# DRAFT Scallop Plan Team Report February 19-20, 2013 Fishermen's Hall Kodiak, Alaska

Plan Team members present: Dr. Diana Stram (NPFMC) co-chair, Gregg Rosenkranz (ADF&G Kodiak)-co-chair, Scott Miller (NMFS Juneau), Peggy Murphy (NMFS Juneau), Rich Gustafson (ADF&G), Dr. Jie Zheng (ADF&G), Dr. Brad Harris (APU), Ryan Burt (ADF&G), Quinn Smith (ADF&G)

Public and agency personnel present (for some or all of meeting): Tom Minio (F/V Provider), John Lemar (F/V Arctic Hunter), Brendan Harrington (F/V Kilkenny), Bill Harrington (F/V Kilkenny), Karla Bush (ADF&G), Wayne Donaldson (ADF&G), Mark Stichert (ADF&G), Dr. Chris Siddon (ADF&G), George Hutchins, Steven Tauphin, Craig Farrington (CFEC), Marsha Spafard (ADF&G)<sup>1</sup>

#### Administrative Issues:

Agenda: The agenda for the meeting is attached.

*Membership:* The team notes the need for NMFS RACE staff participation. Ideally a scallop person could be hired to participate on the SPT as well as to conduct some of the much-needed research and studies on scallop stocks in Alaska. Extensive observer and survey data sets exist but, capacity to investigate these data is lacking. Gregg Rosenkranz also raised the issue of possibly having someone else take over the co-chairmanship, as Gregg will be retiring in a couple of years. The team did not discuss this further; however, the topic may need to be addressed by the team at the 2014 meeting.

**Presentation to SSC:** Diana Stram requested additional participation by appropriate staff as needed for a more technical presentation of the SAFE and scallop issues to the SSC at the April, 2013 Council meeting. In the past she has provided this information alone. Many questions arise on management of specific registration areas and having an ADF&G or other staff present to assist would be useful. The team recommended that on an annual basis, depending upon most critical issue, team members would be solicited to attend specific SSC meetings to assist Diana in presenting relevant issues. Brad Harris and Rich Gustafson both volunteered to coordinate technical presentation information prior to the SSC meeting and attend this year to provide further assistance. Rich indicated that Ken Goldman (ADF&G Central Region) would also attend.

#### Shell aging overview and Camsled update

Gregg Rosenkranz, ADF&G scallop biometrician, began his presentation by describing the hardware and software technology used for the CamSled project, the CamSled specifications, and how the deck is setup onboard the research vessel. Gregg also described the database updates and upgrades that have been made to improve data processing, and indicated that Ric Shepard has been instrumental in making the project a reality. He then described the features of the image data review software and showed a few clips of actual data.

<sup>&</sup>lt;sup>1</sup> Affiliations: Alaska Commercial Fisheries Entry Commission (CFEC), Alaska Department of Fish and Game (ADF&G), Alaska Pacific University (APU), North Pacific Fishery Management Council (NPFMC).

Gregg described the Tanner Crab Habitat Mapping in the Kodiak Area project, which is lead by Carrie Worton and supported by the CamSled. Gregg also described the CamSled survey performed in June 2011 aboard the Arctic Hunter and showed a map of the Chiniak Gulley survey area and images of the two main types of habitat found within the area – mud with sea whips and sand with brittle stars. Gregg gave a quick summarization of a project titled Spatiotemporal Analysis of Benthic Communities on Alaskan Weathervane Scallop Beds, which is being performed by Jessica Glass in pursuit of her M.S. degree at the University of Alaska Fairbanks, School of Fisheries and Ocean Sciences, with advisor Gordon Kruse in Juneau. NMFS Economist and Scallop Plan Team member, Scott Miller, is also a member of Jessica's thesis committee. Jessica will use haul composition data collected by scallop observers from 1996 to 2012 to analyze spatial distributions to determine changes in, and variability of, species compositions of benthic communities where scallop fishing occurs.

Gregg described his investigation of the effects of different levels of aggregations, subsampling, and bin sizes of CamSled data on coefficients of variation and estimated scallop population numbers using Kriging. He then described the methodology used to determine shell height data from CamSled images and how that data can be used in conjunction with shell height/meat weight data gathered during scallop fishing to estimate CamSled survey scallop meat weight. He also described the scallop shell aging techniques and methodologies developed by Jeff Barnhart (former ADF&G biologist and Scallop Plan Team Chairman, now retired). Slides of scallop age data from the Yakutat area to the Bering Sea illustrated the varying growth rates of scallops from each area: Yakutat scallops grow slowest, Kodiak scallops grow fastest and Bering Sea scallops growing at a rate somewhat in between.

