all assessed species, each year</li> </ul>	<ul style="list-style-type: none"> <li>• Year 1 survey info used in Y3 fishing for stock group A</li> <li>• Y1-2 survey info used in Y4 fishing for stock group B</li> <li>• Y1-3 survey info used in Y5 fishing for stock group C</li> </ul>	<ul style="list-style-type: none"> <li>• 7 months for Council staff and committees work on NEPA/RFA, SAFE documents</li> <li>• Less overall Council time for issues other than specifications</li> </ul>	<ul style="list-style-type: none"> <li>• 2 months for implementation, inadequate time</li> <li>• Less overall NMFS time for issues other than specifications</li> </ul>	<ul style="list-style-type: none"> <li>• Start date the same, process same, so little/no industry adjustment</li> <li>• Less Council/NMFS time to work on other industry issues</li> </ul>
<p><b>2. 3-meeting, biennial process, 3/1 start.</b></p> <p>PFCM meets April (proposed ABC/OY), June (final ABC/OY, proposed management), and Sept (final management) Fishing year starts March 1</p>	<ul style="list-style-type: none"> <li>• Stock assessments could occur Jan- Mar of following Y</li> <li>• All stocks assessed every other year with STAR or STAR-lite review</li> <li>• Intervening years have STAR process for models, new overfished spp.</li> </ul>	<ul style="list-style-type: none"> <li>• Year 1 survey info used in Y4-5 fishing for all stocks</li> <li>• Y2 survey info used in Y6-7 fishing</li> <li>• Y3 survey info used in Y6-7 fishing</li> </ul>	<ul style="list-style-type: none"> <li>• 11-19 months for Council staff and committees work on NEPA/RFA, SAFE documents</li> <li>• More time for issues other than specifications</li> <li>• Inseason adjustments for last 3 months made at Nov meeting.</li> <li>• Conflict with salmon management schedule</li> </ul>	<ul style="list-style-type: none"> <li>• 5-5 months for implementation, adequate time</li> <li>• More NMFS time for issues other than specifications</li> </ul>	<ul style="list-style-type: none"> <li>• Change in fishing year requires business planning changes for industry</li> <li>• 2-year process, possible early closures if limits not controlled</li> <li>• More Council/ NMFS time to work on other industry issues</li> <li>• Fishing based on older data than all other alternatives</li> </ul>

Process Alternative	Science Process *Stock assessments occur Jan-May needed for all options. Different schedule indicated when more time available.*	Data/Stock Assessment Use *May not survey all stocks in all years. Y1 survey data used in Y2 assessment process.*	Council Process *Council process and workload more or less burdensome depending on whether 2- or 3-meeting process*	NMFS Process * 5 months minimum needed for proposed rule, comment period and response time*	Industry Needs/Effects *Where process is 2-years, discipline is needed in 1 <sup>st</sup> fishing year to not push limits higher in Council process – otherwise fewer fish available for 2 <sup>nd</sup> year, possible early closures
<p><b>3. 3-meeting, biennial process, 1/1 start.</b></p> <p>PFMC meets Nov (proposed ABC/OY), March/April (final ABC/OY, proposed management), and June (final management) Fishing year starts Jan 1</p>	<ul style="list-style-type: none"> <li>Stock assessments occur Jan-Oct</li> <li>All stocks assessed every other year with STAR or STAR-lite review</li> <li>Intervening years have STAR process for models, new overfished spp.</li> </ul>	<ul style="list-style-type: none"> <li>Year 1 survey info used in Y4-5 fishing for all stocks</li> <li>Y2 survey info used in Y6-7 fishing</li> <li>Y3 survey info used in Y6-7 fishing</li> </ul>	<ul style="list-style-type: none"> <li>14 months for Council staff and committees work on NEPA/RFA, SAFE documents</li> <li>More time for issues other than specifications</li> <li>Conflict with salmon management schedule</li> </ul>	<ul style="list-style-type: none"> <li>6.5 months for implementation, adequate time</li> <li>More NMFS time for issues other than specifications</li> </ul>	<ul style="list-style-type: none"> <li>Start date the same</li> <li>2-year process, possible early closures if limits not controlled</li> <li>Fishing based on older data than Alternatives 1, 4, 5</li> <li>More Council/ NMFS time to work on other industry issues</li> </ul>
<p><b>4. 3-meeting, biennial process, 5/1 start.</b></p> <p>PFMC meets June (proposed ABC/OY), Sept. (final ABC/OY, proposed management), and Nov. (final management) Fishing year starts May 1</p>	<ul style="list-style-type: none"> <li>All stocks assessed every other year with STAR or STAR-lite review</li> <li>Intervening years have STAR process for models, new overfished spp.</li> <li>Database adjusting for change in fishing year</li> </ul>	<ul style="list-style-type: none"> <li>Year 1 survey info used in Y3-4 fishing for all stocks</li> <li>Y2 survey info used in Y5-6 fishing</li> <li>Y3 survey info used in Y5-6 fishing</li> </ul>	<ul style="list-style-type: none"> <li>9 months for Council staff and committees work on NEPA/RFA, SAFE documents</li> <li>More time for issues other than specifications</li> <li>Inseason adjustments in Nov. and March possibly ill-timed for May 1 fishery start</li> <li>Re-evaluation of whiting and fixed gear sablefish season management required</li> </ul>	<ul style="list-style-type: none"> <li>6 months for implementation, adequate</li> <li>More NMFS time for issues other than specifications</li> </ul>	<ul style="list-style-type: none"> <li>Change in fishing year requires business planning changes for industry</li> <li>2-year process, possible early closures if limits not controlled</li> <li>5/1 fishery start conflicts with current whiting and fixed gear sablefish seasons, tribal groundfish fishery management</li> <li>More Council/ NMFS time to work on other industry issues</li> </ul>



