

Scallop Plan Team Meeting

March 3-4, 2010

Ted Stevens Marine Research Institute
17109 Point Lena Rd., Rm. 256
Juneau, AK

Plan Team members present: Diana Stram (NPFMC)-co-chair, Gregg Rosenkranz (ADF&G Kodiak)-co-chair, Scott Miller (NMFS), Jie Zheng (ADF&G Juneau), Gretchen Harrington (NMFS), Rich Gustafson (ADF&G), Ryan Burt (ADF&G).

New member: Joseph Stratman (ADF&G)

Public and agency personnel present: Tom Minio (Provider), Jim Stone (Alaska Scallop Association), Karla Bush (ADF&G), John Lemar (Arctic Hunter), Bill Bechtol (Bechtol Research), Doug Woodby (ADF&G), Stefanie Moreland (ADF&G), Matt Eagleton (NOAA Fisheries), Diana Evans (NPFMC), Gordon Kruse (UAF), Franz Mueter (UAF), Peggy Murphy (NMFS), and Clayton Jernigan (NOAA GC).

The Scallop Plan Team meeting convened on March 3rd at the Ted Stevens Marine Research Institute in Juneau, Alaska. The attached agenda was approved for the meeting.

Administrative Issues

New members: The team welcomed new member Joseph Stratman (ADF&G) and looks forward to his participation on the team.

SPT meeting 2010: The Team indicated the necessity of convening an additional meeting to review the revised ACL analysis prior to Council final action in October. The team tentatively planned for a one day meeting the last week of September in Anchorage for that review.

Minutes: The team reviewed and approved minutes from the previous year and did not note any outstanding issues that are not already scheduled for discussion at this year's meeting. The team again divided note-taking responsibilities for sections of the meeting in order to assist Diana's ability to compile minutes while chairing the meeting itself.

Essential Fish Habitat (EFH) 5-year Review

Diana Evans and Matt Eagleton provided an overview of the EFH 5-year review process, and explained the need to consult with the Scallop Plan Team with respect to the review of weathervane scallop EFH. Evans and Eagleton provided the current FMP text describing weathervane scallop EFH, which is based on revisions resulting from the 2005 EFH EIS. The current weathervane scallop EFH map identifies the distribution of 95% of weathervane scallops caught either in the NMFS and ADFG trawl surveys or the commercial scallop fishery. Stock assessment authors Gregg Rosenkranz and Rich Gustafson contributed to a preliminary review of the FMP text describing scallop EFH, which was summarized for the Plan Team.

The Team agreed with the stock assessment authors' review that the map of weathervane scallop EFH distribution should be modified to include inshore areas that are important scallop habitat, based on ADFG trawl survey data. These should include bays on the east side of Kodiak Island and south of the Alaska Peninsula between Chignik and Unimak Pass, as well as Kachemak Bay, bays in Prince William Sound such as Orca Bay. The Team highlighted that many of the bays are very important to scallop reproduction. Members of the public also testified that there may be important areas for scallop habitat that are no longer fished commercially, but should still be considered as EFH due to their importance for

larval spawning, such as Yakutat Bay. The Team also discussed whether historic scallop beds in Bristol Bay should be considered as EFH, however Rosenkranz cautioned that any expansion to the EFH distribution should be based on reliable and fairly recent data, due to the temporally cyclic nature of scallop bed die-off and resettlement.

The Team noted that there may need to be some editorial changes and minor updates to the EFH FMP text, particularly in the description of life history characteristics, both to make it internally consistent and accurate, and to add new literature references. Gregg Rosenkranz noted that there is ongoing research concerning scallop habitat, however it is not yet at a stage to substantively change our understanding of scallop biology or habitat associations and result in regulatory management change.

