Enforcement Committee Agenda
March 27, 2012
1pm – 5pm
NPFMC Conference Room
Old Federal Building 605 W. 4th Ave., Room # 205
Anchorage, Alaska

The following four agenda items are scheduled for review at this meeting:

- C-2 Initial review of chum salmon bycatch measures
- C-3(a) Initial review of HAPC skate sites
- C-6(b) Discussion paper on limiting other gear on jig vessels
- D-1(b) Discussion paper on VMS use and requirements

I. C-2 Initial review of BSAI chum salmon bycatch measures

Alternatives

Alternative 1: Status Quo (No Action)

Alternative 2: Hard cap

Alternative 3: Triggered closure with rolling hotspot exemption

The alternatives analyzed in the EA and RIR generally involve limits or "caps" on the number of non-Chinook (elsewhere in document referred to simply as chum salmon as they comprise over 99% of the composition of the bycatch) that may be caught in the Bering Sea pollock fishery and closures of all or a part of the Bering Sea to pollock fishing once the cap is reached. These closures would occur when a non-Chinook salmon bycatch cap was reached even if a portion of the pollock TAC has not yet been harvested. Alternatives 2 and 3 represent a change in management of the pollock fishery because if the non-Chinook salmon bycatch allocations are reached before the full harvest of the pollock allocation, then directed fishing for pollock must stop either BS-wide or in a specified area. Under Alternative 3, a closure is proposed to which the fleet would be exempt for participating in an RHS program similar to status quo as well as options to provide additional triggered closures to participants. Note that the alternatives are not mutually exclusive and mixing and matching of components of each may be done to create a combined management approach which would represent a new alternative.

Enforcement

Increasing enforcement responsibilities

The U.S. Coast Guard (USCG) conducts fisheries enforcement activities in the EEZ off Alaska in cooperation with NOAA Office for Law Enforcement (OLE). New programs to protect resource components from pollock fishery impacts will create additional responsibilities for enforcement agencies. Despite this likely increase in enforcement responsibilities, it is not clear that resources for enforcement will increase proportionately.

The USCG is expected to bear a heavy responsibility for homeland security and is not expected to receive proportionate increases in its budget to accommodate increased fisheries enforcement. Increased responsibilities for homeland security and for detection of increasing drug-smuggling activities in waters

off Alaska have limited the resources available for the USCG to conduct enforcement activities at the same level as in the recent past. Any deterrent created by Coast Guard presence in enforcing fisheries regulations and restrictions would likely be reduced, as would the opportunities for detection of fisheries violations at-sea.

Likewise, the NOAA OLE has not recently received increased resources consistent with its increasing enforcement obligations (J. Passer, pers. comm., March 2008). However, new enforcement assistance has become available in recent years through direct Congressional line item appropriations for Joint Enforcement Agreements (JEAs) with all coastal states. The State of Alaska has received approximately $10 million of this funding since 2001, and has used JEA money to purchase capital assets such as patrol vessels and patrol vehicles. The State has also hired new personnel to increase levels of at-sea and dockside enforcement and used JEA money to pay for support and operational expenses pertaining to this increased effort (J. Passer, pers. comm., March 2008).

Uncertainties about Congressional authorization of increased enforcement funding preclude any prediction of trends in the availability of resources to meet increased enforcement responsibilities. Thus, while an increase in responsibilities is reasonably foreseeable, a proportionate increase in funding is not.

Technical and program changes that will improve enforcement and management

Managers are increasingly using technology for fisheries management and enforcement. Managers are likely to increase use of vessel monitoring systems (VMS) in coming years. Vessels fishing for pollock in the Bering Sea are required to operate VMS units (50 CFR 679.7(a)(18)). Managers and enforcement personnel are making extensive use of the information from existing VMS units, and are likely to make more use of it in the future, as they continue to learn how to use it more effectively.

Monitoring the catch of pollock and salmon bycatch in the pollock fisheries relies heavily on data collected by NMFS-certified observers. Increased observer coverage requirements as a result of Amendment 91 are contained in Chapter 2. Observers currently are provided through a system known as "pay-as-you-go" under which vessels operators required to carry a NMFS certified observer contract directly for observer services with observer providers (businesses who hire and provide observers).