# Overview of APU-ADFG research on boring worms/ mud-blisters, and discard mortality in Kamishak

SPT member Dr. Bradley Harris, of Alaska Pacific University, updated the team on investigations into scallop disease and parasites he is working on with undergraduate ecology students. Weathervane scallop shells collected by ADF&G-Homer from Cook Inlet beds were imaged and analyzed in Brad's lab for presence of boring worms and associated mud blisters. Spatial extent of bore tubes and blisters on selected shells was measured using digital image analysis software. The worms have been identified to genus as Polydora, a polychaete, and may be a previously unknown species or at least not known to occur in this area. University of Alaska Anchorage professor, and world renowned polychaete specialist, Dr. Jerry Kudenov is working on the species ID. Cook Inlet scallop populations experienced a die off in 2003 that may have been at least partially caused by boring worms. Brad's research is working toward a better understanding of how these worms affect scallop quality and may affect scallop mortality. Brad also described studies planned for spring 2013 that will be a first cut at estimating discard mortality of weathervane scallops after capture by dredge gear.

#### 2012 Unimak Bight Scallop Fishing Trip Summary

ADF&G Scallop Observer Program coordinator, Ryan Burt, provided a powerpoint presentation summarizing the results of a Scallop fishing trip he made aboard the FV Arctic Hunter, Captained by John Lemar, from August 8<sup>th</sup> through August 23<sup>rd</sup>, 2012. Ryan, along with Scallop Observer Program trainer, Felix Canez, served as observers on the trip. The area fished had been closed to commercial scalloping since 1975; however, it was opened in March of 2012 via State Board of Fisheries action under provisions of a commissioner's permit and with a Guideline Harvest Limit of 15,000 lb of shucked meats and crab bycatch limits of 12,000 tanner and 50 king crab. The area opened is west of a line extending south from Cape Pankof and east of a line extending south from Scotch Cap Light.

The Arctic Hunter departed Kodiak on August 8<sup>th</sup>, and began exploratory fishing on August 10. The vessel fished continuously except when modifying or repairing gear, in cases of severe weather, or when running to a different fishing area. Dredge tow paths consisting of horseshoe, J shaped, and half circles were generally made on known beds, while straight line tows were used to explore. Exploratory tows were made along the 50 fathom depth contours, as well as into adjacent shallower and deeper depths to roughly define bed boundaries. In total, 248 hauls, using 255 dredge hours, were made and the total harvest was 15,040 lbs. of shucked scallop meats from 357,009 retained scallops.

With two observers aboard the vessel, each working a 12 hour shift, 77 hauls (31%) were sampled for scallop catch and crab bycatch. A subset of 39 of the 77 sampled hauls, or 51%, were additionally sampled for haul composition. The results of the sampling effort provided an estimated total retained scallop round weight of 205,950 lb, with 29,382 round pounds estimated to have been discarded. Discards accounted for about 12.5% of the catch, with 3.4% of the scallops intact at discard, and 9.1% having broken shells at discard. Shell height measurements of 1,342 retained scallops ranged from 125mm to 170mm, while shell heights of 887 discarded scallops ranged from 65mm to 130mm. Visual shell aging indicates that there may be three fairly distinct age groups in the Unimak Bight area: one group that is 3 to 5 years old, a group that is 6 to 9 years old, and a third group that is 12 to 17 years old.

Catch sampling also included sampling the number and size of bycatch species. King crab, snow crab and Dungeness crab were not encountered during catch sampling; however, 8,660 tanner crab, and 64 halibut were estimated to have been taken as bycatch. Male Tanner crab ranged from 13mm to 164 mm in carapace width, while female Tanner crab carapace width ranged from 49mm to 119mm. Sampled halibut ranged from 49cm to 119 cm in total length. Also, a single snow crab was encountered with both eyes colored half reddish-pink and half light green, suggesting the possibility of Snow/Tanner crab hybrids existing on the south side of the Alaska Peninsula. Haul composition sampling also shows that scallops accounted for 78.4% by weight, with natural debris, horse mussel, basket stars, and empty bivalve shells making up 4.3%, 4.2%, 3.0%, and 1.4% of haul weight, respectively.

