


MEMORANDUM

TO: Council, SSC and AP Members

FROM: Chris Oliver 
Executive Director

DATE: December 1, 2004

SUBJECT: Final GOA Groundfish Specifications for 2005 and 2006

ESTIMATED TIME 8 HOURS (for all D-1 items)
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ACTION REQUIRED

Approve 2005 BSAI/GOA EA and GOA Final Stock Assessment and Fishery Evaluation (SAFE) report, and approve final GOA groundfish specifications for 2005 and 2006:

1. Acceptable Biological Catch (ABC), and annual Total Allowable Catch (TAC).
2. TAC considerations for the State Pacific cod fishery.
3. Prohibited Species Catch Limits.

BACKGROUND

At this meeting, the Council makes final recommendations on groundfish and bycatch specifications as listed above to manage the 2005 and 2006 Gulf of Alaska (GOA) groundfish fisheries.

GOA SAFE Document

The groundfish Plan Teams met in Seattle November 15-19 to prepare the final SAFE reports and to review the status of groundfish stocks. The GOA SAFE report forms the basis for the GOA groundfish specifications for the 2005 and 2006 fishing years. Note that there are three volumes to the SAFE report: a stock assessment volume, a fishery evaluation volume("economic SAFE"), and an ecosystems considerations volume. These three volumes, together with the BSAI SAFE, are incorporated into the Environmental Assessment for the 2005 and 2006 groundfish total allowable catch specifications. The SAFE reports and the EA were mailed to you in late November. The GOA Plan Team and Joint Plan Team minutes are attached as Items D-1(e)(1) and (2).

Under Amendments 48/48 to the GOA and BSAI FMPs, OFLs, ABCs and TACs may be specified for a period of up to two years. For this reason, catch specification recommendations are provided for both 2005 and 2006. This amendment also allowed for biennial assessments for long-lived GOA species as trawl surveys in the GOA are conducted on a biennial cycle. These species, including rockfishes, flatfishes and Atka mackerel do not have full assessments in the 2005 GOA SAFE report. Instead, updated information and projections are provided in an Executive Summary version of the annual stock assessment chapter. Not all of these species have updated projections, thus many of the OFL and ABC recommendations are rollovers from 2004. A full assessment for each GOA target species will be provided next year following the annual groundfish trawl survey.

ABCs, TACs, and Apportionments

At this meeting, the Council will establish final catch specifications for the 2005 and 2006 fisheries. The SSC and AP recommendations will be provided to the Council during the meeting. Item D-1(e)(3) lists the 2004 specifications and catch (through November 6, 2004) and GOA Plan Team recommendations for OFLs and ABCs for 2005 and 2006. The sum of the Plan Team's recommended ABCs for 2005 is 539,263 mt. The sum of the ABCs increased 6% compared with last year. The ABC levels increased in pollock (+27%), deep water flatfish (+12%), arrowtooth flounder (+11%), Pacific ocean perch (+2%), pelagic shelf rockfish (+2%) and northern rockfish (+5%). Of these stocks, a full assessment was prepared only for pollock this year; the other ABC increases were based on projected biomass increases. The species with ABCs that declined relative to 2004 are Pacific cod (-6%), sablefish (-4%), flathead sole (-13%), and demersal shelf rockfish (-9%). Of these stocks, full assessments were prepared for Pacific cod and sablefish. The ABCs for the remaining stocks were rolled over from the 2004 ABCs. Full assessments for all GOA stocks will be prepared next year.

The abundances of Pacific cod, Pacific ocean perch, northern rockfish, dusky rockfish, thornyhead rockfish, flathead sole, Dover sole, and arrowtooth flounder are above target stock size. The abundances of pollock and sablefish are below target stock size. The relative abundances of other deep-water flatfish, shallow-water flatfish, rex sole, shorttraker rockfish, roughey rockfish, demersal shelf rockfish, other pelagic shelf rockfish, other slope rockfish, Atka mackerel, and skates are unknown. None of the groundfish stocks are overfished or approaching an overfished condition.

In 2004 skates species were removed from the "other species" category in the GOA FMP and moved to a target species category. A recommendation was made by the GOA Plan Team to split big skates and longnose skates by species (for OFLs) and areas (for ABCs) for 2005. The Team also recommends breaking shorttraker rockfish and roughey rockfish out from the combined category in which they are currently managed such that individual OFLs and ABCs may be specified by species. Please also refer to letter from NMFS under D-1(f)(3).

The Team recommended that the Council initiate two amendments to the GOA groundfish FMP. The first recommendation is to initiate an amendment to change the language regarding how the "other species" TAC is currently calculated. The second recommendation is to initiate an amendment to remove Dark rockfish from the FMP and turn management of this species over to the State of Alaska. The rationale for both recommendations are provided in the GOA Plan Team minutes.

TAC Considerations for State Pacific Cod Fishery

Since 1997, the Council has reduced the GOA Pacific cod TAC to account for removals of not more than 25% of the Federal P. cod TAC from the state managed fisheries. Using the area apportionments of the 2005 and 2006 P. cod ABC recommended by the Plan Team, the federal TAC for P. cod would be adjusted as listed below.

Proposed 2005 Gulf Pacific cod ABCs, TACs, and State guideline harvest levels (mt).					Proposed 2006 Gulf Pacific cod ABCs, TACs, and State guideline harvest levels (mt).				
Specifications	Western	Central	Eastern	Total	Specifications	Western	Central	Eastern	Total
ABC	20,916	33,117	4,067	58,100	ABC	18,396	29,127	3,577	51,100
BOF GHL	5,229	8,031	407	13,667	BOF GHL	4,599	7,063	358	12,020
(%)	25	24.25	10	23.5	(%)	25	24.25	10	23.5
TAC	15,687	25,086	3,660	44,433	TAC	13,797	22,064	3,219	39,080
	Cook Inlet	993	3.00%			Cook Inlet	874	3.00%	
	Kodiak	4,140	12.50%			Kodiak	3,641	12.50%	
	<u>Chignik</u>	<u>2,898</u>	<u>8.75%</u>			<u>Chignik</u>	<u>2,548</u>	<u>8.75%</u>	
	Central	8,031	24.25%			Central	7,063	24.25%	

Prohibited Species Catch Limits

Halibut Prohibited Species Catch (PSC) for all fisheries and gear types is limited to 2,300 mt. The following are the proposed 2005 halibut PSC seasons and apportionments for the Gulf of Alaska groundfish fisheries:

2005 Trawl		2005 Hook and Line		
Jan 20 - Apr 1	550 mt	1st trimester	Jan 1 - Jun 10	250 mt
Apr 1 - Jul 5	400 mt	2nd trimester	Jun 10 - Sep 1	5 mt
Jul 5 - Sep 1	600 mt	3rd trimester	Sept 1 - Dec 31	35 mt
Sept 1 - Oct 1	150 mt	DSR	Jan 1 - Dec 31	10 mt
Oct 1 - Dec 31	300 mt			
TOTAL	2,000 mt			300 mt

Season	Trawl fishery categories		Total
	Shallow Water	Deep Water	
Jan 1 - Apr 1	450 mt	100 mt	550 mt
Apr 1 - Jul 5	100 mt	300 mt	400 mt
Jul 5 - Sep 1	200 mt	400 mt	600 mt
Sep 1 - Oct 1	150 mt	any rollover	150 mt
Oct 1 - Dec 31	no apportionment		300 mt
TOTAL	900 mt	800 mt	2,000 mt

**Plan Team Report
Gulf of Alaska Groundfish Plan Team Meeting
November 16-19, 2004
AFSC, Seattle WA**

The meeting of the GOA groundfish Plan Team convened November 16-19, 2004 in Seattle, WA. The following team members were present: Jim Ianelli (co-chair), Diana Stram (co-chair), Sandra Lowe, Bill Bechtol, Jeff Fujioka, Jon Heifetz, Nick Sagalkin, Tory O'Connell, Tom Pearson, Beth Sinclair, Bill Clark, Sarah Gaichas and Bob Foy. Kathy Kuletz was absent. Approximately 20 members of the public, state and agency staff also attended.

The Team welcomed new member Nick Sagalkin (ADF&G) who replaced Mike Ruccio this year. The Team also welcomed the assistance of Erik Eisenhardt (WDF) who assisted while the Team awaited a response from the State of WA on the appointment of a Team member to replace Farron Wallace.

The Team gratefully acknowledges the years of service by departing team members Bill Bechtol (ADF&G) and Beth Sinclair (MML). Their many years of hard work and insight were much appreciated by the team and they wish them well in all future endeavors.

This is the first year that the GOA team has begun biennial assessments for most species. As agreed upon in September, the Team decided to have assessment authors present an overview of their species, including any updated catch information from the fishery, submit an executive summary of their assessment, and be available to answer any questions by the Team. The breadth of detail varied by assessment author, with some executive summaries (notably for some rockfish species) including new projections with updated catch information.

Flatfish Assessments:

Jack Turnock presented the flatfish assessments. These are all on a biennial assessment schedule. Only rex sole and Dover sole had assessments this year given the use of a new model (rex sole) and the use of an age-structured model to provide ABC recommendations this year (Dover sole).

Rex Sole:

Increased maturity information for rex sole prompted the development of model for rex sole. This assessment was presented in a draft form at the September meeting, and presented to the SSC in October. The assessment has been updated, and per Plan Team convention the model may be used in next year's assessment cycle to establish ABCs for Rex sole in 2006 and 2007.

Many flatfish species biomass increased in 2003. The model does not appear to be fitting the increase in 2003. There was no indication of large recruitment in the length composition data, therefore the biomass increase observed in 2003 appears questionable.

Questions were again raised (similar to September) regarding the selectivity curves. The survey samples indicate much smaller fish, while the fishery data shows larger fish. How is the fishery seemingly avoiding the smaller fish? Fishery lengths were noted to be inclusive of all observed catches. The maturity sampling locations appear to be close to shore and in the area surrounding Kodiak and therefore may not be representative of the broader distribution of the fishery. What is the likelihood that maturity samples are representative of the entire population? More maturity information is necessary to validate this.

As calculated in the model, the F35 and F40 values would result in catching all fish where the selectivity = 1.0. The authors backcalculated F rates to obtain a consistent ABC with last year (without the model). The Team did not agree with the authors' rationale for calculating the F rates to be consistent with last year's ABC, however the Team did express concern regarding the potential volatility of catch in the fishery and potential to catch all of the large fish. The author suggested that there should be other criteria for establishing the ABC than the model projection. The projection would lead to high ABCs in the next couple years and with the population declining sharply afterwards. This would lead to extreme instability in the fishery which is not advisable.

The Team noted that this stock is in Tier 3a, and while the tier sets maximum ABC, the ABC could set below the maximum at the author's discretion as is done in other stocks. This stock was previously in Tier 5. The ABCs for 2005 and 2006 are a rollover from 2004. The model will not be utilized until next year to recommend ABCs.

The Team had lingering concerns regarding the data utilized in the model and questioned what new data would be available for next year. The Team noted that it will likely be faced with this same problem next year with the assessment, and made suggestions for information availability and questions in order to assist the authors in problem solving the vast difference in selectivity between the survey and the fishery. It was noted that new survey information will be available next year. Suggestions were made to get more maturity information from the fishery. The author explained that approximately 50% of the samples were from the fishery but that it may be possible to collect additional maturity information.

Suggestions from members of the team included:

- Survey maturity samples over wider geographic range.
- Calculate maturity for the survey (to obtain an indication of to what extent fishery selectivity are representative).
- Could look at $F=M$ as compared with real catches. ($F=M$ would give an ABC close to actual catches in previous years).

Members of the public present noted that the fishery is primarily located on the shelf and upper slope. It was suggested that there may be an impact of the use of halibut excluders. The fishery is primarily a catcher processor fishery and these CPs use halibut excluders which could produce size differences in the catch.

Questions were raised regarding any potential work that has been done on halibut excluders and what other species are similarly excluded? Sarah Gaichas commented that skates are also excluded.

Catch was noted to be much less than TAC due to halibut bycatch in this fishery. Rex sole are considered to be the most valuable flatfish of flatfish complex. Once the groundfish fishery becomes rationalized, the fishery can make better use of halibut limits. The public noted that the stock is patchily distributed and difficult to catch.

The Team recommended that the author look closely at the maturity data. It is important to determine how the fishery is able to avoid younger fish. What did the data look like prior to the use of halibut excluders? It was noted that this may be difficult to distinguish depending on how the observer data reported at that time. The maturity samples are primarily from shore based processors but the majority of the catch comes from CPs. It may be that using survey maturities instead may be a better representation of the overall fishery.

Questions were raised regarding to what extent the fishery and survey ages are aged by the same people? This should be investigated to ensure that the data are not reflective of an inconsistency in ageing techniques. Other questions included whether ages for rex sole have been validated, for instance by marginal increment analysis? The author agreed to check on this. The ages should have a consistent bias and the authors should document age data for rex sole. The Team noted that this has been a problem sometimes in the past with moving to an age-structured model without adequate validation of ages.

Additional questions from the Team on the assessment included whether there has there been a shift to larger fish age over time (as portrayed in the assessment figure 4.2) or is this actually an artifact of the way that the survey is presented? What are the sample sizes for ages?

Members of the public also questioned to what extent the data shows an indication of the stock segregating by age seasonally such that in spring in the fishery are seeing different ages than in summer during the survey. The Team encourages the author to look into this as well as a possible explanation for the distribution of ages in the survey versus the fishery.

Dover sole:

The assessment included updated catch and fishery information, otherwise it is similar to last year's assessment. The model is similar to other flatfish models.

The biomass of Dover sole in 2003 biomass increased (similar to observed increases in both arrowtooth and rex sole). Recruitment is restricted in the model, therefore the model is not fitting the recent biomass increase. The weighting scheme in the model smoothes the recruitment closer to an average recruitment. The author noted that the difference in natural mortality between males and females is unknown.

Length by depth data does not show larger fish in deeper water. It was noted that this could be due to the timing of the summer survey. The same results have been seen for different surveys, with larger fish not present in deep water. The most recent 2003 survey does show some smaller fish in shallow depth ranges.

The Plan Team approved of the recommended ABCs for 2005 and 2006. It was noted that while Dover sole makes up the majority of the deep-water flatfish complex the complex also includes Greenland turbot and deep-sea sole. The ABC is based on Dover sole primarily with some additional quota included for the other two components as listed.

Questions were raised by the Team regarding the need for consistency in basing ABCs for complexes on a major component of the complex with other smaller components included. There is a need for consistent treatment of minor complex components across complexes. It was suggested that the assessment author include in the Dover sole assessment separate tables for Greenland turbot and deep sea sole to clarify that these are assessed and included separately from the Dover sole ABC.

Arrowtooth Flounder:

The author noted a continued steep biomass increase in 2003. Catch of arrowtooth was less than last year. ABCs and OFLS for 2005 and 2006 were utilized from the projections provided to the Team in September. No updated assessment or information was provided to the Team on this species.

Flathead Sole:

The author noted that catch of flathead sole has been similar to previous years. ABCs and OFLS for 2005 and 2006 were utilized from the projections provided to the Team in September. No updated assessment or information was provided to the Team on this species.

Pollock:

Martin Dorn presented the assessment for walleye pollock. A new section was added to the assessment this year discussing ecosystem concerns. The assessment author discussed some pollock survival indices developed by FOCI (precipitation based survival index and a wind mixing index) but explained that as yet there was no clear correlation between physical indices and recruitment.