The Council took action in October 2010 to restructure the North Pacific Groundfish Observer Program to provide a new system for procuring and deploying observers in those fisheries that require at least 100% observer coverage. The Council recommended restructuring the program such that NMFS would contract directly with observer companies to deploy observers according to a scientifically valid sampling and deployment plan, and industry would pay a fee equal to 1.25% of the ex-vessel value of the landings included under the program. (The Magnuson Stevens Act authorizes collection of an ex-vessel fee of up to 2%.) As all sectors benefit from the resulting data, the Council chose to apply the same fee percentage to all restructured sectors, in order to develop a fee program that is fair and equitable across all sectors in the restructured program.

The new program is intended to address problems identified under the status quo. Under the status quo, NMFS cannot determine when and where to deploy observers in the sectors with less than 100% coverage requirements, coverage levels are fixed in regulation, and data gaps exist for sectors without any coverage. The restructured program is intended to provide NMFS with the flexibility to deploy observers in response to fishery management needs and to reduce the bias inherent in the existing program by employing a random vessel selection process, to the benefit of the resulting data. While this action denotes a significant change in the observer program for many vessels and fisheries, it does not affect monitoring in the BS pollock fishery, as the Council action explicitly placed industry sectors that are determined to need at least 100% coverage in the 'full coverage' category. This category of vessels will continue to meet observer coverage requirements by contracting directly with observer companies under

the status quo service delivery model. Vessels and processors in the full coverage category include: all catcher processors and motherships; catcher vessels while fishing under a management system that uses prohibited species caps in conjunction with a catch share program (e.g., catcher vessels while participating in AFA pollock and GOA rockfish catch share program); and shoreside and floating processors when taking deliveries of AFA and CDQ pollock. Thus, the primary improvements in monitoring within the BS pollock fishery are due to the increased observer coverage requirements implemented under Amendment 91 (refer to Chapter 2).

Support of the observer program and investigations involving observers and observer data quality are the highest priority of the NOAA OLE. Since 1998, the NOAA OLE has provided dedicated staff to investigate observer reported violations and to maintain the partnership between NOAA OLE and the NPGOP. NOAA OLE currently dedicates two Special Agents to liaison with and to provide law enforcement support for the observer program. The dedicated agents provide inseason enforcement, observer deployment and debriefing support, subject matter expertise, and observer training to the NPGOP staff and the observers. NOAA OLE provides support to observers and industry through public outreach, partnership building, education, program development, and the enforcement of laws and regulations intended to protect observers and to provide them safe and productive work environments. NOAA OLE strives to promote voluntary compliance and law enforcement through communication with the observers themselves, NMFS observer program staff, fishery stakeholders, and other law enforcement agencies.

In 2008, when compared to 2006 and 2007, NOAA OLE saw an increase of at least 62% in the total number of North Pacific groundfish observer statements alleging violations. This increase coincides with the increased concerns regarding prohibited species numbers and with the implementation of the Amendment 80 fisheries. Stronger prohibited species restrictions will continue to increase the need for the high quality observer data, while simultaneously providing greater incentive for industry to hide fish or to manipulate or bias observer data.

During 2008, NOAA OLE provided compliance monitoring training to more than 450 new and prior observers in more than 40 training sessions. NOAA OLE provides observer training on prohibited species mishandling, sample station requirements, limited access fishery requirements, reasonable assistance, accommodations, access to catch and records, recordkeeping and reporting, conflict resolution, interference, sample biasing, and hostile work environments. Under Amendment 91, NOAA OLE anticipates the need for additional law enforcement support and NOAA OLE provided training on the above subject categories and on issues related specifically to salmon number verification.

NMFS is investigating the use of shipboard video monitoring to ensure compliance with full retention requirements in other regions. In the Alaska Region, NMFS has implemented video monitoring to monitor catch sorting actions of crew members inside fish holding bins and investigating the use of video to monitor regulatory discards. An EFP for continued development of the capability to do video monitoring of rockfish catch in the GOA is currently under consideration by NMFS and Council (73 FR 14226, March 14, 2008). NMFS is hopeful that these investigations could lead to regulations that allow use of video monitoring to supplement observer coverage in some fisheries. Electronic monitoring technology is evolving rapidly, and it is probable that video and other technologies will be introduced to supplement current observer coverage and enhance data collection in some fisheries. Video monitoring as not been sufficiently tested to ensure compliance with a no discard requirement at this time, but NMFS would support and encourage research to explore the feasibility of video for this use.