An additional sample of 73 scallops was used to measure shell height and meat weight relationships. This sampling was complicated by rough seas and limited access to the weighing scale. However, the data that were collected show a strong positive relationship between shell height and meat weight under linear regression with an intercept ( $R^2 = .8151$ ).

Sampling also detected several older scallop meats with tannish to reddish color variations and meat that would easily tear, as well as the presence of mud worms, sponges, and an unknown gelatinous red substance between the viscera and shell. It is not known whether the red substance is disease or parasite. In addition, 813 clappers were encountered in sampled hauls, with roughly 70% considered large (150mm to 180 mm shell height) and unbroken. Given that this area was un-fished for a considerable period of time, these clappers could represent natural mortality compared to areas regularly fished. Finally, during this sampling an inspection of all gonads was made; however, all were tan to gray in color with a translucent outer layer turning to opaque within a few millimeters below the surface. Thus, gonad inspection could not definitively determine scallop sex.

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#### Status of Statewide Scallop Stocks and SAFE report-Catch specifications by area

#### Central Region

Rich Gustafson, ADF&G biologist, provided a powerpoint presentation that gave an overview of Central Region scallop stocks. Rich began by announcing that Area Management Biologist Charlie Trowbridge retired in 2012 and that Jan Rumble is now in the position in Homer.

Rich described the Central Region's dredge survey goals to: 1) determine scallop population biomass and abundance, 2) document scallop shell height distributions and age compositions, 3) continue development of their video sled/dredge technology, and 4) continue development of an age structured scallop population model.

Rich provided an overview of the 2011 Kamishak Bay survey areas for the north and south beds and survey and data collection methodologies. He then presented a table and figure showing estimated biomass and abundance. Biomass and abundance in the north bed ranged between 15.7 million to 10 million scallops from 1996 to 2001. In 2002 a die off was observed in the 2002 fishery and survey abundance estimates have declined to 4.1 million scallops in 2003 to 2.9 million scallops in 2011. South bed was first surveyed in 2003 and abundance estimates have declined from 9.4 million scallops in 2003 to 2.8 million scallops in 2011. Rich showed age and shell height distributions, by year and bed, illustrated scallop year classes. Kamishak north bed has remained open to fishing at a low level and south bed has remained closed due to young aged scallops under 100mm.

He described Kayak Island survey areas for the east and west beds, and survey and data collection methodologies. He showed a table and figure of estimated biomass and abundance. East bed abundance peaked in 2004 at 17.4 million scallops and has declined to 4 million scallops in 2012. West bed abundance peaked at 17.9 million scallops in 2000 and declined to a 2.0 million scallops in 2010, and increased to 2.8 million scallops in 2012. Rich showed age and shell height distributions, by year and bed, illustrated scallop year classes. The fishery in the west bed closed in 2010 due to low abundance and number of young aged scallops under 100mm. The east bed closed in 2012 due to low abundance and age structure. He also mentioned that during the 2012 survey they found what could be a skate nursery in the west bed.

Rich then described the plans for the spring 2013 Kamishak Bay survey using their video sled/dredge technology and an 8-foot wide scallop fishing dredge to study discard mortality in conjunction with Brad Harris at the Alaska Pacific University in Anchorage. They have provided data to Central Region's biometrician Dr. Xinxian Zang and started work on an age structured model for Kamishak north and south beds.

#### Westward Region

Gregg Rosenkranz, ADF&G scallop biometrician, provided an overview of Westward Region scallop fishery by district.

Northeast District: Preliminary data from the 2012/13 fishing season indicate 4 vessels harvested just over the 60,000 lb GHL. CPUE decreased compared to the last few seasons. This change in catch rate was attributed to large tidal fluctuations at the beginning of the fishery. Industry indicated tidal flow is a significant factor in fishery performance. Industry believes that scallops pump down into the substrate to avoid abrasion from scouring and drift from strong tidal currents. Managers indicated that number of scallops harvested per dredge hour is now estimated by shell height.

Shelikof District: Harvest data for the 2012/13 fishing season were not compiled at the time of this report but four vessels were known to have participated in the fishery. Managers estimated this season's harvest was just over the GHL of 105,000 pounds. The GHL has been reduced the last two fishing seasons. Managers will need evidence of new recruitment before the GHL is increased. A slight increase in the CPUE may be the result of a recruitment event evident in the shell height data for several years. Scallops in the Shelikof District exhibit the fastest growth of any scallop bed in the state.