The assessment author discussed preliminary information on trophic interactions based on results from the Ecopath model. Arrowtooth is still considered to be a major predator on juvenile and adult pollock, with halibut also a main predator on adult pollock. It was noted that there is a tendency for halibut to consume larger pollock than juveniles. Arrowtooth, halibut, pacific cod, and pollock were estimated in the model by stomach samples from the GOA survey. There was discussion of the relative importance of pollock in the diets of Stellar sea lions, and the population trends of pollock predators.. Arrowtooth and SSLs were inversely correlated to Pollock, thus some potential exists for competition for Pollock prey. Discussion focused upon under which conditions arrowtooth are favored (and vice versa). Environmental changes were discussed, and the possible change in the vertical distribution of prey (bottom dwelling prey more favorable for flatfish over SSLs), changing temperature trends, and impacts of surface warming. Questions were raised regarding any noted changes in arrowtooth distribution? They are considered to be distributed throughout the GOA, though more concentrated in gullies.

It was suggested that a climate model in the GOA might provide useful information, particularly with respect to correlating temperature trends with population trends in other species(e.g bird decline?). The author noted the work on physical indices such as wind mixing but agreed that it might be possible to look at these on an even broader scale. Questions were raised regarding the potential change in depth distribution of pollock and whether this type of information is possible from the survey information? Mike Guttormsen noted that from the survey data there was not much indication of that.

The Team commended the author on the utility of examining different indices and ecosystem consideration in the context of the stock assessment. The Team suggested looking at a principal component analysis to further investigate relationships between variables. The Team also cautioned that the variability in each of these variables needs to be explicitly stated in the discussion and the underlying assumptions. The author reiterated that the intent of this section was only to show the potential for competition between predators, and that no conclusions were intended to be drawn from this. This was an exploratory investigation in potential predation and competition effects.

Bill Clark commented that the trends shown by the assessment author are consistent with recent halibut survey population estimates (noting that recent years have been more problematic but through 2000 shows a long-term stable trend). It is interesting to note the importance of large pollock in diet of halibut, and that they seem to shift to pollock as they increase in size.

A discussion of bycatch information noted that the bycatch of sleeper sharks is highest in the pollock fishery. This was noted to be both spatially and possibly seasonally-related.

Catch at age from the survey showed the prevalence of the 2000 year class in all areas, while Prince William Sound was dominated by the 99 year class. Estimates in Shelikof remained low. If the 99 year class was as strong as initially anticipated, a larger increase would have been expected. However there appeared to be more spawning in Shelikof than in the last several years.

A question was raised regarding why the length at 50% mature in Chirikof was larger than for Shelikof. The authors answered that this is more likely due to noisy data, and lack of small fish in Chirikof, but not something representing a significant concern. It was explained that if equal sampling occurs in Chirikof and Shelikof, they are equal weighting. This year there was no juvenile layer seen in bottom layer, but at present there was no intention to change the depth distribution in survey.

Chris Wilson discussed overall survey plans following a MACE meeting to discuss proposed research and an overview of the current survey schedule. The Team was updated on those aspects of the meeting of interest to GOA stocks and the GOA summer survey. These topics included:

1. MACE summer/winter survey effort: adequacy of spatial and temporal coverage
2. Oscar Dyson vs Miller Freeman and implication to the time series
3. Current and proposed future research efforts to improve survey estimates how research effort competes with BS and GOA survey effort
4. Potential collaboration that could be done with MACE/REFM to improve BS/GOA Pollock stock assessment effort
5. GOA Pollock maturity project
6. Other MACE/REFM collaborative efforts: FIT research

Chris requested input from the Team on any information or requests for potentially major spawning areas that the survey should be potentially adding to existing coverage.

He mentioned that the summer work (2003) was principally a feasibility study, to assess whether acoustic methods were applicable for assessing Pollock. He noted that the survey was successful therefore they could possibly expand coverage. The coverage has expanded to 140 degrees east longitude (Yakutat) but not yet into PWS yet, however could look into expanding there if there was sufficient interest. The Team had no guidance on to what extent PWS coverage a priority.

There was discussion of what type of survey design was appropriate for the summer survey. Currently, the survey utilizes 20 mile spacing across the continental shelf. It is possible that the survey could also assist the rockfish working group, as well as collecting bottom type information from acoustic gear, which could also potentially assist in habitat information.

The Team was updated on the upcoming use and timing of the new vessel the Oscar Dyson and plans to calibrate both vessels the following winter. Currently MACE is developing a standard protocol for inter-vessel comparison. The current schedule is to use the Dyson for field work in April. Lingering questions remain regarding the actual timing of the Dyson's availability and the Miller Freeman is already committed to work on the west coast. The Teams will be updated by MACE as soon as more information is known on vessel availability and any resulting impact on survey scheduling.

The assessment author discussed the comparison of models and the impact on model projected biomass of downweighting the Shelikof survey data. A higher estimate of stock size is obtained as compared with the base model if Shelikof is downweighted. There was a limited effect on projected biomass of reducing the weight on the ADFG survey.

Some questions by the Team on the model fit to survey estimates included to what effect fishery selectivity has changed related to SSL protection measures? Is it possible that they are being concentrated in bays? Julie Bonney noted that haulout and rookery closures in 1999 matched the observed patterns in fishery selectivity. The author noted that there could be a relationship.

The model was noted to be projecting a stock trending upwards based on the maturity of 1999 and 2000 year class, with biomass projected to be at B37%. There are lingering concerns however as there has been no indication of a strong year class since 2000. There are also remaining concerns regarding uncertainty in the data and the variability associated with estimates of episodic recruitment. While the model does not predict a significant probability of going below B20 in next 4 years, after 2006 the trend begins to drop due to lack of recruitment in last 3 years. Long term projections show an increase due to the assumption of eventual recruitment.

The author's recommendation was to use an F rate of $F_{50\%}$ for two years (2005-06). This was intended to be temporary change that would help to accomplish the following:

- Stabilize catches rather than allow short-term increase followed by decrease
- Keeps stock from dropping as low as might be possible under other F rates
- Addresses residual concerns with respect to the 1999 year class

The author explained that the models are not formulated to give a sense of short-term decline with no strong recruitment in the immediate future, as the model formulation assumes eventual recruitment. Concern was expressed by the author that with no sign of recruitment to the stock since 2000, more precaution in establishing ABCs was warranted.

While the Team approved of the need for conservatism based on the rationale put forward by the authors, they did not approve of the author's recommendation of accomplishing this using an $F_{50\%}$ rate for two years. The Team discussed balancing the need for conservatism while debating to what extent the goal of stabilizing harvest is a TAC consideration and not an ABC consideration. The team discussed whether or not applying a specific control rule would be endorsing a harvest policy, or if applying a control rule to act as a buffer against uncertainty and concerns with the lack of apparent recruitment in this stock were appropriate. It was discussed that there will be additional data available next year, thus any resulting recommendation for 2006 can be modified at that time pending data to support modification.

The Team acknowledged that this was the first year that they were endorsing the 1999 year class as being properly estimated as an average class, and as such it would then be inconsistent to recommend specific F rates to decrease the ABC. The Team acknowledged concerns with potentially raising the quota when there are biological concerns regarding the health of the stock, and questioned to what extent the model has built-in conservatism to account for uncertainty. The assessment author explained that the projected increase in biomass is largely a model result and has yet not been verified in the survey results or other indices of population status.

The Team felt that there was appropriate justification biologically to continue to constrain the ABC for this stock. Methods to do so were debated, including a possible stair-step mechanism to mitigate against extreme year-to-year changes in ABCs. The Team elected to use an ABC that represented a compromise between the average of the 2004 ABC and the projected 2005 ABC from an adjusted $F_{40\%}$ harvest strategy. The Team recommended a 2006 ABC consistent with the author's recommendation of 86,280 mt. 2005 and 2006 OFLs were recommended based on the projected values.

Pacific cod:

Grant Thompson presented the assessment for Pacific cod. The model was the same as utilized in the past however a new methodology was employed for adjusting the maximum permissible ABC.

Some questions were raised by the Team regarding the use of data in the model. One comment questioned the data from specific regions, and to what extent size and movement differences may impact model results. Specific examples were noted in areas near Kodiak where movement amongst cod populations might be limited. Other questions were raised regarding the length at age data whereby previous information had questioned the legitimacy of the relationship of length at age thus the model was adjusted to account for this. However new age data in the Bering Sea shows length at age close to these old data, which if this were also applicable for the GOA, would imply that now the model formulation could be incorrect.

The author discussed the new methodology for adjusting the maximum permissible ABC. The goal of this is to decrease the variability, and while this method could be employed in this year, it is expected that an improved methodology would be sought for the following assessment. A new spatially-explicit model is also in development and is anticipated for use next year.

Concerns were raised by members of the industry present regarding the implications of smoothing catch to be less variable, as in cases of an increase in abundance, the relative change in ABC is very small. There was a general discussion of which is preferable, a stairstep mechanism to increase slowly followed by potentially rapid decline, or a smoothed catch such that there are neither large increases nor drops. Industry members present questioned to what extent this smoothing approach impacts potential environmentally caused variability. The author commented that at this point the intent is solely to sustainably manage the population by addressing the variability in the data.

The Team discussed the pros and cons of having a standard mechanism to reduce from the maximum permissible ABC in cases where it is warranted. Currently if the Team does not agree with the maximum permissible ABC for any species, there is no standard methodology to reduce it. Due to extended discussions of what was (and was not) a viable approach to reduce the GOA pollock ABC this year, the Team questioned the inconsistency of approving one approach and not another. The Team also discussed to what extent an approach should be consistently applied to all species.

The Team did not have consensus as to whether or not there should be consistent methodology in reducing the ABC from the maximum permissible, thus it remains up to individual assessment author to recommend appropriate means to do so.

The Team accepted the author's recommended ABC based on the new calculation methodology. The Team noted that this new approach was viable for use this year because, as in previous years, the approach is designed to minimize risk on a declining stock. This is as opposed to pollock, where the biomass has been variable and the concerns are related to stock status and conservation.

The Team did not recommend the use of this modified risk-averse methodology to all stocks, and noted in fact that approach may not be utilized next year for cod if an improved approach is developed. It was noted that this work may also fall under the auspices of the MSE initiatives.

The Team accepted the apportionment scheme and did not recommend changes to the apportionment strategy at this time.

Rockfish:

Dana Hanselman presented the rockfish assessments (POP, northern, PSR, other slope, Rougheye, shortraker)

Pacific Ocean Perch:

Given the new biennial assessment schedule, this assessment was a modified executive summary/assessment, as the projection was updated with recent catch information, ABC recommendations were not straight rollovers from 2004 given these updated projections, but a full assessment was not necessary in this year. The ABC increased approximately 400 mt when using the updated projection. Catch was noted to not be fully utilized.

Next year, survey data as well as new age data will be included in the full assessment.

The Team approved of the 2005/2006 ABCs and OFLs as proposed by the authors in the Executive Summary of the assessment based on the updated projection numbers using updated catch information.

Some additional analyses were presented as appendices to the assessment. A suggestion was made from a team member that the analysis in appendix 2 (on age-truncation and effects on spawning biomass) might be improved if it were focused on the stock recruitment curve rather than on the F40 proxy. It was clarified that while this would be beneficial, currently the stock assessment is not utilizing the SR curve.

Northern rockfish:

Again this Executive Summary represented an updated projection using updated catch information. Here the catch was fully utilized. The same apportionments were recommended as per last year, based on survey biomass estimated proportions.

The Team approved the 2005/2006 projections based on updated catch for ABCs and OFLs.

Pelagic Shelf Rockfish:

The authors recommended an alternative model (for Dusky rockfish) to that utilized last year. The appendix to the assessment is a comparison of models 1-3

Changes using this new model include downweighted catch, and increased survey biomass weighting. The model appeared to do a better job tracking the survey biomass adjustment than the previous year's model configuration.

The Plan Team approved of the projected ABCs and OFLs for 2005 and 2006 from the new model. The remainder of the ABC for PSR is made up of the combined ABCs for yellowtail, darks and widow rockfish. For these stocks the authors' and Team recommended a roll over from 2004, given that there is no new survey information available and no models utilized to project biomass of these stocks.

The Team discussed the apportionment strategy and the problems of separate apportionments by species or aggregating together first and then apportioning across areas. Members of industry present noted that it would be important to look at the catch composition to see what are the relative contributions by these minor components. It was noted that Dusky rockfish makes up the majority of the catch (and ABC) and should possibly be managed separately.

The Plan Team decided to leave the apportionment strategy the same as for last year, but to suggest the authors examine the catch composition (particularly of minor components) by area in next year's assessment to ensure that this aggregated system is appropriate and no one component is being overexploited in individual areas.

Shortraker, Rougheye and other slope rockfish:

Rougheye:

The author presented an overview of a new rougheye rockfish model. Per Plan Team convention this model is reviewed this year with the intent to utilize the model for ABC recommendations in the following year.

Two alternative models were presented. The models are similar to the POP model structure but incorporate data from the sablefish longline survey.

Preliminary results indicated similar fits for both models but the authors acknowledged uncertain recruitment due to lack of available age-data. Model 1 was preferred by the authors as the more conservative choice, given that natural mortality was specified in this model. Until more data is available to better estimate natural mortality and catchability parameters the authors recommended the use of model 1 for recommending ABCs. Further feedback to the authors from Plan Team members on model specifications and estimated parameters would transpire over the course of the year such that the model could be utilized in the following specifications process.

Team members questioned if the new rougheye model indicated any conservation concern for this stock? The authors noted that the model is recommending a higher ABC than the current harvest strategy therefore there does not appear to be a conservation concern on for the rougheye portion of the stock complex (rougheye and shortraker are currently combined for ABCs).

Other slope rockfish:

The Team recommended the use of the rollovers from the 2004 ABC and OFL for 2005 and 2006 given that no new survey data is available. It was noted that catch in WGOA vastly exceeded the ABC (600%). Comments from in-season management indicated that this was an unusual year and that much of the catch was sharpchin rockfish. It was noted to be difficult to harvest POP and northerns without bycatch in the other slope rockfish

The Team expressed concern regarding the excessive bycatch of other slope rockfish in the directed rockfish fisheries. The Team was concerned as to whether or not the biomass estimated for the ABC calculation is correct. The Team noted that new survey information will be available next year, and that this may give a greater indication of the relative biomass estimates for these species which make up a majority of the high discards (e.g., sharpchin).

Shortraker/Rougheye complex:

The Team noted the SSC's concerns from December 2003 regarding the complex ABC and the relative catch composition between shortraker and rougheye.

In response to these noted concerns, the authors prepared appendix 9A to the SR/RE SAFE report detailing alternative ABCs for these species individually as well as a complex. The Team noted that

it is necessary to establish the appropriate methodology for separating shorttraker and rougheye catch, whether that is straight observer data or to expand this by the percent coverage by gear type. A higher percentage of trawl weight for SR/RE is observed but the longline catch is not well observed.

It was noted that currently on boats that have 30% observer coverage observer data is the only used for discards and otherwise they are only using electronic reporting for landings at the processor. This is notably not as accurate as extrapolating the observer basket samples but this extrapolation is not being done.

The Team recommended that improved species identification is necessary at the plant level as species not being identified shoreside. The requirement of full retention might assist in this but it is necessary to have some quantification of discard catch and improved shoreside identification to species level. The Team recommends that observer coverage be increased at these shoreside plants. Julie Bonney noted that part of the pilot program would encourage species identification at plant levels.

The Team recommended alternative 4 (in appendix 9A) to split out shorttraker and rougheye and establish separate ABCs for each. The Team recommends that these species be split out immediately and recommended separate ABCs and OFLs for each for 2005 and 2006. In the case that this cannot go through immediately, the interim recommendation would be a roll over from 2004 until such a time as they can be broken out separately.