The Team also reviewed the maps illustrating the change in trawl fishing intensity distribution between the 5 year period analyzed in the EFH EIS (1998-2002), on which the evaluation of fishing effects on scallop EFH included in the FMP is based, and the more recent five-year period 2003-2007. Although it was noted that there are some specific areas within each management areas where higher intensity trawl fishing is now occurring, overall the intensity of fishing has decreased, and the areas of increased intensity do not appear to be in areas that are important scallop habitat. The Team also considered whether the new areas that they are suggesting be added to the scallop EFH distribution would be likely to have adverse effects from fishing, however as they are primarily inshore areas, it does not appear that these areas are intensively fished. Consequently, the Plan Team agreed that the evaluation of fishing effects conclusions currently in the FMP are still appropriate. The Team also discussed whether there were any localized areas important for scallops that should be advanced for Council consideration as HAPCs, but determined that they had no specific recommendations at this time.

The Team recommends that the Council initiate an FMP amendment to revise the distribution of weathervane scallop EFH to include inshore areas and historically fished areas. The Team noted that these changes may also result in minor modifications to the EFH text description if this results in a more shallow depth distribution of weathervane scallop EFH. Because exact revisions to the distribution of scallop EFH will be determined during the development of the amendment, the Team would like the opportunity to review the final distribution map again during the amendment process, for further discussion by both the Scallop Plan Team and members of the public. As part of the proposed amendment, the Team recommends that the Council also update the FMP text to clarify and improve the life history description of scallops. Gregg Rosenkranz and Ryan Burt have offered to assist Evans and Eagleton in this effort.

The Team also noted that although the FMP only identifies EFH for weathervane scallop, the FMP also covers all scallop stocks off the coast of Alaska, including rock scallops, pink scallops, and spiny scallops, even though there is no commercial fishery for these species. The Team suggested that the 5-year review report should accurately reflect this, and should clarify why EFH is not defined for these other species.

During the course of the meeting, the Team identified the following specific research needs that relate to scallop habitat, and should be included in the EFH 5-year review. The Plan Team recommends that the AFSC consult with ADFG scallop researchers when soliciting proposals for the annual distribution of EFH funds.

Camera Sled Update

Gregg Rosenkrantz provided an update of work on camera sled for using to survey scallop. A slight modification of sled was made this year to facilitate sled movement by adding metal to the bottom. Ric Shepard of ADF&G did some work on software for brightening up the images, measuring the sizes of scallop, and classifying other animal species. Gregg summarized the field work done in 2009. During

June 2009, the sled was used to survey seven areas off Kodiak: Marmot, Chiniak, KNE3, KNE6, Alitak Inside, Alitak Flats, and Alitak Offshore with total 551.4 km and 76.7 elapsed hours. The main purpose for the 2009 field work was to explore possible means of doing surveys of Kodiak area. With the improvement of equipment and software, the sled appears to be able to be used for studying scallop as well as marine habitat.

ADF&G Scallop management staff indicated that they would like to be able to review the VMS data but have had difficulty gaining access to the data. Scott Miller volunteered to look into this and see whether ADF&G staff can be given access to the VMS data. The team also discussed some of the legal issues around VMS in state waters.

Scallop Observer Program

Ryan updated SPT on migration of ADF&G scallop observer data from multiple databases to a single relational SQL database. Scallop observer sampling forms have been changed to streamline and simplify observer duties while collecting the same data as in previous years. New error checking queries are in development. Where possible, scallop observer program methods and procedures have been revised to align with ADF&G crab observer program protocols. Data forms, instructions, observer training materials, and documentation on the program are now available statewide within the ADF&G firewall on the Westward Region Intranet.

The observer program is going to institute a special project on “weak meats”. The goal is to collect 90 meat samples and have Dr. Olivera at the Fisheries Industrial Technology Center analyze the samples. The principal component she will test for is glycogen levels. Observers will collect 30 weak meat scallops and 30 healthy scallops from Yakutat area beds and compare them to 30 healthy scallops collected from Kodiak area beds. There was also some discussion on collecting shells from the animals as well.

Weak Meat Research Report

Ryan Burt provided a report on results of preliminary analysis of weak meat tissue samples. This analysis has been one of the top priorities of the Scallop Plan Team for several years. The analysis was conducted by Alexandra Oliveira, Ph.D, and Katie Brenner both with the University of Alaska Fairbanks and working out of the Kodiak Fishery Industrial Technology Center.

The analysis was conducted on a sample of weak meat scallops harvested, specifically for this study, by John Lamar on the vessel Arctic Hunter. The study also used samples of non-weak meat weathervane scallops from the Yakutat and Kodiak areas as well as a non-weak meat rock scallop sample from Juneau.

