

C. Minutes of the Technical Sub-Committee

Forty-seventh Annual Meeting of the TSC May 2-3, 2006 Inn at Otter Crest Otter Rock, Oregon

I. Call to Order - Rick Stanley, Chair, called meeting to order at 8:30am, May 2.

II. Appointment of Secretary - Alena Pribyl and Polly Rankin

III. Introductions - attendees introduced themselves

Cleo Brylinsky	- Alaska Department of Fish and Game, Sitka
Dave Clausen	- Alaska Fisheries Science Center, Auke Bay
Tracee Geernaert	- International Pacific Halibut Commission, Seattle
Tom Jagielo	- Washington Department of Fish and Wildlife, Montesano
Patrick MacDonald	- Pacific States Marine Fish Commission, Newport
Steve Parker	- Oregon Department of Fish and Wildlife, Newport
Stephen Phillips	- Pacific States Marine Fish Commission, Portland
Mike Schirripa	- Northwest Fisheries Science Center, Newport
Rick Stanley	- Fisheries and Oceans Canada, Nanaimo
Mark Wilkins	- Alaska Fisheries Science Center, Seattle

Jane DiCosimo of the North Pacific Fishery Management Council and John Field of the Southwest Fisheries Science Center participated by conference call on May 3, 10:00-11:00.

IV. Approval of 2005 Report

The 2005 report was approved. The TSC thanks Bess Wong and Susan Anderson, and PSMFC for putting the report together. The report was distributed in a timely manner.

V. Approval of 2006 Agenda

TSC added a Wednesday, May 3, 10:00-11:00 conference call for those who could not attend.

VI. Working Group Reports

A. Committee of Age Reading Experts (CARE)

P. McDonald, CARE Chair, summarized the 2006 bi-annual CARE workshop. All agencies were in attendance. They examined the structures of 15 species of fish during the workshop. The idea of doing yelloweye and darkblotched rockfish for future workshops was brought forward. The minutes were approved and will be put on the TSC website.

Lingcod and Dover sole will be added to the ageing manual. Raw data from double readings will be on the website so people can analyze these results as they wish. The 2008 CARE meeting will be held in Nanaimo, rather than the usual Seattle location, to coincide with the Pacific Biological Station's 100th anniversary.

R. Stanley asked whether the various agencies are including age readers' comments (in addition to the estimate of age) in their databases. P. McDonald responded that some notes are now being coded and input. S. Parker and C. Brylinsky commented that their agencies just put the basic information in the databases.

CARE reported that Dr. Greg Cailliet from the Moss Landing Marine Laboratory attended for the first time in 2006 and his contribution was much appreciated. Among other things, his input led to the initiation of a skate discussion group. TSC recommended that the Chair send a letter of appreciation to Dr. Cailliet. M. Wilkins mentioned their NMFS taxonomists will soon be publishing a guide to North American skates.

It was suggested at the 2005 TSC meeting that CARE hold annual workshops that rotated among the common species of interest. During the year and at the 2006 meeting, TSC discussed this request and noted some inter-lab issues concerning the proposal. At the same time, it was noted that CARE has planned two such workshops, one for sablefish and another for petrale sole. These workshops were what the original request was intended to provide. It was suggested that the spirit of the request was being addressed and that no formal need for rotating workshops was necessary. Instead, the TSC commended CARE for the planning the upcoming CARE ageing workshops and reiterated their support for future workshops.

T. Jagielo commented on how valuable the CARE organization is. M. Wilkins thanked S. Phillips and the PSMFC for their support of CARE. TSC recommended that the annual TSC letter to supervisors should highlight the benefits of CARE but recommend increased liaison between stock assessors and age reading staff.

B. Trawl Survey Working group report

The Trawl Survey Working Group met February 21, 2006 in the Montlake Lab in Seattle. It was attended by NMFS staff from the AFSC (Mark Wilkins, Ken Weinberg and Bob Lauth), NWFSC (Guy Fleischer Aimee Keller, Vanessa Tuttle, Victor Simon, John Wallace, and Ian Stewart) and DFO (Greg Workman and Rick Stanley). All sides

summarized current and future plans for the large scale trawl surveys. R. Stanley noted that DFO is building a survey simulator to explore the cost-benefit of alternative survey designs (e.g. annual vs. bi-ennial) as well as attempting to quantify how well a survey “works” given hypothetical power test scenarios.