In addition to the technical aspects of video monitoring, several other issues related to video must be resolved. These include the amount of staff time and resources that would be required to review video footage, curation and storage questions, and the costs to NMFS and the fishing industry. Until these issues

are resolved, NMFS will continue to implement existing proven monitoring and catch estimation protocols. Electronic monitoring is discussed in more detail in section 10.5.7.4.

II. C-3 (a) Initial review of HAPC skate sites

Background

At the February 2012 meeting, the Council made an initial review of designating areas of skate egg concentration as Habitat Areas of Particular Concern (HAPC). The Council voted to expand the analysis and current suite of alternatives and options for initial review at this meeting. Under the Council's motion at the February 2012 meeting, Alternative 2 will include a discussion on potential industry and agency monitoring, reporting, and accountability mechanisms, and a statement of intent to discourage adverse fishing activities within the HAPC sites. Alternative 3 will be revised to include HAPC area boundaries consistent with the Enforcement Committee's recommendations from the February 2012 meeting.

Alternatives and Options

In order to address the issues described in its statement of purpose and need, the Council identified three alternatives and five options for analysis, shown below. In addition, an FMP housekeeping option has been added to the analysis (Option f).

Alternative 1: Status quo; no action.
No measures would be taken to identify, or to identify and conserve, areas of skate egg concentration as HAPCs.

Alternative 2: Identify skate egg concentration HAPC(s).
The Council may select to identify – individually, severally, or all six of – the areas of skate egg concentration as HAPCs.[1] The intent of Alternative 2 is to "discourage fishing in these areas" of skate egg concentration with gear that makes contact with the sea floor.

Table 1. The six areas of skate egg concentration proposed for identification as a HAPC under Alternative 2.

Site name[a]	Predominant skate species	Depth of max. egg density (m)	Maximum egg density (eggs/km^2)	Area of HAPC nm^2	Boundaries of HAPC (°N latitude or °W longitude)			
					North	South	West	East
1. Bering 1	Alaska	145	800,406	18.4	54°53′	54°49′	165°46′	165°38′
2. Bering 2	Aleutian	380	62,992	17.5	54°38′	54°33′	165°45′	165°34′
3. Bristol	Bering	156	6,188	13.7	55°21′	55°17′	167°40′	167°34′
4. Pribilof	Alaska	205	16,473	1.2	56°11′	56°10′	168°28′	168°26′
5. Zhemchug	Alaska	217	610,064	3.2	56°57′	56°54′	173°23′	173°21′
6. Pervenets	Alaska, Bering, Aleutian	316	334,163	27.7	59°28′	59°22′	177°43′	177°34′
Total area of the eastern Bering Sea proposed as HAPCs under Alternative 2 = 81.7 nm^2								

[a] Counterintuitively, the Bering 2 site is south of the Bering 1 site. Sites 3 through 6 run south to north.

[1] 50 C.F.R. 600.815(a)(8). Essential Fish Habitat (EFH) provisions provide a means by which the Council may identify HAPCs within FMPs.