The analysis compared the samples for specific levels of moisture, ash, lipids, carbohydrates, and also compared age/shell height to the prevalence of weak meats in the samples. The preliminary findings are that weak-meat scallop tissue had approximately 4% more moisture than the non-weak meat scallops. Weak-meat scallops also were found to have from 1.5% to 2.5% more ash than the non weak meat scallop meat samples, possibly suggesting greater mineral content in weak-meat scallops. Weak-meat scallops also have lower lipid protein content than non-weak meat scallops; however, the differences were not statistically significant across all samples compared. Weak- meat scallops were found to have zero carbohydrates. This implies low sugar that can lead to bitter taste and “weak” meat that falls apart when shucked and/or handled.

A comparison of age of using shell heights indicates that non-weak scallops tend to be younger, approximately 5-10 years of age, but weak-meat scallops range from about 8 to 22 years of age.

Members of industry indicated that they believe that it is a feed relationship, possibly temporal and that the weak scallops can improve over time. It was also pointed out that weak-meat scallops have heavier body weights, but also heavier meat weights and they are older so this may be related to age and/or minerals and moisture content; however, these relationships are not conclusive at this point.

The team also discussed doing a second year of sampling that would allow for comparison of sites sampled in the first year with different sites sampled in the second year. The intent here is to geographically spread the samples out; however, the time needed from sampling to processing could be an issue with some of the more remote locations. The team also discussed the possibility of doing on-site sampling in the Yakutat area and John Lamar offered to coordinate that sampling in the Yakutat area.

Gregg Rosenkranz identified the need to determine if age is the primary driver in weak-meats, and whether young scallops also have weak-meats. Participants discussed various other factors, such as fresh water inflow, feed availability, and ocean temperature, that could be considered in future analyses of weak-meats. Rich Gustafson also pointed out that they have found weak-meats in the Northern Kamishak bed and suggested an experiment should also be set up there as part of their Kayak Island survey to check for weak-meats. The discussion concluded with the regional managers all indicating a willingness to work together on future sampling efforts for weak-meat analysis.

Scallop Stock Assessment by Region

Central Region: Rich Gustafson:

In conducting their annuals stock assessment, Central Region conducts a dredge survey (8' dredge) to analyze population and they also use height and age in surveys and height and age in commercial fishery harvest. This year they used a sled/dredge to allow video analysis. However, a power failure on the sled prevented video survey work this year.

In 2009, the Kamishak N. bed was surveyed and this survey also was used to experiment with the dredge/sled.

The South Kamishak bed was first surveyed in 2000; however, a die off event occurred in 2002 and a dramatic population decline has occurred from 2002 to present. The South Kamishak Bed is now in a state of very patchy distribution versus the North Kamishak Bed.

Age distribution in the north bed is bi-modal with peaks at 4 and 10 years. The age distribution in the south bed is similar to the north bed. The sled/dredge used there is similar to the one used in the Kodak region but is using older video technology from trawl survey work. The sled/dredge is deployed off side of the boat, which seemed to work well, and it has a ring bag on the bottom. An electrical system failure prevented video work so some comparative tows were done. Video was tested; however, in Kachemak bay and it worked well prior to the electrical failure.

During the survey there was difficulty with the sweep chain, and it appears that the sled dredge is not as effective as the 8' dredge. Central Region is looking at adding a spoiler for control as well as adding weight to the sweep and they are working on solving the electrical problems.

The Kamishak survey did find weak-meats. The 8' dredge sample contained 10% weak-meats in the North Kamishak bed and the sled dredge had 15% weak-meats. In contrast, the South Kamishak bed had only 5% weak-meats in the 8' dredge sample.

A survey was also conducted at Kayak Is where the West bed had a big drop in Biomass estimate. However, this drop in biomass may be due to sample size not stock condition. Bill Bechtol also has developed an age structure analysis that they hope to apply to the Kayak survey next year.