K. Weinberg (AFSC) summarized their trawl catchability studies. M. Wilkins noted that they have a working group looking at how to improve trawl survey methodology. They are looking at the effects of different trawl setting routines. M. Schirripa noted that NWFSC is planning a fall workshop that will focus on how best to analyze the Washington-California survey data. R. Stanley noted that the annual meeting is beneficial to DFO and they plan to continue to attend each year.

C. Sablefish Working Group Report

M. Schirripa noted that since the establishment of the Sablefish Symposium steering committee, little interest has been expressed in the symposium. Furthermore, based on the most recent Western Groundfish Conference held in Newport in 2006, he suggested that there is only a limited amount of research currently being conducted on sablefish. Consequently, the working group decided that rather than one comprehensive symposium, several smaller focused workshops would make more efficient use of the limited resources. For instance, CARE is considering sablefish ageing workshop and the Alaska Fishery Science Center is considering an “escape ring” workshop. It seems best to take advantage of these efforts. S. Phillips noted PSMFC might be able to provide limited funding in support of these sablefish workshops.

D. GIS Working Group (see notes)

L. Yamanaka reported that a two-day GIS workshop was held in Richmond, B.C. with participation from the ADFG (Sitka), WDFW (Montesano and Mill Creek) and the NMFS (NWFSC and SWFSC) and DFO (PBS). The first day of the workshop was devoted to agency presentations and the second day to demonstrations of software and GIS tools that had been developed and used by agencies to manipulate, analyze and display habitat data. A wide range of topics was discussed during the workshop, including:

- Methods in use to;
 - code and manage visual habitat data,
 - collect and filter/smooth submersible navigation data
 - measure area swept – 3 beam system
 - develop habitat proxies from fisher records and bathymetric analyses
 - interpret habitat from acoustic data;
- New data collection technologies
- GIS tools for 3-D visualization and linear referencing
- Custom software for;
 - video review and data capture,
 - raster operations classification library tool
 - integration of various data streams into a GIS and interpolate between data points,
- Scaling habitat data collection and the scale used for analyses

- Using habitat data to stratify fishing and visual surveys
- Using habitat data to expand fish densities to an abundance and biomass.

Participants felt it was valuable to bring together habitat “users” to discuss their experiences (and frustrations) in working with habitat data and conducting various analyses. All agreed that the workshop was beneficial and identified the following themes to focus on for a more comprehensive workshop.

- GIS tools
- Survey methods, comparability coastwide
- Stock assessment methods

A proposed steering committee, subject to approval by supervisors, was struck with agency members at the workshop. Agencies not represented were asked to recommend a member to the committee. The steering committee will plan the logistics for a comprehensive workshop around these basic themes to take place in the winter of 06/07. L. Yamanaka recommended that she be contacted regarding membership on the committee. Agencies and members on the GIS/habitat workshop steering committee with proposed members include: ADFG-C. Brylinsky; DFO-L. Yamanaka/Lisa Lacko; WDFW-Wayne Palsson/Robert Pacunski; NWFSC- Elizabeth Clarke/Waldo Wakefield/Curt Whitmire; and SWFSC-Mary Yoklavich/Diana Watters.

Remaining Agencies that are requested to designate a member to the committee:

- Oregon Department of Fish and Game
- International Pacific Halibut Commission
- Alaska Fisheries Science Center
- California Department of Fish and Game

J. DiCosimo requested that NPFMC also be included in the distribution list regarding the meeting. She suggested Cathy Coon (cathy.coon@noaa.gov) and John Olson (john.olson@noaa.gov) be the contacts.

C. Brylinsky seconded Lynne’s comments and stated that it was a good workshop and benefited from being small and informal. She suggested the larger workshop consider inviting someone who makes their living using GIS tools, in order for the group to “bounce” their needs off more high-powered GIS experts and obtain more ideas on how to create more tools. The TSC thanked Lynne for organizing the workshop and PSMFC for providing coffee and snacks.

E. Data Acquisition Working Group

M. Wilkins reported that that supervisors at each agency have been contacted to assess the level of interest in a “data acquisition” workshop. The intent would be to showcase and discuss recent technological tools and procedures for acquiring data and integrating databases in the marine environment as they relate to fisheries and oceanographic research. They were also asked to provide a contact from their agency that might participate on the workshop steering committee. Mark received positive responses from many agency supervisors and has assembled a list of candidates for the steering

committee. He will hold an initial phone meeting of the steering group within the next two weeks to identify a date and venue for the workshop.