Demersal Shelf Rockfish:

There were new survey data. Biomass estimates were updated using recent average weight data. The Plan Team approved of the author's recommendations for 2005 and 2006 ABCs and OFLs.

The author noted that the directed fishery is shut down for 2005. Concerns have been expressed regarding the catch rates of yelloweye rockfish in the sportfish fishery. It was noted that restrictive bag limits have lead to high mortality rates in the sportfish fishery even with a declining fleet size. This could eventually be problematic for the halibut longline fishery. Bag limits in the king salmon and halibut sportfish fishery have lead to increased interest in yelloweye as a target sportfish. Another noted source of yelloweye mortality is in the halibut subsistence fishery which could be a significant source of mortality. It was discussed that full retention is still not in place in the Federal fishery, but is in place in the state fishery.

Dark rockfish FMP amendment rationale:

Per SSC request, the Team discussed the rationale for recommending (in September) that Dark rockfish be removed from the FMP and turned over to State management. The following represents the primary rationale for initiating this amendment:

1. Dusky rockfish (previously Light Dusky) and Dark rockfish (previously Dark Dusky) have now be separated to species level.
2. Dark rockfish occurs in nearshore reef habitats and is not specifically assessed by the GOA trawl survey
3. Nearshore rockfish such as Dark rockfish could easily be overfished in local areas under the relatively high TAC for the PSR assemblage.

The team notes that while its' recommendation is for removing only Dark rockfish from the FMP, this same rationale could be applied to any of the minor components under the pelagic shelf rockfish assemblage if any of these components were specifically targeted. The PSR ABC and TAC are based primarily on the abundance of Dusky rockfish with additional quota for the minor components. The

Team has already recommended (under the PSR agenda item) that the authors' evaluate the catch composition by area for these minor components of the PSR assemblage to investigate if they are being locally exploited in the aggregate quota apportionment scheme utilized at present for management of the complex.

The Team encourages the initiation of an FMP amendment to remove Dark rockfish to State management.

Thornyhead rockfish:

The Team concurred with the author's recommendation to roll over 2004 ABCs and OFLS for 2005 and 2006. No new survey information was available this year. Catch was considerably under quota in 2004. It was noted that this has not always been the case for thornyheads, as catch in the past has exceeded the TAC and ABC. This stock is usually placed on bycatch status in the beginning of the year for management purposes. Next year a new assessment will be available incorporating new survey data.

Atka Mackerel:

The Team concurred with the author's recommendation to rollover the 2004 ABC and OFL for 2005 and 2006. It was noted that in 2004, the ABC and TAC of 600 mt was exceeded with catch over 800 mt. There was a discussion as to whether or not 600 mt was sufficient to cover incidental catch in other fisheries or if the excessive catch in 2004. The author indicated that a preliminary look at some of the haul-by-haul data indicated that it was more likely "topping off" and in fact some of the hauls were actually in the percentage range of a directed Atka mackerel fishery.

The Team decided that if the excess catch did not appear to be incidental then there was no reason to raise the ABC from last year of 600 mt.

Criteria for Assessments in Off Years:

The Team discussed what criteria would trigger an assessment in "off" years, and what information should be included in Executive Summaries in the absence of an assessment. For Executive Summary contents, the Team chose to use the template modified by the Auke Bay lab in use for their rockfish Executive Summaries. Assessment authors were then advised to follow this format in as much as was possible in this year's SAFE Report.

The Team reiterated that in the absence of established criteria, it is still at the discretion of individual assessment authors for the necessity of doing an assessment in an off year. Some suggestions to trigger a full assessment however include structural changes to an assessment model. It was determined that updating catch and re-estimating parameters should not necessarily require a full assessment. This type of updating was done notably for many rockfish species including POP and northern rockfish.

Skates:

Sarah Gaichas presented the assessment for skates. There was no new survey data from last year. Skates are on a biennial assessment cycle thus there was no new assessment for this year. Next year there will be a full assessment for skates including available survey data from the GOA survey as well as additional age data (pending staff availability at ADF&G). Most data thus far has been from

ADF&G staff despite the fact that it is federal fishery. The author noted the grateful assistance of ADF&G staff for their continued effort on behalf of the skate data collection.

The author's recommendation for skate ABCs and OFLs was similar to last year in recommending separate ABCs and OFLs by species and area with a gulfwide ABC and OFL for the combined bathyrāja species ("other skates").

The Team spent a considerable amount of time reviewing the skate situation which developed last year, the author's recommendations last year, the Council's actions in the specifications process, and any additional information available from the fishery. Members of the industry present indicated that interest in the directed fishery in 2004 declined due to market considerations. Anecdotal evidence indicated that CPUE may have decreased as well. Reported landings were primarily in federal waters. Catch of Big and Longnose skates is roughly 2/3 in the trawl fleet and 1/3 in the longline fleet.

The SSC requested in December 2003 that no directed fishery go forward in 2005 without an adequate sampling program developed. While ADF&G has volunteered their time to sample skates, no federal data collection program has been initiated. It was noted that data collection efforts are underway for 2005 using limited SAIP funds, but a federal data collection program is not in place to adequately sample skates. It was noted that the timing of any data collection effort would be best at the conclusion of the state waters P cod fishery.

Given concerns regarding inadequate data collection and the need for conservative management measures, the Plan Team strongly recommends that no directed fishery for skates occur prior to obtaining more information from the fishery and from the 2005 trawl survey. The Team notes that it continues to request discard data from both the halibut fishery and the halibut survey.

Additional concerns were raised regarding the identification of skates to species level at the processing plants. It was noted that observer are trained in skate identification but there may not be adequate identification at the processing plants.

The Team recommends collecting maturity information for skates from the survey. The Team also recommends that skate sampling also be added to the priorities for any changes to existing observer protocols.

Concerns were raised by Plan Team members regarding the restrictive nature of area-specific OFLs. It was specifically noted that it could shut down the halibut fishery if the OFL is exceeded for skates. Other in-season management measures mentioned to assist in conservative management for skates included area closures and target fishery closures.

Understanding that market considerations did not promote rapid development of a fishery in the 2004 fishery, the Plan Team remains concerned with the potential for over-exploitation of skates. The speed of the fishery could occur very rapidly again and it would be more conservative to assume that give an opening, a fishery could develop rapidly to fill this. The author expressed concern regarding the anecdotal evidence of low CPUE as this could indicate a decline in the population. There continues to be a lack of information on skates, and the author remains concerned that the directed fishery is occurring on mature females. There is no information discard mortality.

Discussion focused upon means to restrict the development of a target fishery on skates. Last year the ABC was sufficient to support a small, directed fishery. The Team's stated intention is that no directed fishery be allowed, however current ABC's could potentially allow for a directed fishery.

Development of directed fishery will be dependant on TAC considerations. Industry members present expressed concern that when the TAC is too low, it ends up forcing the industry to increase discards at sea.

The Team recommends a modification of the assessment author's recommendation. The Team recommendation is that skates be managed under species-specific OFLs for big skates, longnose skates and combined all bathyrāja species "other skates" categories. These OFLs are gulfwide. The Team recommends that area-specific ABCs be established for big skates and longnose skates. The "other skates" category (all bathyrāja sp.) should be managed under a gulfwide ABC. The Team felt that this level of conservative management was necessary to protect skates given the lack of available information on the fishery, and the vulnerable nature of the species without being overly restrictive on target fisheries. The Team further reiterates that it is their intention that no directed fishery for skates be developed in 2005, and recommends that skates be put on bycatch-only status from the beginning of the year.

Industry members commented that this solution was infeasible and that the only way to effectively prohibit a directed skate fishery is to set a restrictive TAC. They did not believe that the Team's recommendation offered any additional protection by splitting species out by species and area. The author reiterated that the Plan Team solution was a better reflection of the current available data on the fishery and that if longnose skates are also a target in the directed fishery, this approach would offer better protection to that species.

The Team further recommends that immediate measures be taken to revise the GOA other species TAC calculation. Currently in the FMP the TAC for other species is established as "5% of the sum of the target species TAC". Understanding that measures are on-going to revise the other species category, the Team recommends that an immediate plan amendment be initiated to establish the calculation "as less than or equal to 5% of the sum of the target species TACs". This would serve as an interim measure until a more comprehensive plan amendment can be initiated to revise the other species category.

**Plan Team Report
Joint Meeting of the Bering Sea/Aleutian Islands
and Gulf of Alaska Groundfish Plan Teams
November 15th-19th, 2004
AFSC, Seattle, WA**

The meeting of the Joint BSAI and GOA groundfish Plan Teams convened November 15-19th, 2004 at the Alaska Fisheries Science Center in Seattle, WA.

Members of the teams that were present were the following:

Gulf of Alaska	Bering Sea Aleutian Islands
Jim Ianelli (NMFS AFSC) co-chair	Loh-lee Low (NMFS AFSC) Chair
Diana Stram (NPFMC) co-chair	Mike Sigler (NMFS AFSC/AB) Vice-Chair
Sandra Lowe (NMFS AFSC)	Jane DiCosimo (NPFMC)
Bill Bechtol (ADF&G)	Lowell Fritz (NMFS AFSC MML)
Jeff Fujioka (NMFS AFSC/AB)	Brenda Norcross (UAF)
Jon Heifetz (NMFS AFSC/AB)	Andy Smoker (NMFS)
Nick Sagalkin (ADF&G)	Grant Thompson (NMFS AFSC)
Tory O'Connell (ADF&G)	Ivan Vining (ADF&G)
Tom Pearson (NMFS)	Kerim Aydin (NMFS AFSC)
Beth Sinclair (NMFS AFSC MML)	David Carlile (ADF&G)
Bill Clark (IPHC)	Bill Clark (IPHC)
Sarah Gaichas (NMFS AFSC)	
Bob Foy (UAF)	

Kathy Kuletz (USF&W) was absent. Approximately 30 members of the public as well as state and agency staff also attended.

Aleutian Island Discussion Paper:

Jane DiCosimo briefed the teams on a draft discussion paper, which will be presented to the Council at the December meeting. This paper was initiated at the Council's request and discusses the rationale and potential options for area-specific management in the Aleutian Islands area. The Joint Teams were requested to give any input or ideas that staff might include in this paper. Beth Sinclair noted a PMEL NMML special volume of Fisheries Oceanography that dealt specifically with the Aleutian Islands region. Sarah Gaichas noted that because many species complexes are different between the AI and BS, an initiative to separate these areas for management purposes may streamline these assessments while allowing for the application of different management strategies to BS and AI.

Questions from the Team included: Why the focus upon the AI, and is there an intent in the future to then evaluate other areas of GOA or North Pacific? What are the Aleutians, how is this area defined (ecologically, geographically)? What is the area involved in defining the AI and does it differ by species? Members of the Teams noted that species

composition changes both along the Aleutian Island chain and between the AI and BS. The Teams were informed that many of these questions are being addressed in the forthcoming paper, and/or represent interesting issues (e.g., how to define the area) that will need to be addressed by the Council should any management initiative result from this discussion paper.

Additional issues from the Teams involved the analysis might come from this, the relative impact on staffing needs, and the impact on the AFSC and/or the Plan Teams. It was noted that one option under discussion could create a new FMP for the AI and a subsequently new Plan Team specifically for the AI assessments. While all of these questions are relevant, the discussion paper is only the first step in possible subsequent analysis and, thus, the relative impact is unknown. Council staff will continue to update the Teams following the Council meeting as this initiative moves forward.

Andy Smoker handed out a letter and discussion paper regarding a problem the Regional Office has had dealing with species splits, and the related complications involved in catch accounting for management purposes when creating these splits from species complexes. It was noted that given the time lag for management purposes, any recommendations for species splits in November (Plan Team) and December (Council) will not become effective for management purposes until the following year's specifications.

Non-Target Species Committee meeting update:

Jane DiCosimo updated the Team on the Non-Target Species Committee meeting that morning. She gave the Teams an overview of the ad hoc work group and Council Committee work to date and noted that it will be the committee's role to address policy components, and to develop problems statement for overall non-target versus target species management. The committee recommended a problem statement for review by the Council as well as a draft suite of alternatives from the work group. It was the committee's recommendation that the Council initiate an analysis (for Initial review in April, Final action 2005) to modify the current formula for setting GOA other species TAC (currently 5% of the sum of the target species TACs).

The Plan Teams also recommend that the Council initiate an FMP amendment to remove the fixed 5% calculation, replacing the language such that GOA other species TAC may be calculated as "less than or equal to 5% of the sum of the target species TAC." It is the Teams' understanding that this amendment would serve as an interim measure prior to longer term and more comprehensive plans to revise non-target species management. Further discussion of this was left for the individual teams to discuss.

Management Strategy Evaluation Report:

Grant Thompson gave an overview of an MSE workgroup report and related progress to date on several AFSC initiatives. The report was presented to the SSC in October, so this was an informational update to the Teams. A list of non-prioritized suggestions and considerations for future work are included in the report.

Also, it was noted that as a consideration under the MSC certification for Pollock, it will be necessary to look at the effect of Russian catches and regime change impacts and work is progressing to examine these.

The MSE work group will meet again in an open forum following completion of the stock assessment cycle; plan team members and stock assessment authors are welcome to participate.

MSE strategy for GOA POP:

Dana Hanselman (AFSC-ABL) presented some on-going work using projection modeling to apply alternative means of estimating future stocks sizes and catches for GOA Pacific ocean perch. This work was included as Appendix 7C in the POP Assessment.

The Teams noted that this work is useful for evaluating how model behavior may be impacted by the addition of new data, and also shows the variability inherent in model projections of stock trends.

The Teams discussed the role of MSEs in stock assessments, and how on-going work might be utilized to improve current stock assessments. It was noted that management strategy evaluations such as these are often used in other countries to establish transparent rules for operationally setting quota. Here, our purpose is instead to streamline assessments such that their performance can be compared against more complicated examples. Questions were posed regarding how often control rules established via MSE would need to be re-evaluated. There was no determinate time length, but examples were noted of reevaluation every 5 years for Southern bluefin tuna. The importance of incorporating transparency in the process of setting control rules and conducting evaluations was noted, although this is not necessarily a problem in Alaska where managers tend to consider scientific advice.

Sharks:

Sarah Gaichas gave an overview of the Shark Chapter compiled by Dean Courtney. A draft chapter summary was presented in September; the revised chapter will be included as an appendix to the "other species" Chapter in the BSAI SAFE report. The primary goal of the chapter is to compile all available information on sharks from the previous assessments into one document. The revised chapter incorporated halibut commission survey information. There are no management recommendations in this year's chapter.

The Teams approved addition of the Shark chapter to the SAFE (as an appendix this year), and commended the author on compiling the existing information. The Teams recommended that the chapter be continued and updated in the future, possibly on a biennial schedule in conjunction with between-year assessments for the GOA SAFE Report. The Teams recommended that additional survey information (such as the NMFS longline survey) be included in future assessments.

There was a general discussion of the problems with reliable estimates of catch and the difficulty with assigning sharks to a tier, since the existing catch data is not considered. The Team questioned how to manage these species due to the lack of data. There was a suggestion for the non-target species committee to include sharks while working on similar issues. One problem with the shark data is the lack of landings information. Given the lack of catch and biomass data, team members questioned the chapter statement that there is no indication of overfishing.

The Teams would like to see management recommendations (OFL and ABC) included in the Shark chapter in the future, particularly in light of some interest in developing directed fishing for sharks in state waters. Based on the current lack of data, it seemed premature to begin developing guidelines for sustainable directed shark fisheries. Because survey variation in dogfish biomass estimates does not appear to be supported by life history parameters, it is inappropriate to establish a harvest rate on available biomass estimates.