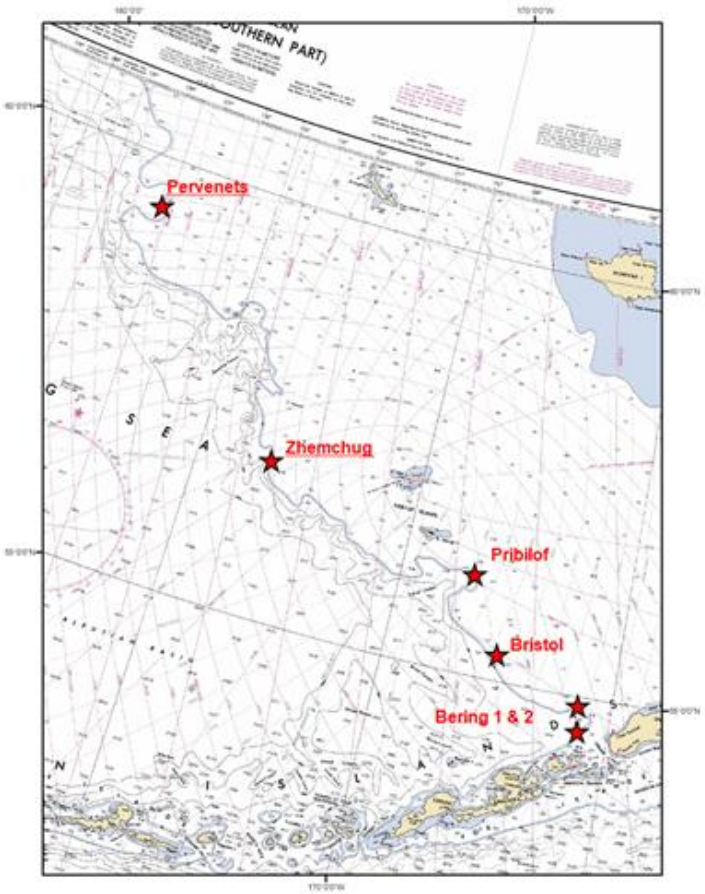

Figure 1. The locations in the Bering Sea of the six proposed skate egg concentration HAPCs (not to scale).

At each of the six areas of skate egg concentration, the spatial extent of bottom trawls containing more than 1,000 egg cases per kilometer squared (km^2) have been established. Boundary lines are then snapped outward to the nearest minute of latitude or longitude.

<u>Alternative 3: Identify and conserve skate egg concentration HAPC(s).</u>
The Council may select to identify – individually, severally, or all six of – the areas of skate egg concentration as HAPCs – AND – the Council may select different conservation and management options for any area identified as a skate egg concentration HAPC:

<u>Option a:</u> Prohibit within skate egg concentration HAPC(s) the use of "mobile bottom contact"[2] fishing gear: nonpelagic (i.e., bottom) trawl, dredge, and dinglebar gear.

<u>Option b:</u> Prohibit within skate egg concentration HAPC(s) the use of "mobile bottom contact" and pelagic trawl fishing gear: nonpelagic and pelagic trawl, dredge, and dinglebar gear.[3]

<u>Option c:</u> Prohibit within skate egg concentration HAPC(s) the use of "bottom contact"[4]

[2] 50 C.F.R. 679.2.
[3] See 50 C.F.R. 679.2 for the particular and intricate components defining "pelagic trawl" fishing gear.
[4] 50 C.F.R. 679.2.

fishing gear: nonpelagic trawl, dredge, dinglebar, pot, and hook and line (i.e., longline) gear.

<u>Option d:</u> Prohibit within skate egg HAPC(s) the use of all fishing gear: nonpelagic and pelagic trawl, dredge, dinglebar, pot, and hook and line gear.

To achieve effective enforcement of these areas, Alternative 3 establishes a minimum size threshold for the core concentration areas to be protected of at least 5 nm to a side and are then, where appropriate, enlarged with a buffer of 1 nm beyond the original boundary under Alternative 2. Boundaries are then snapped outward to the nearest minute of latitude and longitude.

Table 2. The six areas of skate egg concentration proposed for identification as a HAPC under Alternative 3.

Site name[a]	Predominant skate species	Depth of max. egg density (m)	Maximum egg density (eggs/km^2)	Area of HAPC (nm^2)	Boundaries of HAPC (°N latitude or °W longitude)			
					North	South	West	East
1. Bering 1	Alaska	145	800,406	41.8	54°54′	54°48′	165°48′	165°36′
2. Bering 2	Aleutian	380	62,992	40.9	54°39′	53°32′	165°47′	165°37′
3. Bristol	Bering	156	6,188	34.4	55°22′	55°16′	167°42′	167°32′
4. Pribilof	Alaska	205	16,473	28	56°13′	56°08′	168°32′	168°22′
5. Zhemchug	Alaska	217	610,064	27.4	56°58′	56°53′	173°27′	173°17′
6. Pervenets	Alaska, Bering, Aleutian	316	334,163	53.3	59°29′	59°21′	177°45′	177°36′
Total area in the eastern Bering Sea proposed as HAPCs under Alternative 3 = 225.8 nm^2								

[a] Counterintuitively, the Bering 2 site is south of the Bering 1 site. Sites 3 through 6 run south to north.