Process Alternative	Science Process	Data/Stock Assessment Use	Council Process	NMFS Process	Industry Needs/Effects
<p><b>5. 2-meeting, biennial process, 3/1 start.</b></p> <p>PFMC meets June (proposed) and Sept (final), Fishing Year starts March 1</p>	<p>*Stock assessments occur Jan-May needed for all options. Different schedule indicated when more time available.*</p> <ul style="list-style-type: none"> <li>All stocks assessed every other year with STAR or STAR-lite</li> <li>Intervening years have STAR process for models, new overfished spp.</li> <li>Database adjusting for change in fishing year</li> </ul>	<p>*May not survey all stocks in all years. Y1 survey data used in Y2 assessment process.*</p> <ul style="list-style-type: none"> <li>Year 1 survey info used in Y3-4 fishing for all stocks</li> <li>Y2 survey info used in Y5-6 fishing</li> <li>Y3 survey info used in Y5-6 fishing</li> </ul>	<p>*Council process and workload more or less burdensome depending on whether 2- or 3-meeting process*</p> <ul style="list-style-type: none"> <li>9 months for Council staff and committees work on NEPA/RFA, SAFE documents</li> <li>More time for issues other than specifications</li> <li>Inseason adjustments for last 2-3 months made at Nov meeting</li> </ul>	<p>* 5 months minimum needed for proposed rule, comment period and response time*</p> <ul style="list-style-type: none"> <li>5.5 months for implementation, adequate</li> <li>More NMFS time for issues other than specifications</li> </ul>	<p>*Where process is 2-years, discipline is needed in 1<sup>st</sup> fishing year to not push limits higher in Council process – otherwise fewer fish available for 2<sup>nd</sup> year, possible early closures</p> <ul style="list-style-type: none"> <li>Change in fishing year requires business planning changes for industry</li> <li>2-year process, possible early closures if limits not controlled</li> <li>More Council/ NMFS time to work on other industry issues</li> </ul>

### 2.3 Issue 2 – Optimum Yield (OY) Duration Alternatives

Process Alternatives 2-5 feature biennial specifications and management measures processes. The Council has been operating with an annual specifications process (Process Alternative 1) since 1990. In that process, OYs have been set for one year periods. Within a biennial specifications and management measures process, the Council could use two one-year OYs or one two-year OY for each species or species group, or a mix of those alternatives for different species or species groups.

#### Optimum Yield Duration Alternative 1 (status quo/no action), Council preferred

All OYs for all species or species group would be set for one-year periods. In a biennial management process, each fishing year the Council would manage each species or species group to achieve but not exceed its one-year OY. At the beginning of each fishing year, fishing would begin on new one-year OYs, with no adjustments made for underage or overages in the prior year.

At its November 2002 meeting, the Council recommended this alternative, as refined by suggestions from the Council's Groundfish Management Team (GMT). The GMT suggested and the Council adopted for NMFS review, a biennial management process that implements two one-year OYs for all species. As part of this process, the Council would include a mid-biennium check-up on harvest levels that takes advantage of the two-year science process associated with the biennial management process as follows:

Table 2.3.1	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Survey	A	B	C	D	E		
Assessment		A		A-C*		A-E	
Management			A		A-C		A-E
Fishing				A	A	A-C	A-C

\* Assessments for fishing in Years 6-7 would be complete by October of Year 4. November Council meeting of Year 4 provides checkpoint for Year 5 harvest levels to ensure that those harvest levels set in earlier management process are adequately conservative to meet overfished species protection and conservation requirements.