Jane DiCosimo discussed some proposals before the BOF regarding directed shark fishing for spiny dogfish in state waters of Cook Inlet and requested Plan Team input for the Joint BOF-Council meeting on these proposals. Team members questioned the potential motivation for this fishery in State waters when directed fishing for sharks in Federal waters is relatively unrestricted. It was noted that the intent may be more reflective of nuisance control in order to reduce bycatch in salmon and nearshore longline fisheries, such as cod and halibut. The Teams expressed concern regarding the lack of guidelines for developing directed shark fishing in both State and Federal fisheries, particularly given the limitations and variability inherent in existing data.

Catch Estimation:

Dave Ackley (AKRO) gave an overview of changes to the NMFS catch accounting system and where it differs from and improves upon the old "blend" data system which was used through 2002. The Teams discussed some of the assumptions used in catch accounting (3-week moving average etc), and the possibility for Plan Team input on these. The problems with the accounting for other species was discussed, as currently retained catch is available but there is an inherent difficulty with discards because they are still reported at an aggregated level. It would be beneficial to have discard data at a more disaggregated level.

Dave Ackley explained that the region intends to make separate estimates for each species in the other species category. He will also attempt to make the code more user-friendly, such that it could be used independently by AFSC scientists.

Questions were posed regarding grenadiers and whether catch records for these (and for other non-specified species) are collected. Annual estimates of grenadiers (and other non-specified) species could be calculated as it has been proposed for inclusion under quota management under the target/non-target species initiative.

Team members expressed an interest in a common process for disaggregating data and the need for better coordination with NMFS in-season management staff in order to expand the observer data. Next year, the problems with other species will be rectified, and there should not be any more independent analyses of catch estimation, thus everyone should be using the same approach. The Teams encourage the region to fix current problems encountered with catch accounting for other species.

Questions were raised regarding the estimation process for discards and PSC. Specifically, why not blend the WPR with observer information for smaller boats? It was clarified that currently 60% (*need clarification here of the catch?*) is unobserved therefore WPR seems to be the most consistent data set. Concerns were raised that this seems to be ignoring observer data from boats where coverage exists. Effectively, this is true, as observer data is only being utilized for PSC and at-sea discards. This could be reexamined and in-season management staff is amenable to suggestions for improving this process noting that it is a complicated issue.

Sablefish:

Mike Sigler (AFSC-ABL) presented the joint stock assessment for sablefish. Because the GOA is surveyed annually, GOA survey results are used to weight the Bering Sea and Aleutian Islands in years when the Bering Sea and Aleutian Islands areas are not surveyed. The survey time series in the GOA is showing a decline in the Western Gulf only whereas the trend in the Eastern and Central Gulf appears to have flattened in recent years (though the Southeast Outside subarea of the Eastern Gulf continues to decline).

Chris Lunsford (AFSC-ABL) presented an overview of fishery catch rates, and noted a decline in the 2003 fishery catch rates in the BS and AI areas with no noticeable change in effort patterns. Therefore, given indications that the survey and the fishery are co-located, these observed low catch rates may indicate a decline in abundance.

Area-specific catch rates are aggregated in the model. Questions were raised regarding why the fishery and survey CPUE are different. It was explained that these differences are inconsistent among areas and although effort was standardized, there was no obvious reasons for differences in CPUE. Hook spacing is notably different between the fishery and survey, but should be consistent among areas. Sample sizes in some areas are very low.

This year's model is the same as the previous year with two notable changes:

- 1) The model is now fully Bayesian
- 2) The prior probability distribution for natural mortality is concentrated at $M=0.1$.

The previous model did not estimate natural mortality well, but the survey catchability-natural mortality grid was too coarse to allow detection of this problem. In this year's assessment, a prior probability distribution is applied for natural mortality with the distribution concentrated at $M = 0.1$. Because this was similar to estimated values in previous years, the effect on prior ABC recommendations is minor.

Public comments indicated that sampling bias in observer coverage, which only occurs on >60-ft boats, could skew results because fishing patterns differ for larger vessels. Larger boats typically fish northern portions of SEO where catch rates are higher than southern portions, then move to WYAK. The last two years of logbook data are not yet available, and recent logbook data may help resolve recent differences between observer and survey data (especially in EYAK/SEO). It was anticipated that these logbook issues will be resolved for the next year

Questions were raised regarding potential fishery/survey interactions, but it was clarified that a localized fishery effect on survey station catch has not been observed since IFQ implementation.

The assessment author discussed the relative strength of the 1997 and 1998 year classes; 1997 is still considered a strong year class. The 1998 year class was initially thought to be strong, but is now more likely to be average. The 2000 year class is not fully recruited to the fishery, but it is being caught in the survey, suggesting a potentially strong year class.

The Plan Teams discussed the choice of reference points used in the Assessment. The reference points chosen (B_{20} , B_{30}) were utilized in this year's assessment based on scientific literature. This is in contrast to the use of the "historic low" in previous assessments as a benchmark for stock status. The Plan Teams approved the new benchmarks for this assessment.

The assessment author indicated that the population is expected to decline (the extent of the decline will depend on the relative strength of the 2000 year class). The population is projected to be at 37% of unfished biomass in 2005. The maximum allowable yield has declined from last year and is projected to decline further in 2006, even if the 2000 year class is relatively strong. Discussion focused on reasons for this projected decline: that the 1997 year class peaked in 2004, and the 2000 year class, which would peak in 2006/07, is moderating the slope of this decline.

Members of the public asked about the difference between actual fishery catch and the quota, particularly with respect to which is used in projecting future population trends; catch has historically been about 10-20% less than the quota. The model catch is based on actual catch (not ABC), so population fluctuation is based on actual fishery extraction. However the projection is based on the full ABC and not the actual catch.

The public further questioned the statement in the assessment (page 47) that trawl fishery discards are a concern with respect to fishery effects on the ecosystem. Although this statement is presumably attributed to poor observer coverage in the fleet, members of the public asserted that in the CGOA for example, 50% of the quota is taken by catcher-processors that are 100% observed, and there is 30% coverage on catcher-vessels. The assessment author agreed that this statement was attributed to poor data coverage, but if CPs are in fact obtaining that percentage of the catch, then it may not be appropriate to

attribute problems to poor coverage. However, sablefish size data are lacking from this fishery component. Therefore, it's possible that there is a problem with the observer protocol. Plants observers do not appear to be sampling sablefish, as they are instead sampling other higher volume species. Observer protocol is to sample high volume and not necessarily high value species. Julie Bonney (Alaska Groundfish Databank) described the upcoming pilot observer project, planned in conjunction with the pilot rockfish trawl program, and suggested that the observer program could be requested to increase sampling.

There was a general discussion of the September ABC projection and the need to explicitly state upon what information projections are based in September in order to best inform the public. There should be some mention in the SAFE reports of any noted difference between proposed and final specifications from September to November.

The Plan Teams approved of the use of the current model and noted that it is consistent with requests made regarding the assessment in previous years.

Recommendations to the authors include:

- Have table of estimated numbers at age included in document
- If possible, break out numbers at age for GOA for western and central GOA (rather than just Alaska wide). Author noted that this is not available within the current model-(estimates are for Alaska-wide). An area-specific model incorporating tag data and estimating movement rates would be the best way to estimate numbers at age by area.
- Suggestion for sablefish as a possible candidate for Management Strategy Evaluation, with modeling movement of sablefish, and testing the impacts on apportionments (i.e., sensitivity of harvest strategy to movement). The author stated that an evaluation of area apportionment by Jon Heifetz and Jeff Fujioka in the early 1990's found that strategies were sensitive to assumptions about area specific sources of recruitment.

The Plan Teams accepted the author's recommendations for ABC and OFL for 2005 and 2006. The 2005 ABC for the combined areas (BS, AI and GOA) was 21,000 mt and the 2005 OFL (combined areas) was 25,400 mt. A problem noted for the draft assessment OFL (for 2005) was that it assumed that OFL was caught in 2004. This specifically highlights a problem for next year in that there is a need to readjust the projection methodology, as well as needs for standardized tables for consistent location of all numbers used in projections and for establishment of a standard way to project 2 years ahead.

The Plan Team established a projection subcommittee to work on establishing standardized and formal projection methodology. The membership of this committee will consist of Jim Ianelli, Grant Thompson, and Dana Hanselman. The committee will work closely with in-season management personnel and will report to the Plan Teams as well as to assessment authors.

Area apportionments:

The Plan Teams expressed concerns with changing the apportionment strategy this year because effort estimates for the Bering Sea and Aleutian Islands appear too high. The most recent year accounts for 50% of the effort. One concern is that a change in strategy would be merited if logbook data (which will be available next year) indicates a true change in relative effort. Other Plan Team members expressed that this apportionment is actually more reflective of commentary from public on what has already been observed in the fishery, as there has been general concerns from the industry that the apportionment to the BS and AI has not declined in previous years even though industry has observed lower catch rates.

The Plan Team approved the current apportionment scheme for next year, noting that a change will be warranted in the subsequent year following the combination of recent logbook data with observer fishery data to determine apportionments.

Ecosystem Chapter:

Jennifer Boldt (AFSC) presented updated information on the Ecosystem Considerations chapter of the SAFE Report. She noted that model progress and results are being provided to stock assessment authors. Some notable updates from the September draft of the report include updates on the time series of environmental variability in the BSAI and GOA, updates to the habitat research section, updated seabird bycatch and marine mammal information, more information on herring, flatfish, status of crab stocks, jellyfish, and grenadiers. It was particularly noteworthy that grenadiers in the GOA showed the highest catch weight for all GOA non-target species. Specific recommendations are included with respect to research and management of grenadiers. Questions were raised regarding the prioritization of grenadier identification in the observer program. It was noted that this is being added to the observer training and the Teams encourage this process acknowledging the particular vulnerability of this species.

The Teams were informed of changes to the timing in the preparation of the Ecosystem Chapter. Beginning in 2005, the chapter will be updated in January/February and produced and presented at the April Council meeting. This timing should allow for more timely incorporation of ecosystem information into assessments and allow for greater application by the Council. The Ecosystem Chapter will still be presented in September to the Plan Teams and depending upon availability of information may be additionally updated in the Fall. Previously the Teams had discussed competing arguments for both a larger and more concise document. The Teams felt that the new timing with completion of document in the spring may help alleviate these issues next year as authors can give feedback on the document to ecosystem authors prior to September. This should allow the authors to focus their presentation and commentary to the Teams in September on what the most pressing issues are and what should be highlighted up front in the document. Thus changing the timing of the document production alone may help both assessment authors and Plan Team members.

Kerim Aydin and Jennifer Boldt also discussed plans to work with individual stock assessment authors to assist in incorporation of relevant information into the stock assessment. The Teams endorsed both the change in the timing of the document production as well as the intention of the Ecosystem authors to assist stock assessment authors in the dissemination and incorporation of ecosystem information into their assessments.

The Teams discussed the overall goals of the Ecosystem Chapter and the different ways to view ecosystem considerations, i.e from the interaction of ecosystem considerations upon a single species stock assessment, as well as in a more aggregated form to look at the impact of the aggregated catch on the ecosystem as a whole. The latter is acknowledged to be the far more difficult task, but potentially greatly beneficial as an overall objective. The Teams encourage the Ecosystem Chapter authors to include a discussion of this type of backwards look at the previous year and how the TACs established for the previous year are evaluated as an aggregated impact on the ecosystem. The Teams felt that the September meeting would be a good time for a retrospective discussion of these indicators.

The Teams thanked the authors of the Ecosystem Chapter for their hard work and noted that this year in particular the dissemination of information was particularly successful, and authors were better able to incorporate predator/prey information into many of the assessments.

Economic SAFE Report:

Ron Felthoven (AFSC) presented an overview of information contained within the Economic SAFE Report. Contents of the chapter include 2003 groundfish catch breakdown, gear statistics, relative catch by catcher vessels and catcher processors, and overview of discard rates by gear type and fishery. The Team commends the work involved in the compilation of the Economic SAFE chapter and additionally commends staff on their enormous effort this year in working with stock assessment authors to make this information available. The Teams also gratefully acknowledge the increased coordination between the economists and in-season management/catch accounting.

Ron reported on plans to have economic staff appointed to at least one Plan Team in 2005.

Community Profiles:

Jennifer Sepez (AFSC) presented an overview of on-going work characterizing fishing community profiles in the Alaska region. Specific information is being compiled on the community level, in some cases for the first time ever, as previously available information was often at the borough or larger scale level. Under the MSA, the level of detail for profiling needs to be specific to actual communities. Current work has established indicators and threshold criteria for the designation of communities, while

future work intends to use more sophisticated modeling to characterize communities. The actual MSA list of communities will be more extensive than the ones which will be profiled in detail. There will be both short form and long form profiles of communities. The resulting community profiles will be available for use in many academic and NEPA-related documents and will be of immense utility for Council-related work. The Teams were very interested in the on-going effort and impressed by the progress to date as well as at the widespread utility of the work presented.

Team meetings and scheduling issues:

The Teams discussed the agenda of September and November Plan Team meetings. The Teams reiterated that September meetings should focus upon information with more long-term focus, such as ecosystem and economic issues, as well as presentations of on-going work and stock assessment methodology of interest to both joint and individual teams. The November meeting should retain its focus solely on stock assessment and review. There was interest expressed for additional allotted time for the review of SAFE summary sections as a group. Both Teams felt that it was necessary to allocate the last day of the meeting to prepare the introductory chapter of the report.

With respect to the Ecosystem considerations focus at the November team meeting, the Teams felt that it would be good to highlight where the ecosystem information has been incorporated, how it is being applied to individual assessments and how improvements could be made upon incorporating information into assessments. Discussion could possibly be organized by assigning specific team members to be responsible for a summary of the ecosystem information as utilized by individual assessments. A summary overview by assessment could then be presented for the Joint Teams.

The Teams discussed the Joint Assessment ideas for the September plan team meeting (listed in the September Joint meeting minutes). The Teams agreed that the next joint assessment presentation should focus upon rockfish assessments, covering possibly both target and non-target species as well as the problems with stocks on the periphery of their range.

The Teams tentatively identified the week of September 6th, 2005 in which to schedule their September Plan Team meeting.

Other Species recommendations:

The BSAI Team recommended, in their team meeting, that an analysis for an FMP amendment be initiated to break out the "other species" category in BSAI. The GOA Team also initiated an FMP amendment (reflected in the GOA Team minutes) to recommend that an amendment be initiated to change the other species TAC calculation such that it would read "less than or equal to 5% of the sum of the target species TACs" rather than "as equal to % of the sum of the target species TACs". The GOA Team concurs with non-target committee that this amendment would be a useful first step to fixing any potential problems that could come up in the time period that a more

complicated amendment package for breaking out and establishing ABCs and OFLs for other species in the GOA.

The meeting of the Joint Plan Teams adjourned at 10:15am Friday.