Plan team members indicated that the video showed patchy distribution at Kayak. Also, Kamishak survey data, in absence of fishing, shows a serious decline in abundance. Mean catch has dropped in both the North and South Kamishak beds. In the South bed it went from 23.5 to 9.2 from 2007 to 2009 in the absence of a fishery. The North bed went from 22.8 to 12.5 average catch from 2007 to 2009.

Kodiak, Yakutat, Westward Region: Gregg Rosenkranz:

Gregg indicated that the main event in 2008-09 season was substantial crab bycatch in the Shelikof/Kodiak area, which cause the area to close prior to reaching the GHL. Gregg also presented catch statistics tables showing that catch was close to GHL except in the Shelikof area, and that kept overall catch well below statewide GHL. There was also low catch in area M around Sand Point. It was previously closed under a rebuilding plan but industry says there is less scallops present there now than before it was closed.

Yakutat Area D, has had a drop in CPUE, but shell height was larger in 08/09 than in the recent past. It may take a while to get high CPUEs but the GHL has been adjusted up to 160,000 for 09/10 due to the larger shell height, and industry reported larger meats in Area D this year.

In Yakutat area 16 there were decent CPUEs in 08/09 but effort was really low, probably due to low catches. But the GHL was adjusted up to 25,000 due to a recruitment event; larger scallop size, and shell height histograms showed recruitment event.

The 09/10 data is not official yet, and normally there is a one year lag. Issue will be whether there is any variability in the annual recommendation e.g. regional vs. statewide then a delayed data set could affect where GHLs are set on an annual basis. This could be problematic in that there would be a two year lag in data availability for establishing annual ACLs. Gregg pointed out the intrinsic delay due to discard data not being added in until spring and fishing can go till Feb. 15 and the need for error checking post-season of these data. GHL and catch would be the only thing that could be made available in March, and only if staff time is prioritized to ensure that. Ryan's database product, when completed will help with this because he can enter data as it comes in. This discussion was temporarily tabled as there will be more to discuss under ACLs.

In the Prince William Sound Area, the GHL was lowered to 20K, and CPUE is down to an historic low. The GLH is 20K again in 09/10.

In the Kodiak Northeast area an exploratory total was assigned in the north that wasn't targeted due to lack of time but industry did harvest nearly 75,000 lbs. and CPUE is trending downward. There was also a big drop in discards and shell height went up to 150. Jim Stone indicated that the discards are mostly small scallops that they believe have nearly a 100% rate of survival but we are assuming 100% mortality. This indicates a need to separate observer data on damaged vs. whole scallops....Gregg indicates that that is done now but the problem will be the timing of analyzing it as well as what proportion survives and how that discard loss lowers the GHL.

In 08/09 the Shelikof area closed early due to crab bycatch: limit is based on recent survey data and is 1/2 of one percent of the survey when the crab fishery is open and 1 percent when it is closed. In 09/10 crab bycatch was not a problem. In 08/09 it was about 17,000 crabs, with a cap around 16,500. Industry is working directly with Ryan on crab avoidance, not with Sea State. That is due to a lag in Sea State processing due to other workloads.

The Alaska Peninsula 08/09 GHL dropped to 10K but only 2,460lbs were caught. The 09/10 fishery was closed.

The Dutch Harbor (Area O) 08/09 GHL was 10,000 with 10,040 lbs caught and the best in a quite a while. In 09/10 phenomenal fishing occurred on the North side of Area O. It was fished to GLH in 2

days. However, the south side was reported as poor, even in beds that looked good last year. This was the first year quota was split between North and South. However, in 08/09 they fished all around the island to look at beds so CPUE is skewed in 08/09. It is probable that the whole Area O GHJ could have been caught in the North side in a couple of days. Industry reported running into a lot of chalmys off Lava point, where they were prospecting.

In the Bering Sea (Area Q) there have been lots of big scallops with an average size over 150 the past four years in a row. Industry made the 50,000 lb. GHJ with 5 lbs. to spare and CPUE has been consistent the past three years. Crab (tanner) bycatch was about 26,000K.