#### Optimum Yield Duration Alternative 2 (two-year OYs)

All OYs for all species would be set for two-year periods. In a biennial management process, the Council would manage each species to achieve but not exceed the biennial OY for that species. At the end of the first year of the fishing cycle, any OY underage or overage from that year would carry over into the second year, affecting the amount of each species that could be taken in that second year. Under this alternative, the Council may wish to develop harvest checkpoints to articulate the percent of each species' OY that could be expected to be taken at different points during the two-year cycle. These harvest checkpoints would be based on historic fishing cycles, would integrate groundfish landings with landings of other species coastwide, and could be used to monitor progress through the two-year period to ensure that no severe underage or overages occur.

#### Optimum Yield Duration Alternative 3 (mix of one-year and two-year OYs)

OYs for some species would be set for one-year periods, for others OYs would be set for two-year periods. The Council could choose during the development of each new management cycle which species would be managed for one-year OYs and two-year OYs. One-year OYs would allow single year targets for some species within the biennial cycle, which might be appropriate for species that require particularly conservative management, such as overfished species.

## 2.4 Alternatives Eliminated from Detailed Study

During its initial meetings, the Multi-Year Management Committee discussed several variations on the options listed above:

**Multi-Year Management for Periods Longer Than Two Years.** Of the five process alternatives listed above, one would continue the annual management cycle and four would move the Council to biennial specifications and management measures. The Committee discussed management cycles ranging from one to five years in duration. These discussions revealed that setting the length of the management cycle would be a delicate balance between ensuring the use of the best and most recently available scientific information and allowing management process participants adequate time to discuss and absorb this scientific information and its implications for management. Under the current annual cycle, processing and review of data must occur at a fairly swift pace, using scientific personnel time and resources that might otherwise be dedicated to stock assessments and advanced modeling. Thus, the annual cycle tends to allow participating scientists to assess about one-third of all assessed stocks in any one year. As a result, each year's management cycle uses the most recently available information for one-third of assessed stocks. Discussions between the Committee and stock assessment scientists about timing of assessments and data availability led the Committee to conclude that a two-year management cycle would allow participating scientists more time to process and review data from the stock surveys and then more time to complete stock assessments for setting specifications and management measures. Three- to five- year cycles would have lengthened the scientific process further, but the longer cycles would have also resulted in managers using "older" data in setting harvest levels. The Committee determined that the benefits of a longer assessment and analysis period were outweighed by the need to use the best available scientific information in support of the management process.

**Changing Council Meeting Dates.** During its initial discussions, the Committee looked at different ways of addressing the scheduling needs of the scientific process (processing and reviewing data from resource surveys through to completed assessments) and the public notice and comment process (NMFS publication of proposed and final rules in the Federal Register). In addition to considering changing the duration of the management cycle, the fishing year start date, and the Council meetings at which discussion and decision occur, the Committee also looked at changing the dates of Council meetings to better incorporate the scientific process and the notice and comment process. For example, the Committee considered whether the process could be better served by moving the June Council meeting to July, or by moving the September and November meetings to early August and October. Ultimately, the Committee set aside these considerations for two logistical reasons. First, the current Council meeting schedule of five meetings per year held in March, April, June, September, and November is based on the management needs of a variety of fisheries (groundfish, salmon, coastal pelagic species, highly migratory species, halibut). Historically, the September and November meetings have been dominated by groundfish issues, thus the timing of those meetings could have been more flexible with changes to groundfish management needs. March and April meetings, however, are strictly timed with salmon season management and timing for those meetings could not be made flexible to accommodate groundfish management needs. The Committee was uncomfortable with the potential ripple effects of changing Council meeting dates on the management of species other than groundfish. Second, Council meeting dates must be set several years in advance to ensure meeting location reservations adequate for the large number of Council meeting participants. Even if the Committee had wanted to forward an alternative meeting schedule for public consideration, the Council and NMFS would not have been able to fully implement such an alternative for three to four years. The Committee felt that there were sufficient alternatives for addressing their goals in taking a new look at the management process without having to also address the complications of meeting logistics. Based on these technical and economic considerations, changing Council meeting dates was eliminated from further analysis.