**Gulf of Alaska groundfish 2004 OFLs, ABCs, TACs, and catch (through 11/06/04)
and Plan Team Recommendations for 2005-2006 OFLs and ABCs**

Species		OFL 2004	ABC 2004	TAC 2004	*Catch 2004	OFL 2005	ABC 2005	TAC 2005	OFL 2006	ABC 2006	TAC 2006
Pollock	W (610)		22,930	22,930	22,930		30,380			30,452	
	C (620)		26,490	26,490	23,736		34,404			34,485	
	C (630)		14,040	14,040	14,332		18,718			18,762	
	WYAK		1,280	1,280	144		1,688			1,691	
	SubTotal	91,060	64,740	64,740		144,340	85,190		103,250	85,390	
	EYAK/SEO	8,690	6,520	6,520	0	8,690	6,520		8,690	6,520	
Total	99,750	71,260	71,260	61,142	153,030	91,710		111,940	91,910		
Pacific Cod	W		22,610	16,957	15,218		20,916			18,396	
	C		35,800	27,116	26,794		33,117			29,127	
	E		4,400	3,960	112		4,067			3,577	
	Total	102,000	62,810	48,033	42,124	86,200	58,100		65,800	51,100	
Sablefish	W		2,930	2,930	1,986		2,540			2,407	
	C		7,300	7,300	7,002		7,250			6,870	
	WYAK		2,550	2,550	2,133		2,580			2,445	
	SEO		3,770	3,770	3,726		3,570			3,383	
	Total	22,160	16,550	16,550	14,847	19,280	15,940		17,530	15,105	
Deep water flatfish ¹	W		310	310	7		330			330	
	C		2,970	2,970	614		3,340			3,340	
	WYAK		1,880	1,880	55		2,120			2,120	
	EYAK/SEO		910	910	4		1,030			1,030	
	Total	8,010	6,070	6,070	680	8,490	6,820		8,490	6,820	
Rex sole	W		1,680	1,680	526		1,680			1,680	
	C		7,340	7,340	936		7,340			7,340	
	WYAK		1,340	1,340	0		1,340			1,340	
	EYAK/SEO		2,290	2,290	0		2,290			2,290	
	Total	16,480	12,650	12,650	1,462	16,480	12,650		16,480	12,650	
Shallow water flatfish ²	W		21,580	4,500	136		21,580			21,580	
	C		27,250	13,000	2,806		27,250			27,250	
	WYAK		2,030	2,030	1		2,030			2,030	
	EYAK/SEO		1,210	1,210	0		1,210			1,210	
	Total	63,840	52,070	20,740	2,942	63,840	52,070		63,840	52,070	
Flathead sole	W		13,410	2,000	831		11,690			11,111	
	C		34,430	5,000	1,559		30,020			28,527	
	WYAK		3,430	3,430	0		3,000			2,842	
	EYAK/SEO		450	450	0		390			370	
	Total	64,750	51,720	10,880	2,390	56,500	45,100		53,800	42,850	
Arrowtooth flounder	W		23,590	8,000	2,837		26,250			27,924	
	C		151,840	25,000	12,227		168,950			179,734	
	WYAK		10,590	2,500	76		11,790			12,539	
	EYAK/SEO		8,910	2,500	34		9,910			10,543	
	Total	228,130	194,930	38,000	15,174	253,900	216,900		270,050	230,740	

Species	OFL 2004	ABC 2004	TAC 2004	*Catch 2004	OFL 2005	ABC 2005	TAC 2005	OFL 2006	ABC 2006	TAC 2006
Other Slope rockfish	W	40	40	242		40			40	
	C	300	300	527		300			300	
	WYAK	130	130	76		130			130	
	EYAK/SEO	3,430	200	27		3,430			3,430	
	Total	5,150	3,900	670	5,150	3,900		5,150	3,900	
Northern rockfish	W	770	770	1,025		808			755	
	C	4,100	4,100	3,711		4,283			3,995	
	E ³	0	0	0		0			0	
	Total	5,790	4,870	4,736	6,050	5,091		5,640	4,750	
Pacific ocean perch	W	2,990	2,520	2,520	2,195	3,076	2,567	3,019	2,525	
	C	9,960	8,390	8,390	8,446	10,226	8,535	10,008	8,375	
	WYAK		830	830	877		841		813	
	SEO		1,600	1,600	0		1,632		1,579	
	E	2,890				2,964		2,860		
	Total	15,840	13,340	13,340	11,518	16,266	13,575	15,887	13,292	
Shortraker rockfish	W					155			155	
	C					324			324	
	E					274			274	
	Total					982	753	982	753	
Rougheye rockfish	W					188			188	
	C					557			557	
	E					262			262	
	Total					1,531	1,007	1,531	1,007	
Shortraker/ rougheye rockfish	W	340	254	270						
	C	870	656	328						
	E	550	408	375						
	Total	2,510	1,760	1,318	973					
Pelagic shelf rockfish	W	370	370	277		377			366	
	C	3,010	3,010	2,158		3,067			2,973	
	WYAK	210	210	199		211			205	
	EYAK/SEO	880	880	11		898			871	
	Total	5,570	4,470	4,470	2,645	5,680	4,553	5,510	4,415	
Demersal Shelf Rockfish	Total	690	450	450	228	640	410	640	410	
Thornyhead rockfish	W	410	410	270		410			410	
	C	1,010	1,010	400		1,010			1,010	
	E	520	520	135		520			520	
	Total	2,590	1,940	1,940	805	2,590	1,940	2,590	1,940	
Atka Mackerel	Total	6,200	600	600	817	6,200	600	6,200	600	
Big skates	W					727			727	
	C					2,463			2,463	
	E					809			809	
	Total					5,332	3,999	5,332	3,999	
Longnose skates	W					66			66	
	C					1,972			1,972	
	E					780			780	
	Total					3,757	2,818	3,757	2,818	
CGOA Big and longnose		4,435	3,284	1,423						
Other skates	Total	3,709	3,709	1,385	1,769	1,327		1,769	1,327	
All skates (2003)		10,859	6,993	2,808						
Other Species	Total	NA	NA	12,942	1,625	NA	NA	NA	NA	
Total		660,319	507,534	271,776	166,365	713,667	539,263	662,918	542,456	

1/ "Deep water flatfish" includes Dover sole, Greenland turbot and deepsea sole.

2/ "Shallow water flatfish" includes rock sole, yellowfin sole, butter sole, starry flounder, English sole, Alaska plaice, and sand sole.

3/ The EGOA ABC of 2 mt for northern rockfish has been included in the WYAK ABC for other slope rockfish.

NOTE: ABCs and TACs are rounded to nearest mt.

GW means Gulfwide.

*Catch through 11/06/04 data source: NMFS

Here's your names

PUBLIC TESTIMONY SIGN-UP SHEET FOR

AGENDA ITEM D-1 (e) Gulf Specifications

	NAME (PLEASE PRINT)	AFFILIATION
1	Gerry Merrigan	Prowler FISHERIES
2	Julie Bonney	AGDB
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NOTE to persons providing oral or written testimony to the Council: Section 307(1)(I) of the Magnuson-Stevens Fishery Conservation and Management Act prohibits any person "to knowingly and willfully submit to a Council, the Secretary, or the Governor of a State false information (including, but not limited to, false information regarding the capacity and extent to which a United State fish processor, on an annual basis, will process a portion of the optimum yield of a fishery that will be harvested by fishing vessels of the United States) regarding any matter that the Council, Secretary, or Governor is considering in the course of carrying out this Act.

D-1 (e) GUT Specifications

ACDB
PSSM FORMS

TR. i. BUND
- CROSS MESSINA

D-1e Staff H/O D. Stram
12.13.04 3pm

Gulf of Alaska Groundfish Plan Team

Update on groundfish stock trends for the Gulf of Alaska

GOA Plan Team Members
James Ianelli (co-chair) AFSC
Diana Stram (co-chair) NPFMC

Gulf of Alaska Groundfish Plan Team
November 2004

Bill Bechtel	ADFG
Tory O'Connell	ADFG
Nick Sagalkin*	ADFG
Bob Foy	UAF
Bill Clark	IPHC
Eric Eisenhardt*	WDF
Jeff Fujioka	AFSC
Sarah Gaichas	AFSC
Jon Heifetz	AFSC
Tom Pearson	AKR
Beth Sinclair	NMML
Kathy Kuletz	USFWS

Gulf of Alaska Groundfish Plan Team

Main events in the GOA

- 18 assessments (from 14 groups)
- Amendment 48/48
 - * Biennial assessment cycle
 - * New treatment and assessment requirements
 - Issues with projection model
- Two brand new assessments presented
 - * Rex sole
 - * Rougheye rockfish
- Presented last year (and used this year for ABC)
 - * Dover sole
 - * Dusky rockfish

Gulf of Alaska Groundfish Plan Team

Amendment 48/48

"The proposed specifications will specify for up to 2 fishing years the annual TAC for each target species and the "other species" category and apportionments thereof, halibut prohibited species catch amounts, and seasonal allowances of pollock and Pacific cod."

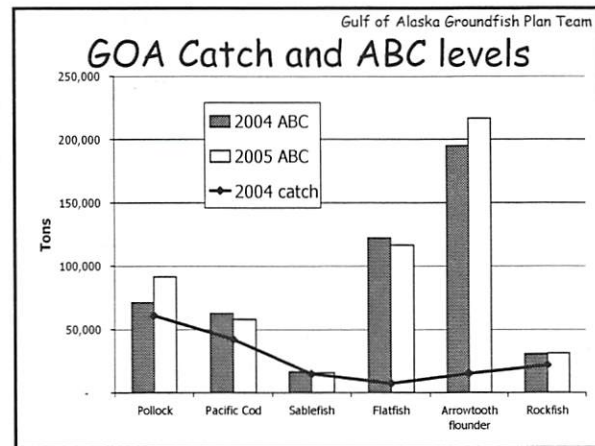
50 CFR Part 679.

Two-Year Ahead ABC and OFL Projections:
p. 9 BSAI SAFE report

Gulf of Alaska Groundfish Plan Team

48/48 Considerations

- Biennial cycle of assessments
 - * Author's discretion unless special recommendation is made
 - * Pollock, cod and sablefish to remain annual
 - * Atka mackerel kept biennial since there is no age-structured model in the GOA
- 2-year recommendations
 - * 2005 and 2006
 - * Caveat on the use of the projection model:
 - Uses best information available
 - Likely to be conservative since full catch is often less than ABC levels



Gulf of Alaska Groundfish Plan Team

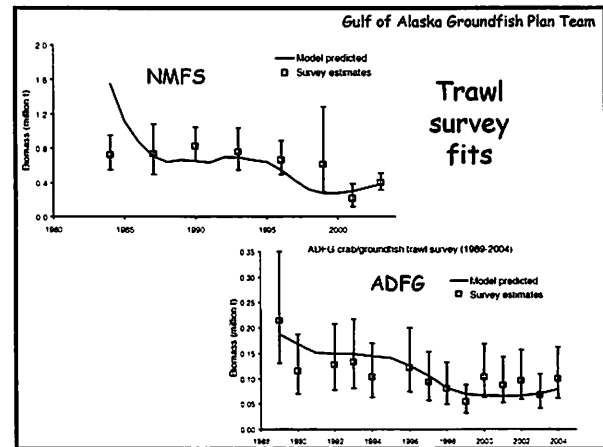
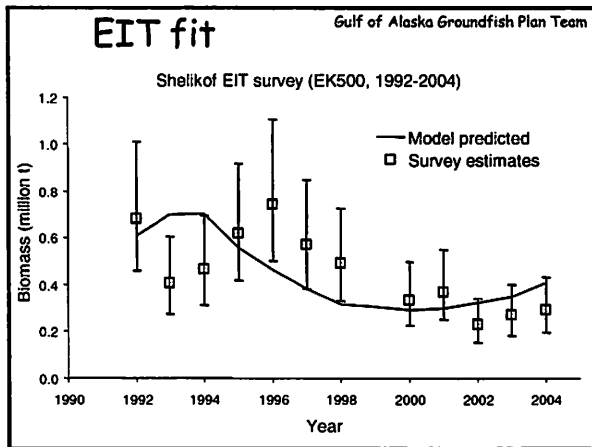
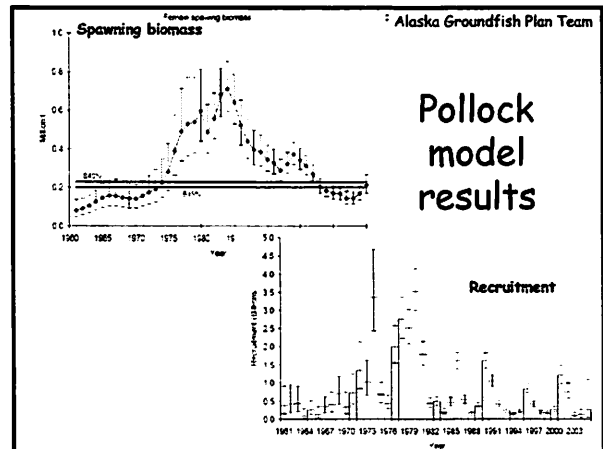
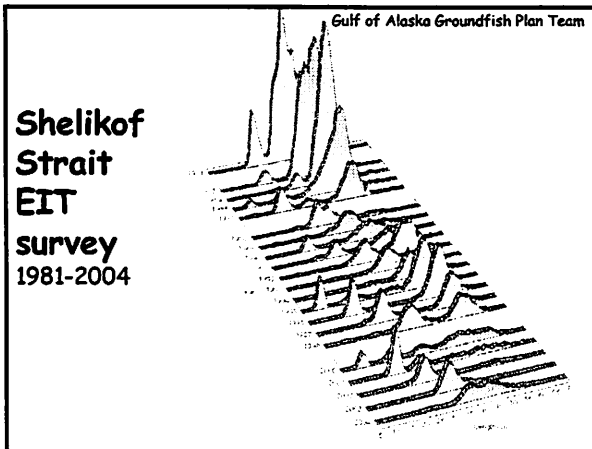
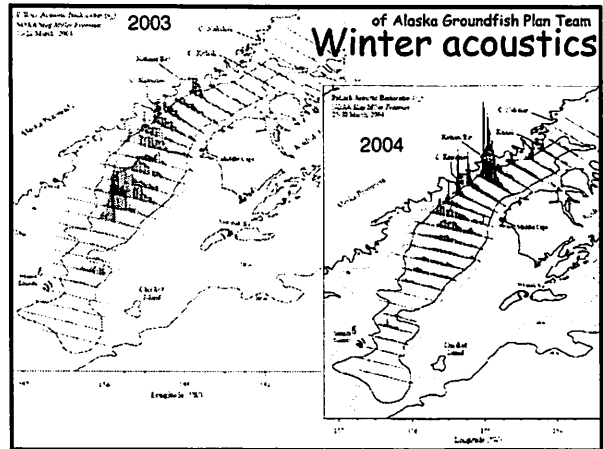
ABC Summary