VII. Other Topics

A. IDFA Funding

S. Phillips noted that Interjurisdictional Fisheries Act Funds are used to support TSC activities, as well as to augment existing (e.g. database) and special PSMFC projects.

B. Age Validation

R. Stanley noted that a paper on validation of spiny dogfish ageing (S. Campana) was soon to be published as well as 2nd validation paper on canary rockfish by Allen Andrews at Moss Landing. M. Schirripa commented on the work by Bryan Black which related growth increments in long-lived rockfish to oceanographic conditions by using dendrochronology. M. Wilkins noted that Craig Kastle had finalized radiometric validation of walleye pollock; and Charles Hutchinson was finalizing his work on shortraker rockfish. C. Kastle was also completing a paper on bomb radiation validation of GOA POP. There is a page on the AFSC website on age and growth that is worth examining. P. McDonald noted that Jody Neill of ADFG was working on bomb calibration of shortspine rockfish.

C. Marine Reserves

R. Stanley commented that DFO had extended the boundaries of the sponge-reef reserves following discussions with trawl fishermen. DFO had also recently hosted a Habitat stock assessment meeting with the discussion focused on papers about 1) trawl bycatch of coral, and 2) identification and taxonomy of corals. The meeting also included environmentalists and trawlers. The meeting proved useful for showing the complexity of the situation and that the solution was not simple. A working group will be formed to look at possible solutions.

S. Parker reported that last summer the Ocean Policy Advisory Committee (OPAC) was reformed in response to a recommendation from the Oregon Governor's office to give consideration to making the entire coast of Oregon a marine sanctuary. OPAC was charged with providing a summary paper on this concept to the Governor. OPAC is currently in an information gathering phase. Discussion issues include:

- What does a national marine (or state) sanctuary mean?
- Who is in control?
- Should it be limited to state waters?

They have had two meetings to date.

T. Jagielo noted that the PFMC had discussions on essential fish habitat (EFH). S. Parker commented that PFMC recommended that EFH include depths to 3500 f, but NMFS suggested going only to 700 fathoms. NMFS rejected oil drilling platforms as EFH. T. Jagielo noted that most of the state waters of Washington were already designated as a marine sanctuary.

D. Genetics and Stock Structure

T. Geernaert reported that the IPHC is conducting otolith elemental work and population genetics on halibut. The genetic work uses fin clips and the elemental chemical work uses otoliths. The data are currently being analyzed. The strontium component looks promising.

E. Western Groundfish Conference 2008 Update

No update on the WGC was received at the meeting, but TSC was subsequently informed that WGC 2008 is scheduled for Feb 4-8, 2008 at the Santa Cruz Coast Hotel in Santa Cruz, CA.

F. Letter to supervisors

TSC endorsed continuing with the letter to the supervisors. The overall response was positive with no negative comments. The letter should also be sent to the PFMC supervisor (Don MacIsaac). TSC could also use the letter to flag issues (i.e. different ageing techniques).

G. 5th International Observers Conference

The 5th International Observers Conference will be held in Victoria, May 15, 2007. It is a bi-ennial meeting which addresses fisheries observer programs, emerging fisheries monitoring technologies, and other approaches for fishery dependent data collection. Howard McElderry is the chair of the conference. The website is <http://www.fisheriesobserverconference.com/>.

VIII. Review of Agency Groundfish Research, Assessment, and Management

A. Agency Overviews

1. ADFG

C. Brylinsky commented that Tory O'Connell will be retiring at the end of May from ADFG. Tory intends to apply for seasonal work. Given Tory's long-standing support for TSC, the TSC recommended that the Chair send a thank you note [note: this was done after the meeting].

2. AFSC

M. Wilkins noted that the AFSC-RACE Division is facing numerous retirements. Among these, the Division Director, Gary Stauffer retired replaced by Russ Nelson. The Observer Program has attained the status of its own division headed by Bill Karp. D. Clausen (AFSC-Auke Bay) noted they have a new director, Phil Mundy. The lab will be moving to the new facility at Lena Point by the end of the year.

3. DFO

R. Stanley noted that DFO was going to reduce the staffing of the stock assessment groups across the nation by 30% over the next 3 years. However, the lack of capacity is mitigated somewhat by faculty at Simon Fraser University and the University of British Columbia who are taking an increasing interest in groundfish research.