Southwest District: The Southwest District was open to exploratory fishing under an ADF&G permit during the 2012/13 fishery. Total catch from one vessel was about 25,000 pounds. Shell size and age data indicate scallops harvested were predominantly 17 years old. This cohort could demonstrate sporadic recruitment to a unique area.

Alaska Peninsula District: One vessel fished the Unimak bight area of the Alaska Peninsula District during the 2012/13 fishing season on an ADF&G permit. Average CPUE was 59 scallops per dredge hour. The GHL of 15,000 pounds was attained.

Bering Sea, Area Q: During the 2012/13 fishing season 1 vessel harvested the GHL of 50,000 pounds. CPUE was consistent with the previous two seasons. The distribution of shell heights indicates the harvest is predominantly larger, older scallops. The boundary of the scallop bed fished in the Bering Sea is poorly defined. The bed is characterized by sparse distribution of scallops over a uniform depth. Observer haul composition data showed more bycatch of sponges than in past fishing seasons.

Dutch Harbor District: The Dutch Harbor district encompasses both the Pacific and Bering Sea sides of the Aleutian Islands. Few scallops have been harvested on the Pacific side. One bed on the Bering Sea side outside Inanudak Bay produced about 5,000 pounds during the 2012/13 fishing season. CPUE exceeded 75 scallops per dredge hour.

#### Southeast Region

Quinn Smith, ADF&G biologist, presented an update to the Southeast (Yakutat) scallop fishery. Yakutat areas include Area D and District 16. Due to relatively low CPUE in 2011/2012, the GHL was lowered from 160,000 lbs to 120,000 lbs in 2012/2013 in Area D. Even with the lower GHL and catch in 2012/2013, the CPUE increased only slightly. The CPUE has statistically trended lower since 2006/2007 in Area D. Little evidence of large scale recruitment was seen in Area D from the 2011/2012 fishery observer data. District 16 had a GHL of 25,000 lbs in 2012/2013 with the CPUE slightly increasing over 2011/2012. Overall CPUEs during recent years were lower than those during the early 2000s in District 16. Tanner crab bycatch in the Yakutat scallop fishery was estimated to be about 12,000 to 14,000 crabs.

#### Discussion of use of observer data for estimation of other FMP species bycatch

Gregg Rosenkrantz led a discussion on the use of observer data for estimating bycatch of other FMP species in the Scallop fishery. The two major species for which observer data is used to estimate bycatch are Tanner crab and halibut. The estimates of bycatch of these species are better than for other bycatch species. The estimates of bycatch of other species come from the haul composition dredge samples. There was some discussion by the team on inclusion of bycatch estimates in the SAFE and on how these

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estimates should be tracked and reported. Diana Stram indicated that we should make these estimates available in the SAFE and that they should be tracked by FMP area.

There was some discussion by the team about bycatch of skates. The team discussed the species being caught that are of concern to the Council, such as big skates, longnose skates, Alaska skate, as well as how skate bycatch data would be stored by AKFIN. Rich Gustafson's PowerPoint presentation on Kayak Island showed evidence of a large skate nursery that Central Region found during the 2012 survey. Gregg Rosenkranz asked whether or not that nursery was found prior to 2012. Rich indicated that this was the first occurrence that ADF&G Central Region staff could remember of a catch of egg cases of this magnitude, but that they would check historical data to verify this.

Gregg said he will get the preliminary bycatch estimates of these other species for inclusion in the SAFE. Richard Gustafson said he had the same tables that Elisa Russ provided last year from the 2011 Kamishak observer trip and can update those for the 2012 observer trip.

#### Update on the sunset of State Vessel Permit Limited Entry Program

CFEC's Craig Farrington provided an update on a current bill in the 28<sup>th</sup> Alaska Legislature dealing with the State of Alaska's(SOA) vessel-based permit limitation program. The history is that the SOA vessel-based permit limitation program was codified into law in 2002 with a sunset date of Dec. 30, 2008. Subsequent legislation extended the sunset date to Dec. 31, 2013. The sunset date clause functions to do away with the entirety of the SOA vessel-based permit limitation program on that date. The Senate Natural Resources Committee introduced Senate Bill 54 (SB54) and it was referred on to Senate Natural Resources Committee for hearings. SB54 would extend the program for 10 years. It has two clauses: 1) a new sunset date of Dec. 31, 2023, and 2) a retroactive effective date of Dec 30, 2013. SB54 is to be first heard in the Senate Natural Resources Committee (the same committee which introduced it). Once out of the Senate Natural Resources Committee, the bill may face more scrutiny; CFEC recently received a request for updated fishery and permit holder information from Rep. Seaton's office. At this time, the ultimate fate for SB54 remains uncertain. A handout was provided with the current holders of CFEC weathervane scallop vessel permits – a total of seven permits, five of which are active, and 2 of which are suspended (pending replacement vessels to be registered with CFEC).