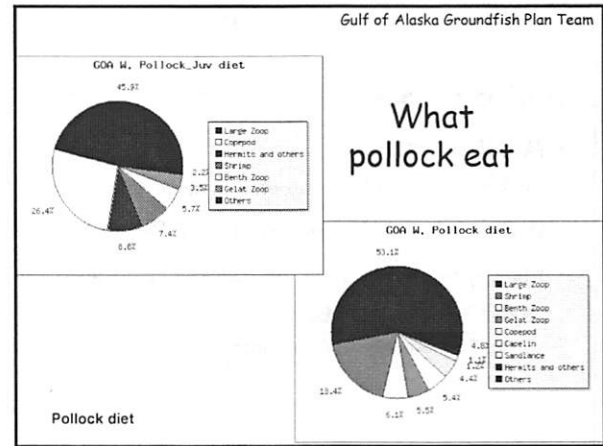
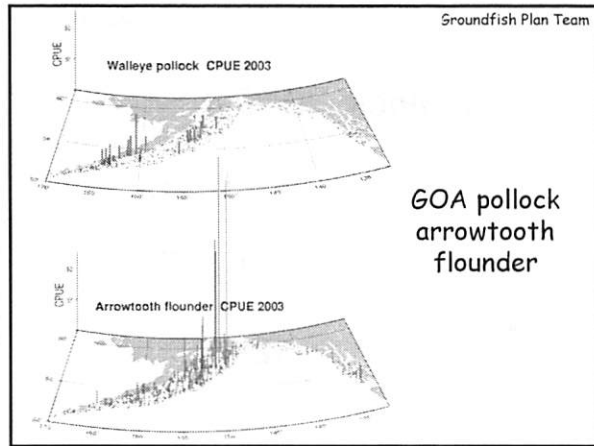
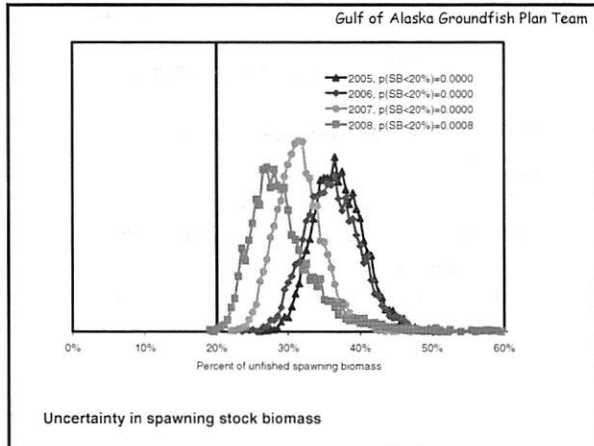
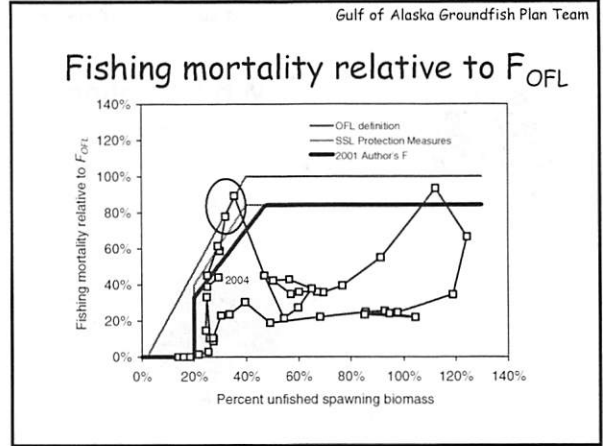
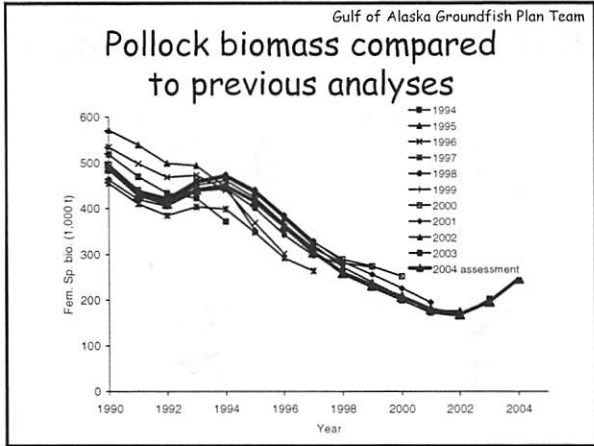
Species	ABC			Change
	2004 catch	2004	2005	
Pollock	61,142	71,260	91,710	up 20,450 (29%)
Pacific Cod	42,124	62,810	58,100	down 4,710 (7%)
Sablefish	14,847	16,550	15,940	down 610 (4%)
Flattish	7,474	122,510	116,640	down 5,870 (5%)
Arrowtooth flounder	15,174	194,930	216,900	up 21,970 (11%)
Rockfish	21,777	30,730	31,229	up 499 (2%)
Total	162,538	498,790	530,519	up 31,729 (6%)

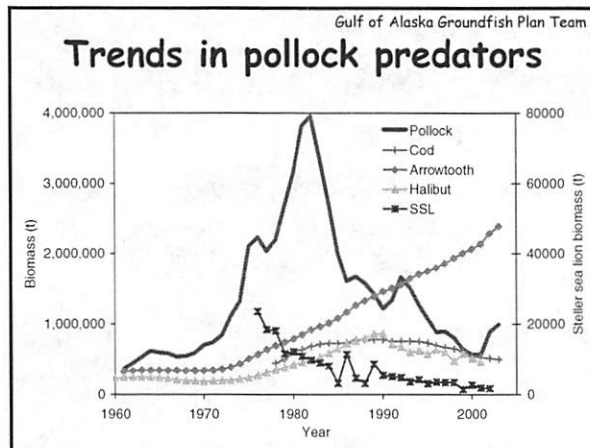
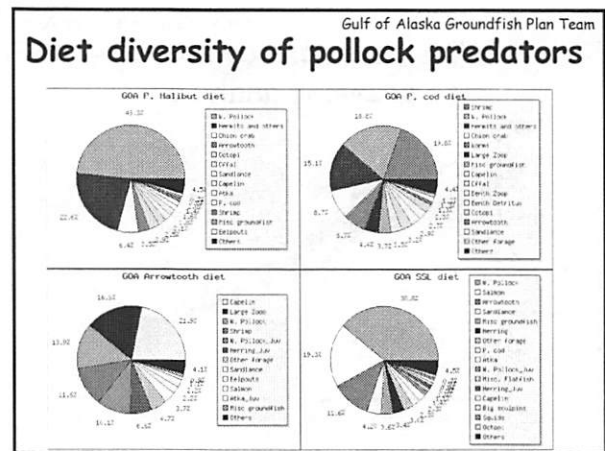
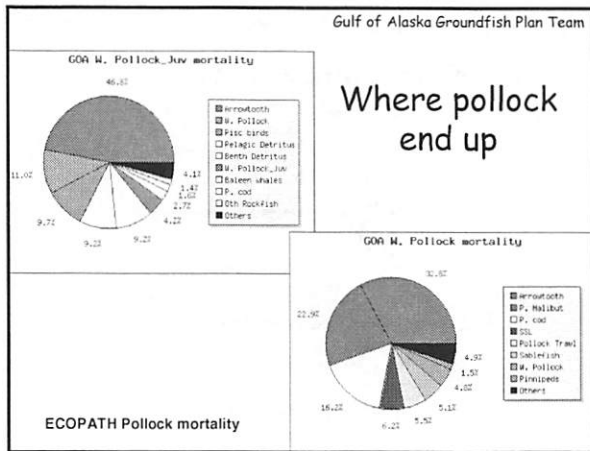
Page 35

GOA Pollock assessment features

- Winter EIT (acoustic) survey (Appendix A)
- Environmental indices
- Predator prey evaluation







- Gulf of Alaska Groundfish Plan Team
- ### ABC considerations
- 2003 BTS survey increase (86%)
 - 2004 EIT survey increase (8%)
 - 2004 ADF&G survey increase (48%)
 - Concerns over recruitment since 1999
 - Ecosystem interactions clear
 - * Role of arrowtooth flounder and other predators

- Gulf of Alaska Groundfish Plan Team
- ### Added pollock conservation measures
- Model selected
 - * Survey catchability assumption fixed at 1.0
 - A constant-buffer scheme is used
 - Fishing mortality kept at current (low) level
 - * Plan Team used an ABC that only increases by one half the F_{ABC} level (20,450 tons instead of 40,900)

Gulf of Alaska Groundfish Plan Team

Pollock 2005 ABC

Plan Team	86,100
Author's Recommendation	78,980
Maximum permissible	124,800

Pollock Spawning biomass

▪ Spawning biomass (1,000's tons)

- * 2005 = 213
- * $B_{40\%}$ = 229
- * $B_{20\%}$ = 115

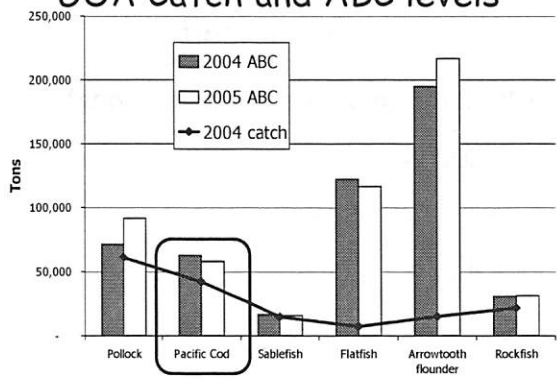
ABC Summary

ABC

Species	2004 catch	2004	2005	Change
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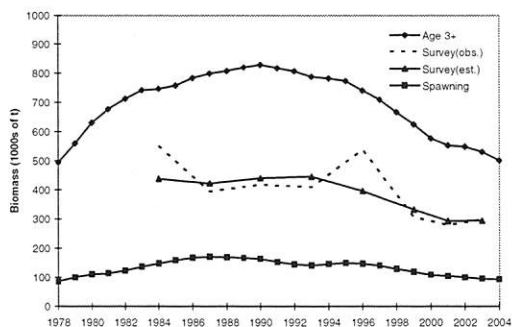
GOA Catch and ABC levels



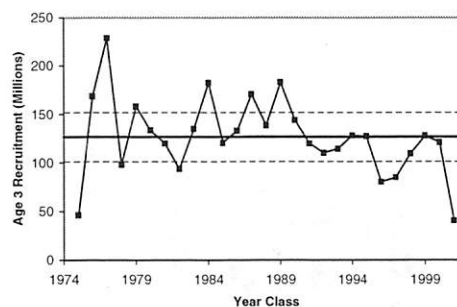
Pacific cod What's New?

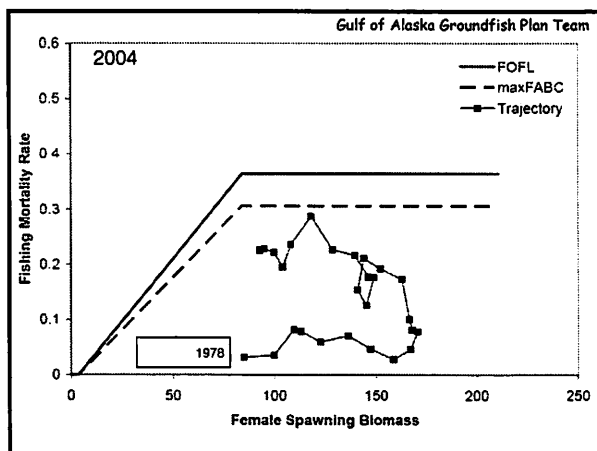
- **Data**
 - * 2003 catch and length comp updated
 - * Preliminary 2004 catch and length comp added
 - * Errors in 2000/2001 length comps corrected
- **No changes to the model**
- **Results**
 - * Spawning bio. down 11%, about as expected
 - * ABC down 7%, about as expected
 - * New ABC methodology proposed

Comparative Biomass Trends



Recruitment by year class



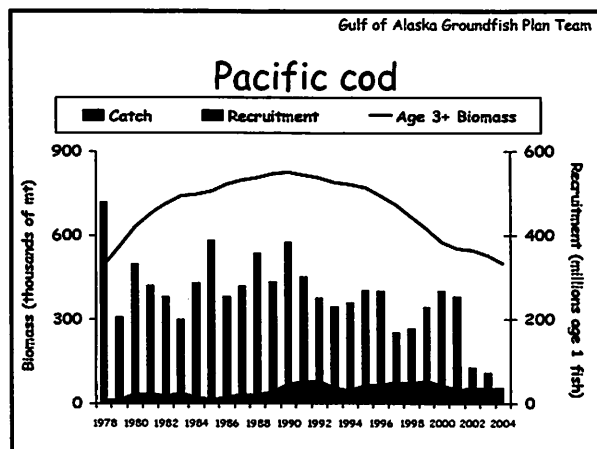


Gulf of Alaska Groundfish Plan Team

ABC Recommendation

Applying the Alternative Approach to 2005

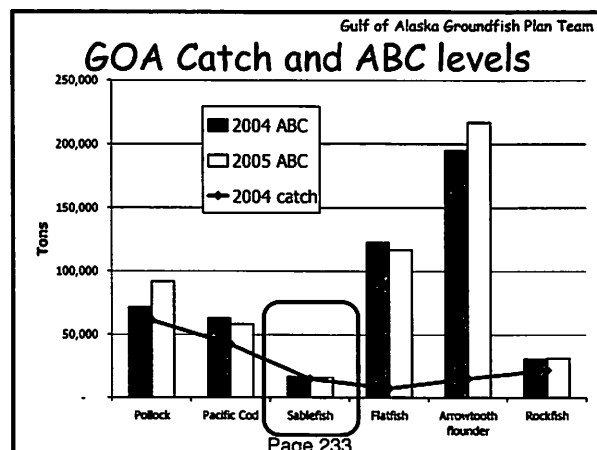
- New adjustment to ABC applied
 - * Trade-off
 - Maximizing yield &
 - Minimizing catch variability
 - 2005 ABC of 58,100 mt (compared to 2004 catch of 58,600)
 - * 2005 maximum permissible ABC = 73,800 mt
 - * 2005 OFL = 86,200 mt



Gulf of Alaska Groundfish Plan Team

Pacific cod

- Female spawning biomass (tons)
 - * 2005 = 91,700
 - * $B_{40\%}$ = 84,400
 - * $B_{35\%}$ = 73,850

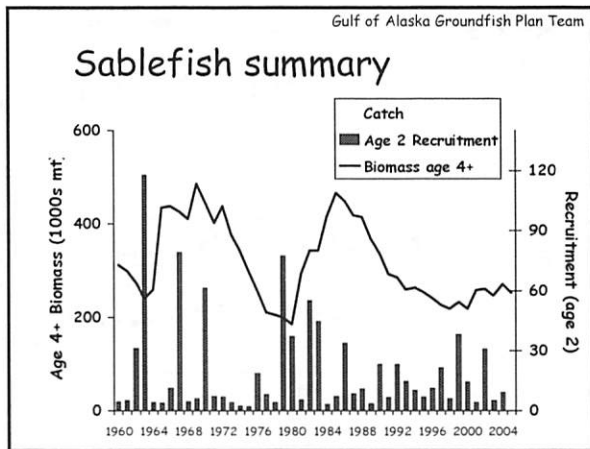
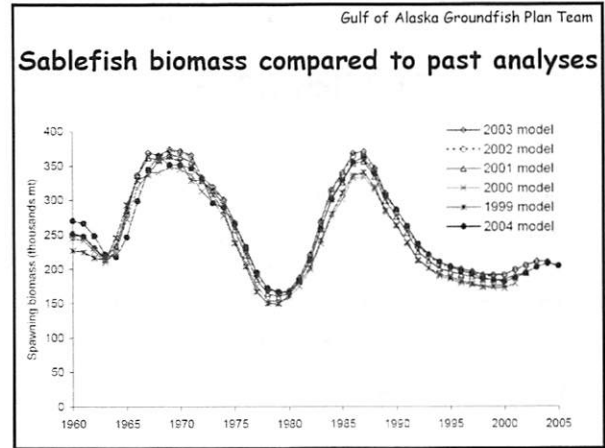
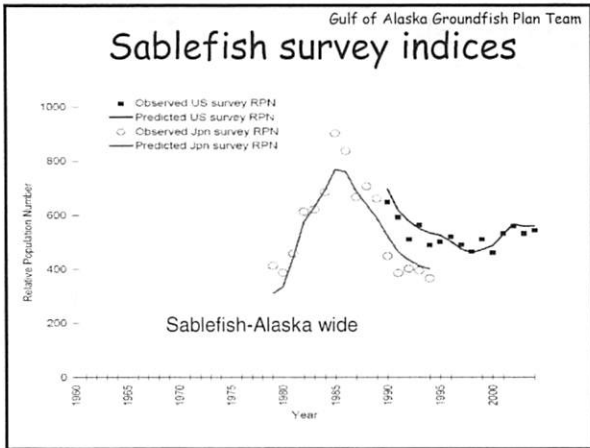