4. NWFSC

M. Schirripa reported that the FRAM Division of NWFSC (Montlake) is in trailers in parking lot. The trailer style buildings were condemned. About 20 people have been displaced and are dispersed throughout the Montlake building.

5. WDFW

T. Jagielo reported there had been no major changes in the groundfish division at WDFW.

6. ODFW

S. Parker commented on reorganization in ODFW. They have hired a new data services person. Bill Barrs retired but has been brought back for part-time age reading. They are doing more nearshore rockfish ageing. They have hired Josie Thompson to fill Bob Mikus's position in ageing. They completed a near shore management plan.

B. Multispecies Studies

1. NWFSC

M. Schirripa reported that the Stock Synthesis model has been revised as SS2. It will be the model of choice for U.S. groundfish assessments on the west coast. Michael will be testing the performance of SS2 on simulated data. SS2 is available on the NOAA website (search under NOAA stock assessment toolbox).

2. SWFSC: J. Field noted that the SWFSC and NWFSC are working to develop juvenile indices for rockfish and hake as well as conducting a detailed examination of the spatial variability in the results. They welcome other collaborators. He noted that a workshop that was being organized jointly by the Southwest and Northwest Science Centers on the use of juvenile indices in stock assessments. [Note: this meeting was held September 13-15, 2006].

3. ODFW

S. Parker reported that ODFW is building a large database for the maturity data on various groundfish species, but mostly nearshore rockfish. They are continuing to study barotrauma effects, including 1) physiological damage caused by barotrauma in different species of rockfish and 2) long-term survivability of rockfish after recompression. ODFW has put Didson acoustic devices on trawl. They are obtaining good information on how fish interact with the footrope and how halibut behave in a selective flatfish trawl. They can identify any species that has a unique outline.

4. IPHC

T. Geernaert reported that the IPHC is examining escapement of sablefish and halibut from traps. They are conducting recompression effects on rockfish using a video camera mounted on a cage.

C. By Species

1. Nearshore Rockfish

AFSC: D. Clausen reported that the Auke Bay lab is beginning to study maternal age effect on survival of quillback.

ODFW: S. Parker reported that they are using telemetry to study movements and home range of black rockfish. The paper will be out soon. There is also a paper in prep on vertical movements of black rockfish. These studies will expand to cover canary, yelloweye, and china rockfish in the future. They are also continuing the work with the cage cam to study survival after recompression. They are looking to link behavioral assays to estimating mortality. They are also looking at gear selectivity by testing different tackle on different rods and seeing what the catch rate of different species is. The height of the lure off bottom appears to affect catch composition.

2. Shelf and slope rockfish, and thornyheads

ADFG: C. Brylinsky reported that this year they did not open the directed commercial fishery for yelloweye. The commercial halibut fishery received 84% of the quota for bycatch. The sport fishery was allocated the remaining 16%. Funds for yelloweye rockfish stock assessments are now only available on a 3-year rotation, instead of having the money every year.

AFSC: D. Clausen reported that there was a small experimental fishery for silvergray rockfish in Alaska. They used modified dinglebar and shrimp flies. They were also conducting catchability studies on slope rockfish in the trawl surveys. They found evidence of herding in POP.

NWFSC: M. Schirripa noted that assessments were completed on cabezon, POP, darkblotched, blackgill and canary, yellowtail and yelloweye rockfish, and longspine and shortspine rockfish (assessments available on NOAA website). T. Jagielo reported that the assessment on yelloweye was controversial but the conclusion still indicated that the population was depleted and overfished.

ODFW: S. Parker reported on an experiment which involved a cage cam and attached transmitter on 6 yelloweye rockfish. They used a lack of vertical movement to indicate mortality. At the 21-day mark, 3 of 6 were definitely still alive, 1 was dead, and 2 fish had left the area. At 120 days it was the same picture. They observed that 5 of 6 fish made large vertical movements soon after release (40-50m). Vertical movements and

survival rates differed from what was expected. This year they will tag 12 yelloweye in a new array off the Siletz River.

3. Sablefish

ADFG: C. Brylinsky reported that they are not PIT-tagging sablefish anymore. They only use external tags (secondary tail clip). ADFG would like see more collaboration among agencies on the sharing of tag information.