ADF&G's Mark Stichert followed, explaining that CFEC has both people-based permit limitation and vessel-based permit limitation. Scallop vessel permits were done by CFEC in order to stay aligned with vessel permits under the Federal Scallop LLP. Mark provided a synopsis of managing the scallop fishery under a 'what-if' scenario in which the SOA vessel-based permit limitation program goes away (sunsets) and the fishery reverts to open access. He stated there was a range of options for managing a fishery under 'what –if' scenarios. ADFG could establish independent GHLs for state waters. Independent GHLs could also be established for Federal waters. Or the fishery could continue to be conducted as currently done in both state and Federal waters, but should fishing effort in state waters increase, due to open access, then state waters could be closed if managers were uncomfortable (with respect to management precision). Additionally, the fishery could be conducted similarly to a parallel fishery (e.g., the Pacific cod fishery). The chair of Scallop Plan Team reported that there was recent Council activity on this, and the intent was to send a letter to the legislature (Senator Giessel) to recommend extending the sunset or to do away with the sunset provision in the law entirely. There was a member of the public

present who voiced his opposition to this Council action because, "It does not allow for room for young fishermen to enter into the fishery". He said he would send a letter stating so to the Council.

#### Stock structure template application to weathervane scallop stocks

Per request of the SSC, the team discussed and drafted the template table for assessing stock structure for weathervane scallop. This template is attached to the end of this report. The team was not comfortable including this in the SAFE report at this time, until it can be further revised. The team notes that substantial caveats on data-limitations for weathervane stocks in Alaska, a lack of compilation of available references, and upcoming age studies are important inclusions prior to the finalization of this assessment. The team provided the stock structure template to the SSC for review but did not include it in the SAFE report this year.

#### Ocean Acidification and potential impacts to shellfish in the GOA and BSAI

Dr. Bob Foy gave the Plan Team a presentation entitled "Ocean acidification: What can crabs tell us about scallops" in which he reviewed recent NOAA research on the impacts of expected decrease in pH (drop of 0.1 over the last 200 yrs) and the associated change in the availability of carbonate ions on crabs with an eye towards what these changes might mean for scallops. He suggested that scallops will be exposed to corrosive waters due to the relative shallow depths and association with upwelling. Under lower pH scallops shell building stresses are expected to increase. Increasingly corrosive waters is also expected to impact food (phytoplankton) availability

#### **Research Priorities**

Revised research priorities compiled by the team are attached (pdf) in track-changes from last year. The team was apprised of the new format and development of a database to house research priority information. Diana Stram noted that she would provide the revised priorities to the SSC in the new format based upon the changes listed by the team for the April meeting.

#### New business

#### BOF proposals or modifications:

There were no new Board of Fisheries proposals pending for the 2013/14 cycle.

# SPT meeting for 2014

The team intends to meet the week of February 24, 2014 in Homer, AK. ADF&G staff noted that a tour of the R/V Pandalus could be arranged in conjunction with the 2014 meeting.

# Tours of Kilkenny and Provider:

The team would like to thank Bill Harrington (F/V Kilkenny) and Tom Minio (F/V Provider) for providing tours of both vessels and operations during the meeting. Thank you Bill and Tom!

The meeting adjourned at 3pm on February 20<sup>th</sup>.