Gulf of Alaska Groundfish Plan Team

Sablefish

Notes

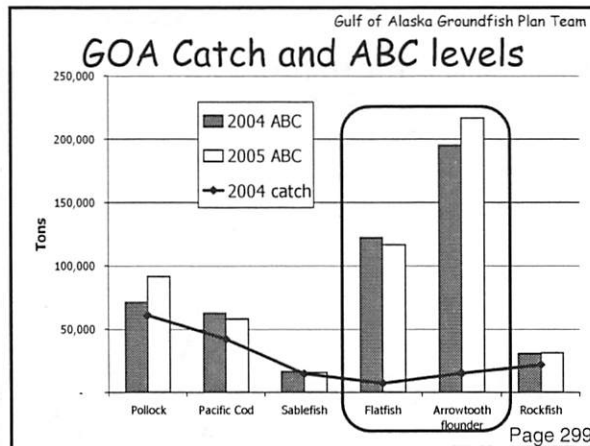
- * Survey abundance decreased ~5% from 2003 estimate
- * Status "moderate"
 - 2004 biomass about 4% higher than 2000 level
 - Below the $B_{40\%}$ level (~91%)
- * Plan Team agreed with author's recommended ABC
 - Supported the careful examination of uncertainty



Gulf of Alaska Groundfish Plan Team

Sablefish spawning biomass

- Spawning biomass (1,000's tons)
 - * 2005 = 204
 - * $B_{40\%}$ = 223
 - * $B_{35\%}$ = 195



Gulf of Alaska Groundfish Plan Team

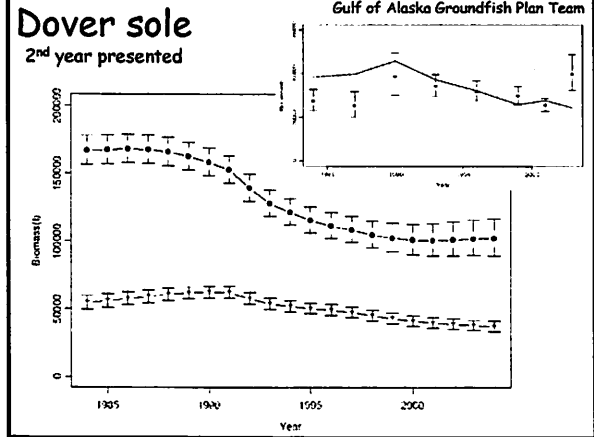
New things in GOA flatfish

- Dover sole assessment
 - * 1st presented last year, used this year (and for 2006)
- Rex sole assessment
 - * Reviewed in September, will be used next year
- Flathead and arrowtooth flounder projected from last year's estimates

Flatfish ABC's

Species	2004 ABC	2005 ABC	Change
Deep water flatfish	6,070	6,820	up 750 (12%)
Rex sole	12,650	12,650	same (0%)
Shallow water flatfish	52,070	52,070	same (0%)
Flathead sole	51,720	45,100	down 6,620 (13%)
Arrowtooth flounder	194,930	216,900	up 21,970 (11%)

Deep-water ABC derived from Dover assessment (Tier 3) + others (Tier 5)



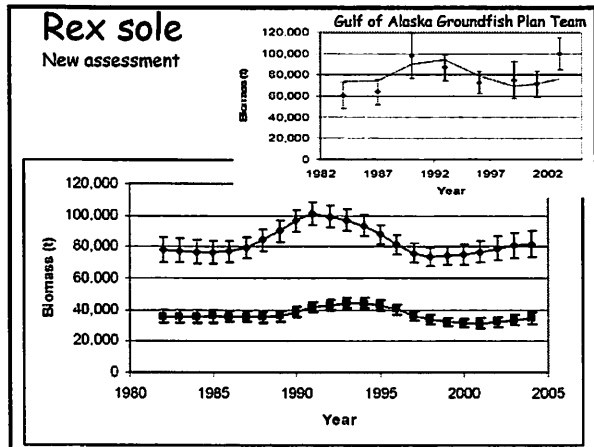
Dover sole

• Female spawning biomass (tons)

* 2005 = 36,400

* $B_{40\%}$ = 16,500

* $B_{35\%}$ = 14,400



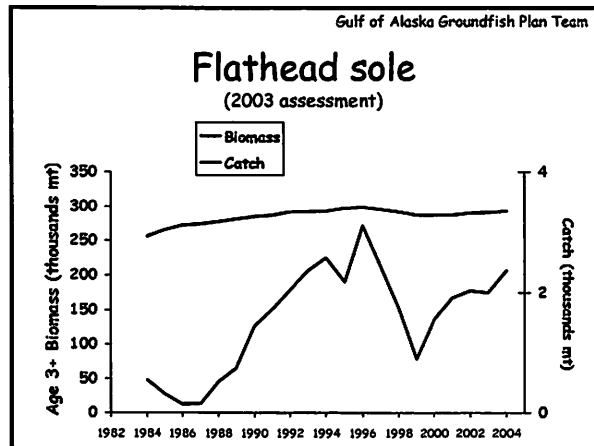
Rex sole

• Female spawning biomass (tons)

* 2005 = 35,400

* $B_{40\%}$ = 18,700

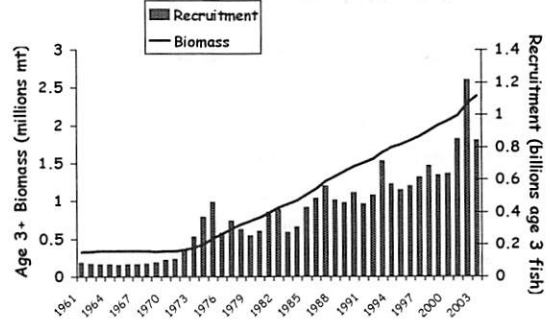
* $B_{35\%}$ = 16,400



Flathead sole

- Female spawning biomass (tons)
 - * 2005 = 110,000
(assuming avg. F in projection)
 - * $B_{40\%}$ = 48,000
 - * $B_{35\%}$ = 42,000

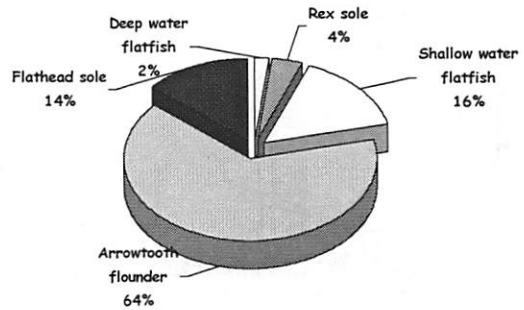
Arrowtooth flounder



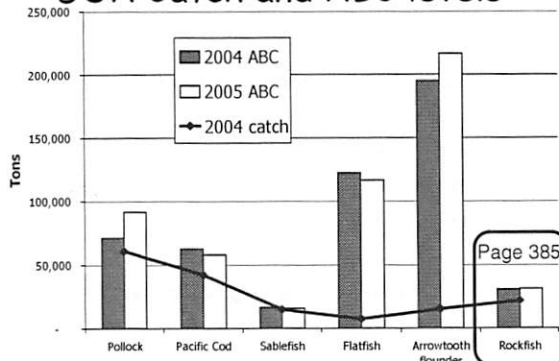
Arrowtooth flounder

- Female spawning biomass (tons)
 - * 2005 = 1,375,000
(assuming avg. F in projection)
 - * $B_{40\%}$ = 620,000

Flatfish 2005 ABC's 333,540 tons total

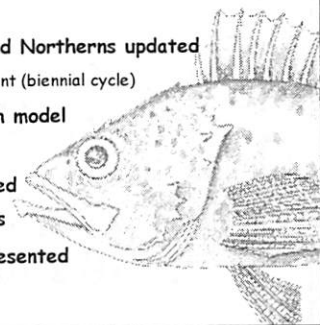


GOA Catch and ABC levels



Rockfish assessments

- Pacific ocean perch and Northernns updated
 - * But not a "full" assessment (biennial cycle)
- New rougheye rockfish model
(Attachment 9B, p. 429)
- Dusky updated and used for ABC considerations
- Research activities presented



Rockfish research

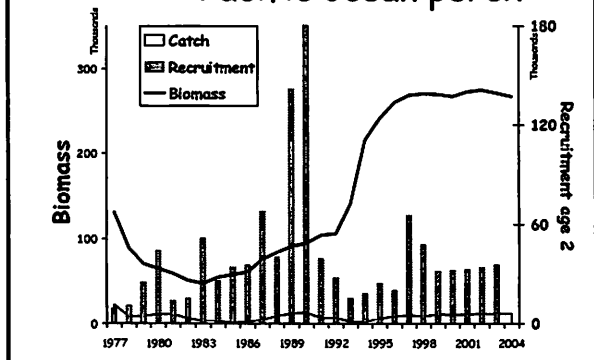
- * Evaluation of management parameters (Attach 7A p. 387)
 - Suggested $F_{40\%}$ sufficiently conservative ($F_{msy} \sim F_{30\%}$)
- * Reproductive potential at age: Attach 7B, p. 399
- * Alternative projections (Attach 7C, p. 403)
 - Result in greater uncertainty
 - Part of MSE activities (Goodman et al. report)
- * Estimation alternatives of SR/RE ABC's

Pacific ocean perch

Updated assessment, p. 385

	This year's projection	
	2005	2006
B _{40%} (mt)	86,162	86,162
Spawning Biomass (mt)	92,421	90,572
ABC F _{40%} (mt yield at F _{40%})	13,575	13,292

Pacific ocean perch

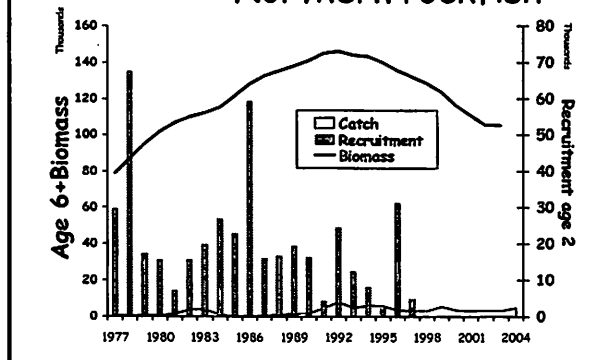


Northern rockfish

Updated assessment, p. 411

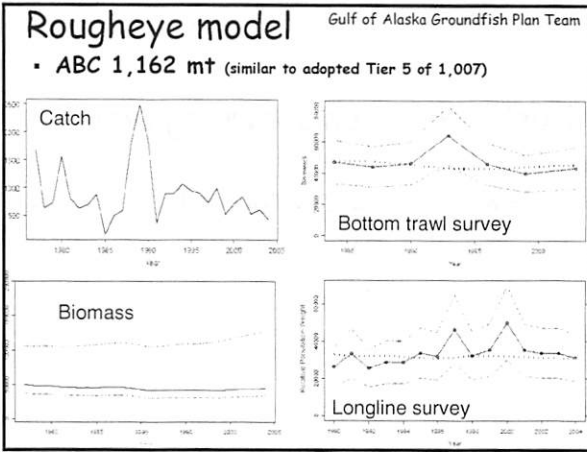
	This year's projection (updated)	
	2005	2006
B _{40%} (mt)	24,693	24,693
Spawning Biomass (mt)	38,272	36,108
ABC F _{40%} (mt yield at F _{40%})	5,093	4,749

Northern rockfish



Shortraker & rougheye rockfish

- Plan Team recommended separate ABC's
 - * Consistent with BSAI approach
 - * Observer coverage not as good for GOA
- Attachment 9A (p. 416) addresses alternative ABC calculations
 - * Species composition estimation methods
 - * Plan Team recommended splitting these species

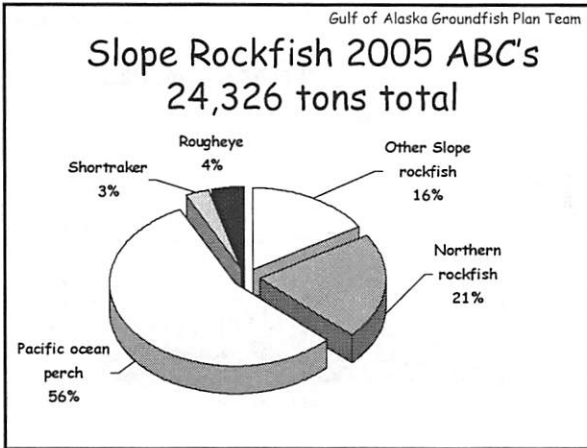


Rockfish ABC's

Gulf of Alaska Groundfish Plan Team

Species	2004 ABC	2005 ABC	Change
Other Slope rockfish	3,900	3,900	same (0%)
Northern rockfish	4,870	5,091	up 221 (5%)
Pacific ocean perch	13,340	13,575	up 235 (2%)
Shortraker/ rougeye	1,760	1,760	same (0%)
Shortraker	-	753	
Rougeye	-	1,007	
Pelagic shelf rockfish	4,470	4,553	up 83 (2%)
Demersal Shelf Rockfish	450	410	down 40 (9%)
Thornyhead rockfish	1,940	1,940	same (0%)
Total	30,730	31,229	up 499 (2%)

Pelagic shelf ABC derived from dusky assessment (Tier 3) + others (Tier 5)