<u>Additional Options</u>

The following options are applicable to ALL of the alternatives, in any combination of skate egg concentration HAPCs, and with any combination of conservation and management measures the Council selects:

<u>Option e:</u> Suggest adding research and monitoring of areas of skate egg concentration to the Council's research priority list.

The Council may suggest incorporating the research and monitoring of skate species into the Council's annual research priority list, to evaluate skate populations, skate egg concentration areas, and their ecology and habitat.

<u>Option f</u>: Adopt formatting standards as stated in the final rule implementing Amendment 89 to the BSAI Groundfish FMP.

The Council may approve the consolidation of figures and tables that describe areas in Amendment 89 to the BSAI Groundfish FMP, which establishes Bering Sea habitat conservation measures. Color Figures 66-69 in Appendix B describe the Bering Sea Habitat Conservation Area, the Northern Bering Sea Research Area and Saint Lawrence Island Habitat Conservation Area (HCA), and the Nunivak Island, Etolin Strait, and Kuskokwim Bay Habitat Conservation Area, respectively.

Enforcement

There are several options offered to conserve these areas of skate egg concentration from the adverse effects of fishing. Initially, the AFSC offered a range of conservation area sizes based upon the egg case concentrations of each particular site, buffered to the nearest minute of latitude and longitude, which is size dependent on the concentration or density of skate egg cases. (See Appendix B – Color Figures 3-8.) The AFSC also recommend in its original HAPC proposal that all fishing gear be prohibited from making contact with the sea floor within areas of skate egg concentration.

At the February 2012 Council meeting, the Enforcement Committee received an overview of the three alternatives presented in the analysis. During discussion, the Committee noted that if the Council wished to identify these skate egg concentration areas - AND - to protect them using VMS, then there would be a minimum size requirement that would allow for protection given the limitations of VMS polling (once or twice per hour), uncertainty in GPS locations, and the spatial dislocation between the vessel and gear. The Committee was informed that there was concern at the SSC about increasing a buffer beyond the distribution of the egg concentration site. However, while the Committee recognized the desire to use biological data (egg concentrations) to identify the sites, there would be a practical enforcement need to create a larger buffer to limit vessel activity in order to ensure conservation of the biological resource.

The Committee stated that an area 5 nm per side would be the ideal minimum because the limits of VMS to accurately track a vessel through the area. With areas smaller than 5 nm per side, although providing some level of protection to the site, the likelihood of successful enforcement goes down substantially. It was further noted that although it is technically feasible to increase VMS polling frequency, that would require additional costs to fishermen, and deviation from what are currently accepted standards (once or twice per hour). Additionally, there would be additional complications in implementing changes in how VMS operates in Alaska, and the Committee would be hesitant to recommend tweaking VMS before current concerns can be addressed. The Committee's final recommendation to the Council was to design areas to accommodate current VMS limitations rather than attempting to change VMS to accommodate smaller areas. The Committee also discussed the desire to align sides of areas with latitude and longitude, to the greatest extent practical. It is more practical for enforcement personnel and USCG pilots to quickly determine whether a vessel is inside or outside of a protected area with margins along latitude and longitude lines than an irregularly shaped area.

Enforcement Concerns

In February 2011, the Enforcement Committee took up a preliminary review on the proposed skate HAPCs. The Enforcement Committee also received a white paper from the USCG and NOAA that provided a background relating to the definitions enforcement personnel must work within, as well as the challenges to at-sea enforcement. The Enforcement Committee noted that the proposed Council actions included options for restricting bottom trawling, while allowing pelagic trawling in the proposed HAPC sites.

Relevant Regulatory Definitions:

For reference, the following This phrasing indicates that pelagic trawling is defined by trawling during which the foot rope is not in contact with the bottom for more than ten percent of the time. 50 C.F.R. 679.2 provides the following definitions:

(11) Mobile bottom contact gear means nonpelagic trawl, dredge, or dinglebar gear.

(12) Nonpelagic trawl means a trawl other than a pelagic trawl.