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HARVEST AND TRENDS	
Factor and criterion	Available information
Fishing mortality	Cook Inlet and Kayak bed-specific information available where
(5-year average percent of F <sub>max</sub> )	surveyed, unknown for other areas.
Spatial concentration of fishery	Fishery concentrated in areas smaller then broad distribution of
relative to abundance (Fishing is	scallop stocks by management region. See figures in SAFE for
focused in areas << management	overall distribution. Known scallops in broader areas then
areas)	fished but not necessarily known beds.
Population trends (Different areas	Survey biomass trends in some regions, CPUE trend data
show different trend directions)	available for other regions, trends differ by area, no clear
	overall trend statewide, age distributions differ by region and
	beds, recruitment difficult to detect due to fishery-dependent
	data (commercial fishery catch does not necessarily indicate
	recruitment or biomass trends)
Barriers and phenotypic characters	
Generation time	No, areas tend to be similar, some differences in growth rates
(e.g., >10 years)	by area and maturity
Physical limitations (Clear physical	Oceanographic differences amongst areas, unknown larval
inhibitors to movement)	settlement patterns, habitat often unsuitable for settlement in
	areas without beds, larval phase ~30 days (ref?)but advection
	and settlement information unknown
Growth differences	Yes, faster growing in Kodiak area, slower growing in eastern
(Significantly different LAA, WAA, or	GOA, unknown if genetic or environmental but more likely to
LW parameters)	be environmental based on literature on scallops(ref to scallop
	growth by depth, temperature, flow, primary production)
Age/size-structure	Complicated by comparison of survey data with fishery data,
(Significantly different size/age	similar age structure but size-at-age varies across areas, Bering
compositions)	Sea age structure older, larger scallops than Kodiak
	area[differences by area likely driven by fishery removals]
Spawning time differences	Scallop spawning thought to occur in early summer and
(Significantly different mean time of	temperature dependent. Historical observer data [ref] indicated
spawning)	consistency by areas spawning in June [Gregg to check
	historical data], complicated by lack of fishery-dependent data
Maturity-at-age/length differences	Unknown, histological analyses not completed but visual
(Significantly different mean maturity-	inspection indicates age 3 in both Kamishak and Kayak but no
at-age/ length)	data available for other regions
Morphometrics (Field identifiable	Yes shell shape, weight, height differences by region
characters)	
Meristics (Minimally overlapping	Unknown
differences in counts)	
Behavior & movement	

Summary of available data on stock identification for Weathervane scallop.

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Spawning site fidelity (Spawning	Yes scallops are sessile
individuals occur in same location	
consistently)	
Mark-recapture data (Tagging data	NA
may show limited movement)	
Natural tags (Acquired tags may show	Unknown
movement smaller than management	
areas)	
Genetics	
Isolation by distance	Unknown
(Significant regression)	
Dispersal distance (< <management< td=""><td>[check genetic ref]</td></management<>	[check genetic ref]
areas)	
Pairwise genetic differences	Weak evidence for difference between Bering Sea and GOA, no
(Significant differences between	evidence for differences within GOA (find genetics study
geographically distinct collections)	distribute to team)

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# Scallop Plan Team meeting February 19-20, 2012 Fisherman's Hall

Kodiak, AK

# Draft agenda 2/13/2013

# Tuesday February 19: 9:00am - 5:00pm

# 9:00am

 Administration: Introductions and approval of agenda, schedule for SAFE compilation/minutes assignments, presentations to SSC (Stram)

# 9:15am

- Shell aging (Rosenkranz);
- o Update on Camsled research (Rosenkranz);

10:00am

• Overview of APU-ADFG research on boring worms/ mud-blisters, and discard mortality in Kamishak (Harris/ Gustafson)

11:00am

 2012 Unimak Bight Scallop Fishing Trip Summary (Burt)

# 12:00-1:00pm Lunch

# 1:00 pm

- o Status of Statewide Scallop Stocks and SAFE report-Catch specifications by area
  - Central Region (Gustafson)
  - Westward Region (Rosenkranz)
  - Southeast (Smith)
- Discussion of use of observer data for estimation of other FMP species bycatch (Rosenkranz)

#### 3:30 pm

• Tour of the scallop vessel Kilkenny (note: I believe we can walk to the dock, otherwise we will discuss transportation on Tuesday)

# Wednesday February 20: 9:00am - 12:00pm

9:00 am

Update on the sunset of State Vessel Permit Limited Entry Program (Farrington/Stichert);
10:00 am

• Stock structure template application to weathervane scallop stocks (Stram/team discussion) 11:00 am

• Ocean Acidification and potential impacts to shellfish in the GOA and BSAI (Foy) 12:00-1:00pm Lunch

1:00 pm

- o Research Priorities
- o New business
  - BOF proposals or modifications
  - SPT meeting for 2014
- o Continue in work session on SAFE report as needed