Annual Catch Limits (ACLs)

Diana Stram reviewed the preliminary SPT draft of the Scallop ACL analysis. She explained that the annual catch limit (ACL) requirement must be implemented for the scallop fishery in the 2011 fishing year. Final action by the council (NPFMC) will be in October of 2010. Right now the SPT is reviewing the preliminary draft EA analysis and the range of alternatives to implement ACLs. The SPT decided not weigh in on recommendations for a preferred alternative at this stage due to preliminary nature of analysis. To provide a recommendation on the preferred alternative to the Science and Statistical Committee (SSC) and NPFMC, the SPT may need to convene an in-person meeting prior to the June or October NPFMC meetings. The team decided to wait to get feedback from the preliminary review of the draft EA at the April Council meeting to determine when to set their next meeting.

Diana walked the SPT through the range of alternatives in the analysis and the alternatives considered but not analyzed. The purpose of ACLs is to account for uncertainty with the overfishing limit (OFL). The primary question for developing ACLs is - How do you set an appropriate ACL to account for uncertainty in the OFL? An ACL must be below OFL unless there is no uncertainty in the precision of the OFL estimate. The GHJ would be set below the ACL and total catch, including discards, should not exceed the ACL. The ACL alternatives are defined as fixed levels (buffers) below the OFL. Analysis will need to show that the preferred buffer is sufficient to address the risk of overfishing. The ACLs could be set by region or by registration area. The team discussed whether the alternative set is complete. The team discussed whether to include alternatives that would change the current OFL/MSY, but decided to keep the analysis focused on the ACLs. The team discussed that there should be an analysis of the uncertainty with the existing OFL/MSY. This would tie into how the OFL was set and the years used.

Outstanding issues that the plan team recommended be addressed in analysis:

Discard and Unobserved Mortality: The team discussed how we should incorporate mortality estimates for discards in calculating total catch. Current analysis assumes 100% handling mortality for discards however, this is probably not representative of actual mortality. Gregg suggested that a literature search should be done to arrive at a better mortality estimate. Team members and members of the public researched available information to determine alternative discard mortality rates. A preliminary literature search found that the east coast scallop 2005 Stock Assessment and Fishery Evaluation Report (SAFE) uses a 20% estimate of discard mortality and adds an additional amount to account for unobserved mortality. The team recommends that the analysis be modified to use an approximate 20% discard mortality estimate based on the east coast estimate. The team recognized that this estimate may change with further analysis and SSC review, but it represented the best estimate at this time. Also, the team recommended that the analysis should discuss unobserved mortality.

Calculating Total Catch: The team recommends that the analysis also include scallop catch from state and federal trawl surveys. For scallop bycatch in the Federal groundfish fisheries, the current information from groundfish observers is not good. Groundfish observers don't indicate bycatch to species level of weathervanes or any other species of scallop. Currently, scallops are categorized in aggregate with

bivalves. The SPT discussed making a request to the NMFS observer program to see whether the observers could: identify weathervane scallops and the *Chlamys* species group separate from other bivalves; record scallop condition and weight; and maintain these attributes with corresponding observer database structures. The analyses of bycatch data also addressed the mismatch of areas used for groundfish and scallop data. The data from the observer program is organized by federal regulatory area which does not correspond with scallop management areas. Table 4 in the EA lists the allocation of ADF&G registration area to Federal regulatory area to estimate scallop bycatch in groundfish fisheries by ADF&G Region. The plan team had no comment on the area assignments. Table 4 also shows that bycatch of scallops in the groundfish fisheries is a negligible amount (3,909 pounds of shucked meats statewide or about 3/10 of one percent of the total of the upper end GHRs).

Total Catch ACLs vs. retained catch OFL and GHR: Analysts requested plan team input on the issue that the OFL is not a total catch OFL and the GHR is for retained catch only whereas we are developing total catch ACLs. ADF&G managers explained that discards are implicitly incorporated in the setting of the GHR. However, for consistency with ACLs, we may want to explicitly calculate discards in the developing of the buffer between either the GHR or a new total catch GHR that includes estimated discards. The analysis will show the difference between the retained catch and total catch to see when the addition of discards would cause the ACL to be exceeded. This directly relates to the size of the buffer because a smaller buffer would account for this difference by allowing the ACL to incorporate discards without being overly constrictive to the GHL. On the other hand, a larger buffer would not factor in this difference between total catch ACL and retained catch GHR. In that case, the analysis should consider adding a discard estimate to the GHR before applying the buffer.