(14) Pelagic trawl gear means a trawl that:

(i) Has no discs, bobbins, or rollers;

(ii) Has no chafe protection gear attached to the footrope or fishing line;

(18) Trawl gear means a cone or funnel-shaped net that is towed through the water by one or more vessels. For purposes of this part, this definition includes, but is not limited to, beam trawls (trawl with a fixed net opening utilizing a wood or metal beam), trawls (trawl with a net opening controlled by devices commonly called doors), and pair trawls (trawl dragged between two vessels) and is further described as pelagic or nonpelagic trawl.

679.24(b)(3) *Trawl footrope.* No person trawling in any GOA area limited to pelagic trawling under §679.22 may allow the footrope of that trawl to be in contact with the seabed for more than 10 % of the period of any tow.

Aircraft Surveillance

Aerial surveillance is the most effective means to monitor closed or restricted gear areas. Due to the size of the Alaska region and the number of enforcement assets available, one of the most effective means of surveillance is by aircraft. While an aircraft can identify the type of vessel (e.g. longliner, trawler, seiner, pot boat, etc.), there is no way for aircraft to readily identify whether a trawl vessel is using pelagic or nonpelagic trawl gear.

Because of these definitions, the only time an aircraft would be able to determine whether a vessel was using pelagic or nonpelagic trawl gear would be if they witnessed a haulback and noted chafing gear on the foot rope or roller gear. By definition, this would make the vessel a nonpelagic trawler. All other definitions used to identify whether a vessel is conducting pelagic or nonpelagic trawl activities must be conducted by a boarding team on the vessel. At-sea enforcement of areas where pelagic trawl gear is permitted and nonpelagic trawl gear is prohibited is problematic. Aerial surveillance remains the most effective means to monitor closed or restricted gear areas. While aircraft can readily identify the type of vessel by gear, identification of pelagic or nonpelagic trawl gear by aircraft is virtually impossible.

One possible mitigating factor, at least for aerial surveillance, would be to have vessels declare what they are targeting and what gear they are using through their vessel monitoring systems (VMS) units. This is a system that is used extensively in other regions of the country, and allows enforcement personnel to quickly identify locations of various fleets by gear type and targeted species.

Observers are another possible mitigating factor because they could be in a position to identify pelagic versus nonpelagic trawls. The Enforcement Committee has noted that the Bering Sea trawl fleet is one of the most highly observed fishing fleets in the world, and the observer position reports, reviewed by enforcement personnel, could provide another potential information source.

At-sea Enforcement

Outside the pollock fishery, which has specific crab PSC limits to define bottom contact, it is almost impossible to define how much time a trawl net is in contact with the sea floor. There are no performance indicator definitions for other target species where vessels use pelagic or nonpelagic trawl gear. Identification of pelagic or nonpelagic trawl gear can easily be done during an at sea boarding, based upon the definition of rollers and chafing gear, but becomes more problematic in cases where gear that

appears to be pelagic in nature is in contact with the sea floor more than the allowable ten percent of the time. It is nearly impossible for a boarding team to determine how much time pelagic trawl gear is in contact with the bottom, and this regulation is almost unenforceable.

Current practice, when in large fleets of vessels, is often to send boarding teams to more than one vessel. Due to the duration of the boarding, cutters would likely be restricted in the number of boardings they can conduct simultaneously due to the risk to boarding team members and concerns for the recovery of personnel at the completion of the boarding. If cutters had teams on multiple vessels, they would likely have to restrict the movement of fishing vessels until the boarding was complete to ensure appropriate response distances for the safety of boarding teams.

Trawl Gear Restrictions

At-sea enforcement of areas where pelagic trawl gear is permitted and nonpelagic trawl gear is prohibited is problematic. Aerial surveillance and VMS remain the most effective means to monitor closed or restricted gear areas. While aircraft can readily identify the type of vessel by gear, identification of pelagic and nonpelagic trawl gear by aircraft is virtually impossible. There have been reports of pelagic trawl vessels spending more time in contact with the bottom, and the Coast Guard remains concerned about their ability to identify the difference between pelagic and non-pelagic trawl gear from the air. In addition, bottom tending mobile gear, particularly trawl gear, provides the greatest concern for disturbance to these sites. It would be difficult to monitor compliance with very small discreet closed areas because this would require excessive use of the major enforcement assets that are used to patrol the Bering Sea. Therefore, a minimum threshold size is proposed of at least 5nm to a side.