AFSC: D. Clausen noted that the AFSC is looking in more detail at the effects of competition for hooks in sablefish longline survey. In the past they have assumed that sablefish out-competed all other fish caught. Dana Hanselman will replace Mike Sigler in sablefish assessments

NWFSC: M. Schirripa reported that he is working with simulation techniques to study the extent to which sablefish population variation is correlated to the sea level index. Any relationships will then be incorporated into SS2 for further study. NWFSC is also conducted a sablefish mortality assessment. They used a combination of lab observations and sea surface temp to estimate discard mortality. The new sablefish assessment is available online. NWFSC also has a grad student looking at sablefish predation on shortspine thornyheads.

4. Flatfish

AFSC: M. Wilkins noted that they have two new people working on flatfish. They are looking at juvenile flatfish habitat distribution around Kodiak Island. They will also be doing work on arrowtooth flounder.

DFO: R. Stanley commented that the trawl industry had found new markets for arrowtooth flounder in China. DFO implemented an interim increase in the coastwide quota.

IPHC: T. Geernaert reported that the stock assessment survey of halibut in the Bering Sea and will be adding 100 more stations. They will be putting out more satellite tags next year as well and are considering using archival tags.

NWFSC: M. Schirripa reported that English, Dover, and Petrale sole stock assessments were conducted last year. They also conducted a brief study on the use of interopercles for ageing. They are probably moving to break-and-burn ageing for all flatfish.

5. Lingcod

ADFG: C. Brylinsky noted that the Board of Fisheries raised the quota for lingcod. They have not conducted any lingcod surveys for a few years. They have a retired ADFG biologist tagging lingcod whenever he catches them.

WDFW: T. Jagielo was lead author on an assessment in 2005. The stock is now considered to be re-built on a coastwide basis although the population in the south is still depleted. The PMFC is managing it as a coastwide resource.

6. Dogfish and Skates

AFSC: M. Wilkins commented that they are now collecting dogfish spines and vertebrae from skates during Alaska surveys.

NWFSC: M. Schirripa reported that NMFS is doing longnose skate assessment for the first time this year. They will use ages derived from vertebrae as provided from Josie Thompson, formally a supported grad student, now with ODFW.

WDFW: Theresa Tsou and Farron Wallace will be doing the dogfish assessment for the first time this year. They are not sure how to proceed with ageing.

7. Pacific Mackerel and Sardines

ADFG: C. Brylinsky reported that some sardines are showing up in SE Alaska. One fisherman asked for permit to harvest. ADFG estimated that Alaska has ~1% of coastwide sardine biomass, so it was decided that fishermen could take 1% of the estimated Alaska biomass.

8. Other Species

AFSC: D. Clausen reported that the NPFMC has asked AFSC to prepare draft assessments on grenadier, sculpins, octopus, forage fish, squid, and sharks. M. Wilkins noted that they are beginning to collect otoliths and ovaries from sculpin species. The meso-pelagic survey will be starting up this year.

9. Other Related Studies

AFSC: D. Clausen commented that AFSC has started a Habitat and Ecological Processes Program (HEPR). Mike Sigler will be in charge, with equal status to a division manager. His duty station will physically be at the Auke Bay Lab although HEPR will be autonomous from the Lab. M. Wilkins commented that the two big picture projects for HEPR will be 1) loss of sea ice in the Bering Sea and 2) EFH. Other studies of the AFSC will include sampling efficiency of survey trawl gear and the collection of acoustic data during surveys using ES60 sounders. For the Bering Sea work, they are comparing trawl catch with acoustic density data. They will be testing whether estimated acoustic density sampling is the same at 3 knots as at 6 knots. They will be using archival tags that measure light intensity on trawls and relating vertical distribution of pollock to catch rate.

10. Other Items

Telemetry: S. Parker noted the coastwide interest in telemetry, but individual investigations are tending to work in isolation. He suggested that it would be a good idea to organize a workshop to discuss techniques, moorings, and data management. D. Clausen noted the increasing involvement of AFSC in this technology for sharks and the POST array. TSC members noted that there are confidentiality issues associated with tag ID's and not all investigators are willing to share information. There are also issues related to tag transmission interference decoding, which are proprietary but not patented. Users are not always interested in providing data to other groups using different tags on a host array. S. Parker offered to organize a steering committee this winter. TSC endorsed the idea and will recommend to the Parent Committee.