Rockfish spawning biomass

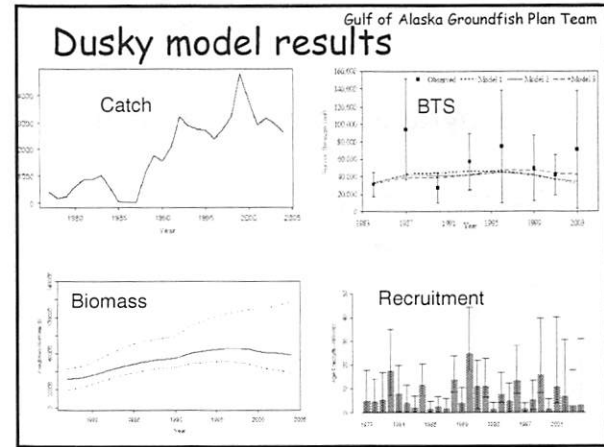
Gulf of Alaska Groundfish Plan Team

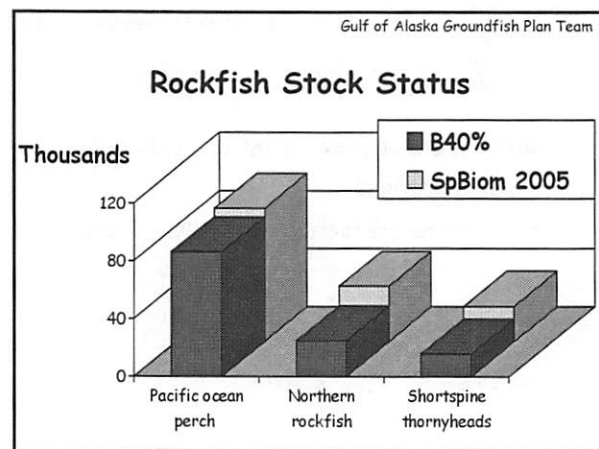
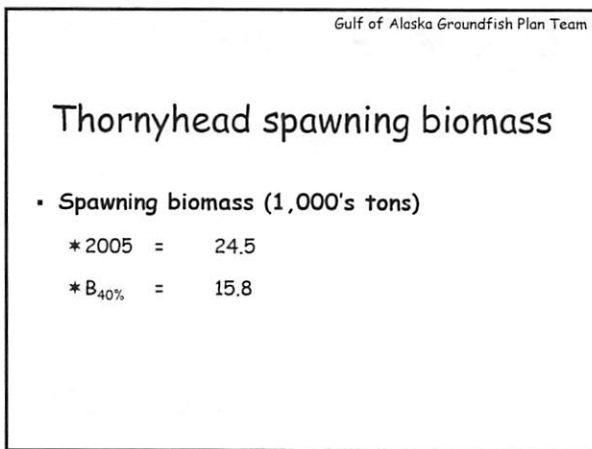
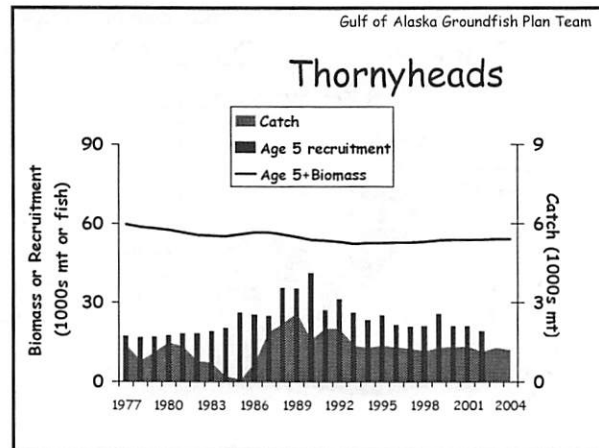
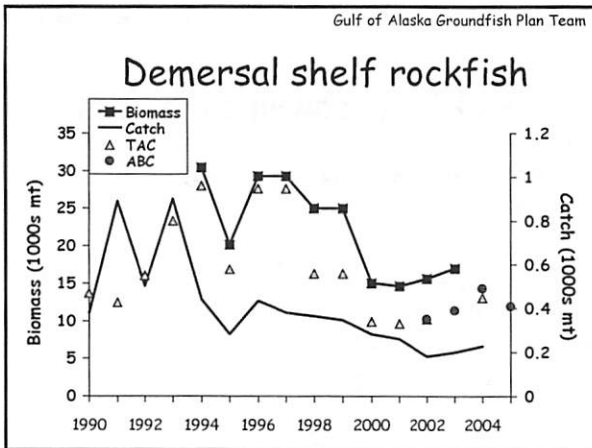
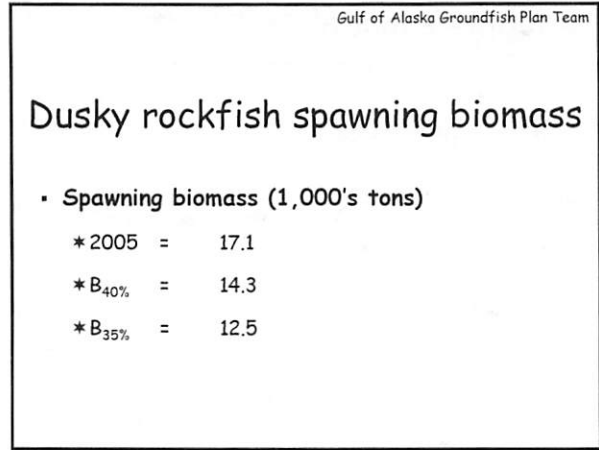
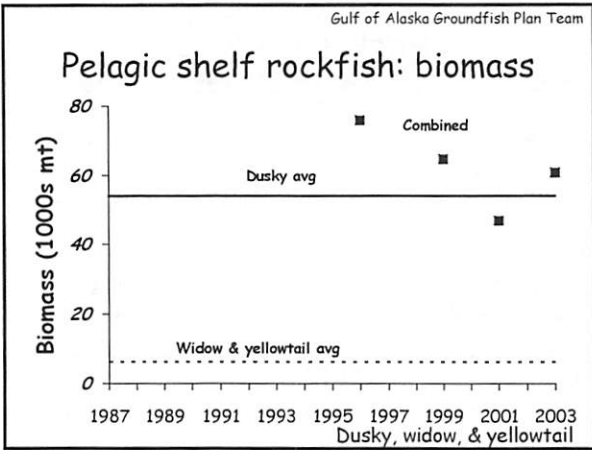
- Spawning biomass (1,000's tons)
 - *POP:
 - 2005 = 92.4
 - $B_{40\%}$ = 86.2
 - *Northern:
 - 2005 = 38.3
 - $B_{40\%}$ = 24.7

Pelagic shelf rockfish

Gulf of Alaska Groundfish Plan Team

- Age-structured assessment of light-dusky rockfish provided
- Accepted as preferred by the Plan Team





Atka mackerel

- **Easterly appearance**
 - * Summer bottom trawl survey and fishery data suggest influx of 1998 or 1999 year class from the Aleutians
 - * ABC recommended at 600 tons, sufficient to allow for bycatch levels
 - * Catch (817 mt) exceeded ABC in 2004 (OFL=6,200 mt)

Skates

- In GOA, 2 main target species
 - * Big skate (*Raja binoculata*)
 - * Longnose skate (*Raja rhina*)
- 3rd group composed of many species
 - * *Bathyraja* spp.
 - * not targeted to date

Rough relative biomass estimates (in GOA)

Big skate ~50%,
 longnose about 32%,
 ~18% to *Bathyraja* spp.

Skate catch estimation

- **Difficult, requires expansion to linked target**
 - * But species ID anticipated to be sufficiently improved for 2005 mgt purposes
- Halibut fishery appears to be a large contributor

Skate ABC recommendations

- **Last year**

2004 catch specifications (mt) for skates. Skates were managed under a Gulfwide OFL, ABC and TAC for all combined skate species except in the CGOA where big and longnose skates were managed under a separate ABC and TAC.

Species group	Area	OFL	ABC	TAC	Catch
Big and Longnose skates	Central GOA		1,155	3,281	1,423
All skates (except CGOA)	GOA wide				
Big and Longnose)			3,709	5,709	1,385
Skate complex (all)	GOA wide	10,589			2,808

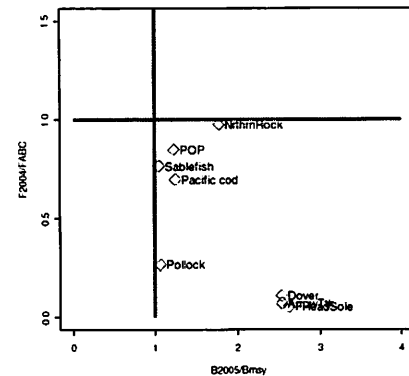
Skate ABC recommendations

- **This year**

Summary of OFLs and ABC for 2005 and 2006. Biomass estimates are averages from the 1999-2003 NMFS GOA bottom trawl surveys.

Species group	Area	Average Biomass	ABC (area specific) 2005-2006	OFL (Gulfwide) 2005-2006
Big skate	W	9,688	727	
	C	32,843	2,463	
	E	10,793	809	
	Total	53,324	3,999	5,332
Longnose skate	W	878	66	
	C	26,300	1,972	
	E	10,397	780	
	Total	37,575	2,818	3,757
Other skates	GW	17,689	1,327	1,769
All skates combined		114,900	8,144	

Overall summary



Other recommendations

- **Other species TAC specifications**
 - * Interim measure: change other species TAC to $\leq 5\%$ of combined GOA groundfish TACs
 - * Eventually specify ABCs individually as part of the non-target initiative
- **Dark rockfish**
 - * Remove dark rockfish from the FMP

D-1e

Staff H/O D. Stram
12.13.04 3pm

Gulf of Alaska groundfish 2004 OFLs, ABCs, TACs, and catch (through 11/06/04)
Plan Team/SSC Recommendations for 2005-2006 OFLs and ABCs, AP recommended TACs

Species		OFL 2004	ABC 2004	TAC 2004	*Catch 2004	OFL 2005	ABC 2005	TAC 2005	OFL 2006	ABC 2006	TAC 2006
Pollock	W (610)		22,930	22,930	22,930		30,380	30,380		30,452	30,452
	C (620)		26,490	26,490	23,736		34,404	34,404		34,485	34,485
	C (630)		14,040	14,040	14,332		18,718	18,718		18,762	18,762
	WYAK		1,280	1,280	144		1,688	1,688		1,691	1,691
	SubTotal	91,060	64,740	64,740		144,340	85,190	85,190	103,250	85,390	85,390
	EYAK/SEO	8,690	6,520	6,520	0	8,690	6,520	6,520	8,690	6,520	6,520
Total	99,750	71,260	71,260	61,142	153,030	91,710	91,710	111,940	91,910	91,910	
Pacific Cod	W		22,610	16,957	15,218		20,916	15,687		18,396	13,797
	C		35,800	27,116	26,794		33,117	25,086		29,127	22,064
	E		4,400	3,960	112		4,067	3,660		3,577	3,219
	Total	102,000	62,810	48,033	42,124	86,200	58,100	44,433	65,800	51,100	39,080
Sablefish	W		2,930	2,930	1,986		2,540	2,540		2,407	2,407
	C		7,300	7,300	7,002		7,250	7,250		6,870	6,870
	WYAK		2,550	2,550	2,133		2,580	2,580		2,445	2,445
	SEO		3,770	3,770	3,726		3,570	3,570		3,383	3,383
	Total	22,160	16,550	16,550	14,847	19,280	15,940	15,940	17,530	15,105	15,105
Deep water flatfish ¹	W		310	310	7		330	330		330	330
	C		2,970	2,970	614		3,340	3,340		3,340	3,340
	WYAK		1,880	1,880	55		2,120	2,120		2,120	2,120
	EYAK/SEO		910	910	4		1,030	1,030		1,030	1,030
	Total	8,010	6,070	6,070	680	8,490	6,820	6,820	8,490	6,820	6,820
Rex sole	W		1,680	1,680	526		1,680	1,680		1,680	1,680
	C		7,340	7,340	936		7,340	7,340		7,340	7,340
	WYAK		1,340	1,340	0		1,340	1,340		1,340	1,340
	EYAK/SEO		2,290	2,290	0		2,290	2,290		2,290	2,290
	Total	16,480	12,650	12,650	1,462	16,480	12,650	12,650	16,480	12,650	12,650
Shallow water flatfish ²	W		21,580	4,500	136		21,580	4,500		21,580	4,500
	C		27,250	13,000	2,806		27,250	13,000		27,250	13,000
	WYAK		2,030	2,030	1		2,030	2,030		2,030	2,030
	EYAK/SEO		1,210	1,210	0		1,210	1,210		1,210	1,210
	Total	63,840	52,070	20,740	2,942	63,840	52,070	20,740	63,840	52,070	20,740
Flathead sole	W		13,410	2,000	831		11,690	2,000		11,111	2,000
	C		34,430	5,000	1,559		30,020	5,000		28,527	5,000
	WYAK		3,430	3,430	0		3,000	3,000		2,842	2,842
	EYAK/SEO		450	450	0		390	390		370	370
	Total	64,750	51,720	10,880	2,390	56,500	45,100	10,390	53,800	42,850	10,212
Arrowtooth flounder	W		23,590	8,000	2,837		26,250	8,000		27,924	8,000
	C		151,840	25,000	12,227		168,950	25,000		179,734	25,000
	WYAK		10,590	2,500	76		11,790	2,500		12,539	2,500
	EYAK/SEO		8,910	2,500	34		9,910	2,500		10,543	2,500
	Total	228,130	194,930	38,000	15,174	253,900	216,900	38,000	270,050	230,740	38,000

Species		OFL 2004	ABC 2004	TAC 2004	*Catch 2004	OFL 2005	ABC 2005	TAC 2005	OFL 2006	ABC 2006	TAC 2006
Other Slope rockfish	W		40	40	242		40	40		40	40
	C		300	300	527		300	300		300	300
	WYAK		130	130	76		130	130		130	130
	EYAK/SEO		3,430	200	27		3,430	200		3,430	200
	Total	5.150	3,900	670	872	5.150	3,900	670	5.150	3,900	670
Northern rockfish	W		770	770	1,025		808	808		755	755
	C		4,100	4,100	3,711		4,283	4,283		3,995	3,995
	E ³		0	0	0		0	0		0	0
	Total	5,790	4,870	4,870	4,736	6,050	5,091	5,091	5,640	4,750	4,750
Pacific ocean perch	W	2,990	2,520	2,520	2,195	3,076	2,567	2,567	3,019	2,525	2,525
	C	9,960	8,390	8,390	8,446	10,226	8,535	8,535	10,008	8,375	8,375
	WYAK		830	830	877		841	841		813	813
	SEO		1,600	1,600	0		1,632	1,632		1,579	1,579
	E	2,890				2,964			2,860		
	Total	15,840	13,340	13,340	11,518	16,266	13,575	13,575	15,887	13,292	13,292
Shortraker rockfish	W						155	155		155	155
	C						324	324		324	324
	E						274	274		274	274
	Total					982	753	753	982	753	753
Rougheye rockfish	W						188	188		188	188
	C						557	557		557	557
	E						262	262		262	262
	Total					1,531	1,007	1,007	1,531	1,007	1,007
Shortraker/ rougheye rockfish	W		340	254	270						
	C		870	656	328						
	E		550	408	375						
	Total	2,510	1,760	1,318	973						
Pelagic shelf rockfish	W		370	370	277		377	377		366	366
	C		3,010	3,010	2,158		3,067	3,067		2,973	2,973
	WYAK		210	210	199		211	211		205	205
	EYAK/SEO		880	880	11		898	898		871	871
	Total	5,570	4,470	4,470	2,645	5,680	4,553	4,553	5,510	4,415	4,415
Demersal Shelf Rockfish	Total	690	450	450	228	640	410	410	640	410	410
Thornyhead rockfish	W		410	410	270		410	410		410	410
	C		1,010	1,010	400		1,010	1,010		1,010	1,010
	E		520	520	135		520	520		520	520
	Total	2,590	1,940	1,940	805	2,590	1,940	1,940	2,590	1,940	1,940
Atka Mackerel	Total	6,200	600	600	817	6,200	600	600	6,200	600	600
Big skates	W						727	727		727	727
	C						2,463	2,463		2,463	2,463
	E						809	809		809	809
	Total					5,332	3,999	3,999	5,332	3,999	3,999
Longnose skates	W						66	66		66	66
	C						1,972	1,972		1,972	1,972
	E						780	780		780	780
	Total					3,757	2,818	2,818	3,757	2,818	2,818
CGOA Big and longnose		4,435	3,284	1,423							
Other skates	Total		3,709	3,709	1,385	1,769	1,327	1,327	1,769	1,327	1,327
All skates (2003)		10,859		6,993	2,808						
Other Species	Total	NA	NA	12,942	1,625	NA	NA	13,871	NA	NA	13,525
Total		660,319	507,534	271,776	166,365	713,667	539,263	291,298	662,918	542,456	284,023

1/ "Deep water flatfish" includes Dover sole, Greenland turbot and deepsea sole.

2/ "Shallow water flatfish" includes rock sole, yellowfin sole, butter sole, starry flounder, English sole, Alaska plaice, and sand sole.

3/ The EGOA ABC of 2 mt for northern rockfish has been included in the WYAK ABC for other slope rockfish.

NOTE: ABCs and TACs are rounded to nearest mt.
GW means Gulfwide.
*Catch through 11/06/04 data source: NMFS