Vessel Monitoring Systems (VMS)

Another tool that can be used in tandem with a real time data reporting system is to require a vessel monitoring system (VMS). VMS is an essential requirement to show the vessel was at-sea, how long it was out, where it docked when it came into port, and the present vessel location. VMS is capable of understanding and recording small details of the ship's evolutions. It can document, for instance, specific course changes and engine speed changes by a vessel. Collectively this pattern is termed a signature. At present, there are not enough data to make a signature admissible in court as an indicator of fishing. Regardless, VMS technicians are trained to look at positioning data and other factors indicating potential fishing activity. An investigator can be dispatched to the landing site intercepting the vessel as it comes into port or even anchors in a remote area. If the captain and crew are believed to have illegally harvested a limited access program (LAP) species, the agent or officer can intercept the vessel. If, during the course of an initial investigation, a violation surfaces, the agent or officer will bring the vessel to port, seize the catch, and cite the errant fisherman.

Enforceable Threshold Size and Shape

If the Council wishes to protect the proposed skate egg concentration HAPCs, and VMS is the mechanism utilized to monitor closures of these areas, then the ideal minimum size according to the USCG and NOAA is approximately 5nm to a side. This is the minimum size that will provide sufficient buffer space in order to use VMS to determine an incursion into the area. The primary reason for this size would be to guarantee that at least one VMS poll is within the much finer area that the Council wishes to protect, and to ensure that vessels do not transit all the way through the area between polls, or merely cut through the corners. This minimum size will guarantee that the U.S. Coast Guard and the NOAA Office of Law Enforcement (OLE) would be able to get at least one VMS poll within the closed area despite issues of cutting the corner, or other means, and would ensure the smaller area is protected.

The distribution maps at each site of skate egg concentration (Appendix B – Color Figures 3-8) display two possible alternatives to determine the extent of the area, based on Alternatives 2 and 3. The red boundary is based on the distribution of trawl sites where skate eggs were greater than 1,000 km^2, using the trawl with the highest concentration as the center of the box. The box design accomplishes two goals, that of estimating the effective habitat area and providing a small buffer around the site that produces a manageable area and shape to facilitate enforcement. The black boundary line expands the areas to comply with the recommendations of the Enforcement Committee.

At the February 2011 Council Meeting, the Enforcement Committee received a preliminary review of the six proposed skate HAPCs and made recommendations on the most appropriate shape and size. The Enforcement Committee recommended that the Council maintain square- or rectangular-shaped closures. Areas closed to certain gear types for conservation are more practical to enforce if they are square- or rectangle-shaped. It is more clear that a fishing vessel is either west/east or north/south of a delineation, and therefore in or outside a closed area using VMS or aircraft overflight. This clarity also benefits fishing vessels in avoiding or inadvertently entering a closure.

There have been no VMS-only cases that have stood up in court, unless the area has a no-transit provision, unless a cutter or aircraft was able to verify that fishing gear is in the water. This is done to ensure the vessel is actively engaged in fishing, and not merely transiting slowly through the area, or dealing with mechanical or weather issues that slow them down.

The Council has the option under Alternative 3 to prohibit nonpelagic gear, as this is the primary gear that would impact the area of skate egg concentration, but would allow pelagic trawl gear. In a February 2011 white paper prepared at the Council's request, the U.S. Coast Guard and NOAA discussed the enforcement and monitoring problems associated with closed areas that prohibit nonpelagic trawling but allow pelagic trawling. This is described in more detail in the above sections. The Committee's recommendation, if the Council wishes to identify HAPC areas around skate egg concentration sites *and* wishes to enforce protections, is to identify HAPC areas of a minimum size to allow effective VMS tracking for enforcement and to establish HAPC boundaries along latitude and longitude lines, wherever practical. Minimum thresholds should be established with a buffer of at least 1 nm beyond the boundary of the area to be protected in order to account for current VMS capabilities, potential GPS error, and the dislocation between vessels and deployed gear. Should the council decide to implement trawl gear restrictions for these areas, the Enforcement Committee recommends prohibition of all trawl activity in these areas.