Fisheries Management: R. Stanley commented that the groundfish fishery in B.C. is implementing a new integrated strategy. DFO specified that all catch including discards of all species must be recorded. All fishermen, including small-scale hook-and-line, will now have either an observer or a camera. However, because of the expense to review all the video, they will review a random sample of 10% of the video against the fisher logbook to see if it matches. Unloadings are already 100% monitored. There will be 100% retention of all rockfish. Interestingly, the industry needs drove the demand for precision so that each fisher knows the other cannot cheat. Vessels effectively cannot leave port without the quota to catch all the possible bycatch they may encounter. Quota will be traded on a restricted basis.

Comments on the format of TSC meeting: There was a general discussion on whether the membership of TSC should be expanded to include, for example, university staff. Or, could TSC consider a more informal approach wherein the host agency could invite students or professors as observers. Some commented that one of the strengths of TSC is the frank discussion about strengths and weaknesses of each agency's programs. These comments could easily be misunderstood by individuals less familiar with the context. It was decided that there would be no official expansion of membership, but the host agency could invite some observers if the Chair and other agencies approved.

TSC re-affirmed that agencies (particularly the host agency) could invite staff to the meetings. There was a brief discussion as to whether TSC needed to meet every year. The consensus was that annual meetings are required. There was also general agreement that the conference call was successful, but TSC felt the meeting required actual attendance to be successful. Therefore, participation by conference call should only be used as a last resort by participants.

IX. Progress on 2005 Recommendations

A. TSC to Parent Committee

1. Following discussions since the previous 2005 meeting and at the 2006 meeting, there was a consensus that CARE not be directed to schedule routine ageing workshops that systematically work through the various species. Although, CARE and TSC

noted the potential for problems where, for example, different agencies used different techniques, it was felt that the impetus for workshops should really come from the principle investigators or stock assessment staff for these species. TSC did however, encourage CARE representatives to communicate their concerns to such staff (see below).

***Action:** If accepted by the Parent Committee, the letter to CARE will encourage CARE representatives to forward their concerns regarding standardization of techniques to the principle investigators of the species.*

B. From TSC to itself

1. Regarding a Field Data Acquisition Workshop, M. Wilkins reported that the nominees for steering committee have been forwarded to him by the steering group, and will be in contact by phone to discuss agenda and date. He wished to thank the IPHC for the offer of financial and logistic support. TSC thanks Mark for initiating this workshop.
2. Regarding the GIS workshop, TSC thanks Lynne Yamanaka for organizing the preliminary workshop. TSC looks forward to the larger-scale workshop under consideration for the winter of 2006/2007.

X. 2006 Recommendations

A. TSC to Parent Committee

1. TSC recommends that the parent committee supports the planning of a workshop on acoustic telemetry techniques and analysis for Pacific coastal marine species. The objective of the workshop is to bring together researchers from California through Alaska to discuss approaches and techniques for conducting acoustic telemetry experiments with the unique environments and species present in the NE Pacific Ocean. Topics could include capture and tagging, active-tracking, passive tracking array configuration, data collection, and database management.

***Action:** If approved by the parent committee, S. Parker will poll various agencies, academic programs, and organizations with active telemetry projects on the west coast to gauge interest, develop a steering committee, workshop scope, timeline, and venue.*

B. TSC to CARE

1. TSC had no specific recommendations or action items for CARE other than to encourage ageing staff to communicate their concerns over the standardization (or at least calibration) of ageing methods among agencies. The Chair of TSC was directed

to send a letter to CARE commending them on their achievements. The Chair was also directed to forward a letter of appreciation to Dr. Cailliet and MLML for joining CARE.

C. From TSC to itself

1. TSC passed the Chair and Baton to ADFG, represented by Cleo Brylinsky, and wishes to thank Rick Stanley for his chairmanship for the 2004/2005 and 2005/2006 years.
2. The next TSC meeting will be held in California, in the vicinity of the Santa Cruz lab. John Field and the SWFSC at Santa Cruz offered to host the meeting. The proposed date is April 24-25, 2007.
3. TSC approved the continued use of a conference call during the meeting for those agencies unable to attend, but suggest that representatives only use this option as a last resort.
4. TSC thanks NMFS-NWFSC-Newport, in particular Mike Schirripa and Steve Parker for hosting the meeting. Alena Pribyl and Polly Rankin did an excellent job of taking the minutes. Their efforts were much appreciated by the Chair. As usual, TSC appreciates the support of the Pacific States Marine Fish Commission and Stephen Phillips for providing the funding for the meeting room and the condiments.

Meeting adjourned at 12:00p.m. 5/6/06