The team discussed how the analysis should evaluate impacts on those areas have scallops but where limited fishing occurs, such as the Alaska Peninsula. The team discussed that regional impacts would be buffered by the closed areas, and, most likely the scallops are all one stock so the closed or underutilized areas would benefit abundance in the open areas.

Economic analysis: Scott explained that he was looking for guidance from SPT for the economic impact analysis on affects of new ACLs. The team discussed how far back the economic analysis should go to examine whether the ACL would have constrained the GHL. The team recommends starting at 1998 through the most recent year for which data are available because this best represents status quo condition. Gregg pointed out that observer data from these recent years is better in accounting for discards. Also, the development of fishing cooperatives has provided for better discard estimates. The team discussed that the MSY is calculated using the 1990 through 1997 seasons.

Should ACLs apply statewide, by region, or by registration area?: The current set of alternatives provides for setting the ACLs either statewide or by ADF&G region. The team discussed whether the alternatives should include setting ACLs by registration area. This may result in more constraints to the GHL and would reduce the State's flexibility to set the GHLs within the ACL constraints. Additionally, the stocks are larger than the registration area. The team recommends this alternative should be discussed in the analysis in the alternative considered and not carried forward section. The team also discussed that setting ACLs by region implies that weathervane scallops are not a statewide stock, however, no evidence indicates that it is not a statewide stock.

Should ACLs be set by Tier?: The team discussed whether to set ACLs by tier based on information level by region or registration area, in response to an SSC request that the team look at tiers for scallops. The team discussed incorporating a tier structure for the ACL setting and recommended that the analysis incorporate an option for setting ACLs by region based on the level of information for that region. This would set up a tier structure and set ACLs by tier. The existing ACL alternatives would be used to set the buffer based on the level of information in each region. With a tier structure, regions with less

information, no assessment, and no abundance estimation model could have a larger buffer compared to regions with this information that would require less buffer.

Other scallop species: Diana explained the options for non-target scallop stocks under the FMP. All FMP species need ACLs, however, there is no fishery data to set ACLs for these species. There is a lack of information on pink, arctic pink, and spiny scallops. Options to address this issue include (1) remove them from the FMP, (2) move to an ecosystem component category, or (3) set ACLs.

Under the current FMP, it is the State's responsibility to determine whether to have a fishery for these species, however, the federal license limitation program (LLP) restricts access to all scallop fishing in federal waters to holders of an LLP license. Removing these species from the FMP would shift the management responsibility completely to the State if someone wanted to start fishing for these species. The State would be responsible for preventing a fishery or opening a fishery. The team discussed what this would mean for unregistered vessels that wanted to harvest these species.

The ecosystem component option would be a good option if we were confident that no fishery would open in the future. If directed fishing on these species in the future is desirable, then they shouldn't be placed in the ecosystem component. Once in an ecosystem component, it would be an FMP amendment to move to a target category which would require an analysis and the setting of an OFL and ACL.

The team discussed setting ACLs for these stocks and, that if we set ACLs, then we would also need OFLs. If we set ACLs and OFLs for these species, then all three could be grouped into one statewide ACL and OFL for *Chlamys* species. State and federal trawl survey data or some other method could be used for estimating ACLs and OFLs.

Team requested that the analysis start to look at the following questions for this *Chlamys sp* issue:

- 1) What would have to be done to prosecute fisheries for these species? Who would be able to do it?
- 2) What data sources are available to assess these species?
- 3) What are the annual requirements for the SAFE?
- 4) What are the risks?
- 5) What are the ramifications to groundfish observing – e.g., speciate all scallops?
- 6) Would EFH need to be defined?
- 7) Specific to setting ACLs, how would OFL be established?

Accountability Measures: The team discussed how the fact that the fleet has 100% observer coverage means that managers have the information to determine whether total catch exceeds the ACL. Since the FMP defers management to the State, if total catch exceeds the ACL, the State could take inseason action, adjust the next year's GHF, or take other measures to prevent exceeding ACLs in future years. The Board of Fisheries may decide to implement AMs through state regulations. Additionally, if an ACL was recommended for each region, then each region may have different accountability measures.