III. C-6(b) Discussion paper on limiting other gear on jig vessels

Background

In December 2011, the Council tasked staff with developing a discussion paper on limiting other gear on board jig vessels fishing for Pacific cod in the GOA. This tasking stems from a proposal the Council considered in April 2011 on the "reverse parallel fishery" concept whereby vessels could jig for cod in Federal waters under the State GHL allocations. The Council postponed taking any further action until the Board had opportunity to comment and take action during its meeting in October 2011. Thus, the option to limit other gear on board jig vessels was tabled along with the postponed action on implementing a reverse parallel jig fishery until brought back in December 2011.

Participation and current gear regulations

In 2010, there were a total of 140 jig vessels participating in the Federal fisheries in either the Western or Central areas, or both (see Table 1 below). Of these 140 vessels, 40 also longlined (i.e., hook and line),

23 also used pot gear, and 75 also used some other type of gear (troll, seine, etc.). None trawled. Of the 40 vessels that jigged and longlined, 14 specifically targeted Pacific cod and 2 specifically targeted Pacific cod with pot gear. These groupings are not mutually exclusive; there could be overlap between vessels across gear types.

Following below are three tables that show the number of vessels with a 2010 targeted Pacific cod jig landing, along with any other gear utilized on the vessel in 2010, for the Western GOA, Central GOA, and the Western and Central areas combined.

Table 3. Western and Central GOA jig participation, combined

Gear Type	Jig	Hook and line Pacific cod	Total hook and line	Pot	Other gear	Trawl
Jig	140	14	40	23	75	0
HAL Pacific cod	14	14	14	2	8	0
Total hook and line	40	14	40	11	25	0
Pot	23	2	11	23	17	0
Other gear	75	8	25	17	75	0
Trawl	0	0	0	0	0	0

Table 4. Western GOA jig participation

Gear Type	Jig	Hook and line Pacific cod	Total hook and line	Pot	Other gear	Trawl
Jig	52	3	15	7	35	0
HAL Pacific cod	3	3	3	1	2	0
Total hook and line	15	3	15	4	11	0
Pot	7	1	4	7	6	0
Other gear	35	2	11	6	35	0
Trawl	0	0	0	0	0	0

Table 5. Central GOA jig participation

Gear Type	Jig	Hook and line Pacific cod	Total hook and line	Pot	Other gear	Trawl
Jig	95	13	30	18	43	0
HAL Pacific cod	13	13	13	2	7	0
Total hook and line	30	13	30	9	17	0
Pot	18	2	9	18	13	0
Other gear	43	7	17	13	43	0
Trawl	0	0	0	0	0	0

Staff have also compiled State and Federal Pacific cod regulations, current as of January 1, 2012[5]:

- Federal/parallel TAC: all gear types legal; no LLP required for vessels jigging in the EEZ
- State GHL: pot, jig/hand troll legal in all areas; longline legal in Prince William Sound

[5] The full regulations may be found in Tables 2 and 3 within the meeting document **2.D.i.**, Reverse Parallel jig fishery.

Issues for discussion

- Where and when would this gear limitation apply – possible scenarios and different fishing strategies
- How are landings reported and what are fishticket requirements – e.g.,1 landing, different gear types
- Who would be impacted by gear restrictions – number of vessels exclusively jigging and mixed-use (see Table 1)
- How would violations be enforced – defining "on board" and "operational;" difficulties with discerning the target fishery
- What is the need for this gear limitation – how extensive or pervasive is misreporting?
- What is the potential for building catch history in the jig and attaining step-ups versus reaching the TAC prematurely?
- What effects will increased participation and landings in the jig sector have on other sectors, fisheries, and annual allocations – the TAC step-ups and potential GHL strandings
- Other issues for discussion?

IV. D-1(b) Discussion paper on VMS use and requirements

Background

In October 2011, the Council approved a motion to initiate a discussion paper to review the use of and requirements for VMS in the North Pacific fisheries and other regions of the U.S. The Council stated that while there is uncertainty regarding whether a major change to or expansion of VMS requirements is necessary in the North Pacific, there is interest in reviewing the current state of the North Pacific VMS requirements in addition to other regions' application of VMS. The discussion paper includes a description of VMS and its benefits, a review of existing VMS requirements in the North Pacific, a summary of the most recent 2007 Council action related to expanding VMS requirements, a summary of VMS coverage in the North Pacific, cost estimates for VMS, and a review of VMS applications in other regions.