Further Discussion

What constitutes a broken vs. whole discarded scallops?: Observer method is subjective. In the past, if 50% of the meat was exposed it was considered "broken", less than 50% exposed was considered "intact." Now they try to account for cracks as whole and exposed gut as broken. This could affect discard mortality. Gregg has also done this by weight of round animals and presents that as a percent of the weight of the catch "landed" on the vessel.

Crab Bycatch Amounts: The observer program also looked at crab bycatch amounts (60, 000k tanners, 17,000 opilio in Bering Sea). Crab shell size in bycatch is very small; only a few legal crabs are caught.

It is possible that only a few tows with several hundred tanners closed Shelikof. They don't see many females in Begin Sea tanners bycatch and shell size if small (70mm).

Scallop Size and Recruitment: The commercial dredge with 4" rings does not catch small scallops so we can't really identify recruitment from catch data. That is, of course, the intent of the 4" ring regulation but it limits catch data use to quantify small scallops and their recruitment into the fishery. This depends on whether you have big tows or not because the rings get plugged up with big scallops and small ones don't slip through. Some big years show this with more small scallops caught. Gregg went over shell size tables by region.

Dredge Content: We also reviewed dredge content in percent weight by species and will discuss need to change accounting of some species as part of the ACL discussion. The issue is using haul comp vs. length/age data on tanners to evaluate weight of tanner bycatch vs. the percent in the haul comp sample.

Opie vs. Hybrids: The team also discussed how to account for opie vs. hybrids as they are now lumped together. How to account for crab bycatch mortality and how that will affect ACLs. Several ideas for research into these mortality estimates were discussed. Doug Woodby suggested looking at old shell injury evidence in commercial harvest to estimate mortality.

Research Priorities

The team discussed research priorities, both in general and those specific to the EFH agenda item. ADF&G also noted that with the camera sled project they have a great deal of habitat data available and would cooperate with NMFS in their EFH research.

The following research items were noted (without indication of prioritization):

1. Life-history information is lacking and sources and sinks of scallop larvae unknown to verify to what extent it is a single statewide stock.
2. Additional genetic studies are needed for more information related to stock structure.
3. Current genetic study shows that stocks appear to be connected with limited degree of separation (Stew Grant paper in press indicates limited genetic variability).
4. Continue research on weak meats and scallop quality. Environmental parameters should be studied coincident with determining cause of weak meats.
5. Vessel of opportunity research to tow camera sleds. Additional camera sled survey information on areas closed to scallop fishing with known scallop beds. Habitat-based assessment approach possibility for pooling camera sled research and broadscale assessment statewide for statewide biomass estimate.
6. Mark-recapture-tagging studies to look at mortality, intact discards, scallop movement, growth
7. Fishery-independent stock assessment in Yakutat
8. Larval studies for better understanding of larval movements in scallops.

Closing

The team appreciates the participation of all members of the public, Federal staff, and State staff who have come to the meetings to present and participate. The team notes that having State scallop management and biologists from a range of regions greatly enhances discussion at this meeting and encourages their future involvement as much as possible.

The meeting adjourned at 05:00pm, March 4th.

Scallop Plan Team Meeting

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Draft Agenda Revised 02/19/2010

Wednesday, March 3, 2010

09:00am Introduction and approval of agenda, discuss minutes, scheduling for 2011
09:30am Scallop EFH: review and recommend changes as necessary to EFH designations
11:00am Camera sled research update

12:00-01:00pm lunch break

01:00pm Update on modifications to the Scallop Observer Program, data collection and database
01:30pm Status of statewide scallop stocks by region (incl. update on 'weak meat' study)

Thursday, March 4, 2010

09:00am Status of statewide scallop stocks (cont. as necessary), SAFE Report discussion and deadlines
10:00am Scallop ACL analysis: review draft analysis of alternatives, SPT recommendations on direction and preferred approach

12:00-01:00pm lunch break

01:00pm Scallop ACL analysis and recommendations (cont. as necessary)
03:00pm Federal scallop bycatch data: SPT recommendations on changes as necessary to meet ACL requirements
04:00pm New business
05:00pm Adjourn