

Appendix B
**ANALYSIS OF COMPONENTS, ELEMENTS, AND
OPTIONS FOR THE HARVEST COOPERATIVE
ALTERNATIVE
COOPERATIVE COMPONENTS ANALYSIS**

**RATIONALIZATION OF THE PACIFIC COAST GROUND FISH LIMITED ENTRY TRAWL
FISHERY PRELIMINARY
DRAFT ENVIRONMENTAL IMPACT STATEMENT**

**PREPARED BY
THE PACIFIC FISHERY MANAGEMENT COUNCIL
7700 NE AMBASSADOR PLACE, SUITE 200
PORTLAND, OR 97220
503-820-2280
WWW.PCOUNCIL.ORG**

AND THE

**NATIONAL MARINE FISHERIES SERVICE
7600 SAND POINT WAY NE, BIN C15700
SEATTLE, WA 98115-0070
206-526-6150**

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An Introduction to Harvest Cooperatives and the Pacific Whiting Cooperative Alternative

A cooperative is used to describe a collective arrangement among a like-minded group of individuals. Cooperatives are entities that are controlled by the people who use them. They differ from other business entities because they are member owned and operate for the benefit of members. The general activity of cooperatives being considered under the council's rationalization program is the harvest of fish, so these types of cooperatives are best described as "harvest cooperatives" and a harvest cooperative can be defined as an entity which acts to coordinate the harvest of its members.

Harvest cooperatives are organizations made up of vessels that work together to harvest a fishery resource. We can categorize this broad definition into two different possible models. One may be made up of vessels that negotiate catch-sharing arrangements among themselves without agency involvement. The Pacific Whiting Conservation Co-op is an example of this type of cooperative—a voluntary association of catcher-processors that have negotiated catch sharing arrangements among themselves without agency and Council involvement. This cooperative depends on an allocation of whiting to the sector and a barrier to entry by other catcher-processors that are not part of the arrangement.

The second model is created by vessels with catch history assignments (a percentage of allowable catch) that each vessel brings to the cooperative organization. The collective catch history then comprises the pool of catch available to that cooperative. This catch history can be leased to another vessel in the same cooperative through a private agreement without needing agency involvement, and the motivations and outcomes from doing so may be similar to those motivations and outcomes that exist when transferring quota pounds in an IFQ program (the reader is referred to Appendix A and E for a further elaboration on such incentives and outcomes). The administration and enforcement of harvest activities among member vessels is primarily done through the cooperative organizations and through private contracts governing the operation of those organizations. The regulatory activities of the agency are generally limited to reviewing and approving or disapproving cooperative contracts, monitoring for sector or co-op catch levels, and closing when a sector or co-op reaches their allocation. The mothership and shorebased cooperative proposals are examples of this type of cooperative. Each catcher vessel permit would have a percentage of the allowable catch based on their catch history and those catcher vessels would form cooperative arrangements with other catcher vessels. The cooperative organization would coordinate harvest activities of its member vessels and these activities would include leasing of shares between member vessels without agency involvement.

The primary difference between the two examples is the assignment of catch history. In cooperative programs with a relatively diverse set of harvesters, catch history assignments may be necessary in order to solve allocation disputes that may arise between vessels over catch sharing. In cooperative programs with harvesters that are less diverse, catch history assignments may not be necessary because vessels have similar historic participation in the fishery and similar historic catch levels, and find it relatively easy to reach catch sharing arrangements.

In some cooperative programs, catch history assigned to each vessel is linked to a processing entity. This linkage provision can trace its roots to the American Fisheries Act (AFA) which rationalized the Bering Sea Pollock fishery. The American Fisheries Act cooperatives were designed to "ensure that both harvesters and processors benefited from rationalization" {Stevens and Gorton, 1999; in Matulich, 2000} and one outcome was to establish a partial link between catcher vessels and shoreside processors. Catcher vessels and mothership processors are not linked in the Pollock fishery. Binding a vessel to a processor creates a system that takes on many characteristics of a vertically integrated firm. Harvesters cannot operate without a simultaneous action on the part of a processor and vice versa. With a harvester-processor linkage provision, harvesting entities and processing entities must negotiate with one another,

and both are in a similarly powerful negotiating position. Neither the processing entity nor the harvesting entity can operate independent of the other, and therefore the goals and operations of both entities become more aligned, partly out of necessity. This type of mutual dependence places both entities in a relatively strong negotiation stance resulting in the sharing of profits that accrue as a result of harvesting and processing activity. Furthermore, a processor linkage provision takes on some of the characteristics of a limited access privilege because those linkages are somewhat defensible and are somewhat transferable (at least in the model envisioned for Pacific whiting cooperatives). Processors with an established linkage have catch available to them from linked catcher vessels and other processors cannot take that catch in the current year¹. When combined with processor limited entry and the fact that processors can transfer their permits and/or associated linkages to another processor, this tool tends to decrease the amount of competition that exists among processors for catch, making it possible for the processing sector to rationalize itself to a certain degree, leading to the generation of greater profits from participation in processing activity than may otherwise be the case.

Although harvesters and processors have been linked in other harvest cooperative programs, that linkage can be broken. Two possibilities are analyzed in the existing cooperative alternatives for breaking or switching a linkage. Under one option, harvesters can break the linkage by electing to fish in a non-cooperative fishery that is designed as a derby fishery. Harvesters in this non-cooperative fishery compete with one another for the catch allotted to the non-co-op, and the non-co-op is closed when the allowable non-co-op catch is attained. The reason for including a non-cooperative portion of the fishery is because it makes the linkages to processors that may exist in cooperative systems voluntary. Harvesters may elect to not participate in a cooperative and deliver to any processor as long as the harvester remains in the non-co-op fishery. Structuring the non-co-op as an Olympic fishery is intentional. This manner of fishing has proven to be less beneficial to participants in a fishery economically, thereby providing an incentive for harvesters to remain in a cooperative and maintain the existing processor linkage, and this increases the chances that processors can benefit from rationalization.

The other option assessed for switching processors is similar to one that occurs in the shoreside Pollock fishery where vessels in a cooperative can switch processors by delivering the majority of their catch to a different processor in the previous year. The method envisioned for doing this would be fishing the unlinked portion of catch history of other vessels in a cooperative through a lease agreement and delivering the majority of one's catch to another processor in that way. If that vessel delivers the majority of his catch to another processor through that mechanism, then a new linkage is formed the following year without ever participating in the non-cooperative fishery. If cooperatives must be formed around processors, this would mean that the vessel would need to join a new cooperative when it switches processors. Requiring that a catcher vessel also switch cooperatives may make it somewhat difficult for catcher vessels to switch processors by using this tool because it essentially relies on other catcher vessels agreeing to let that catcher vessel (and its associated catch history) leave the co-op. In the existing alternatives for whiting cooperatives, this processor-switching tool may be combined with an option that does not require co-ops to be formed around processors, and if this is the case, the outcome is one where the effect of a processor tie is substantially reduced, if not eliminated. If a single cooperative is formed for a sector, vessels can fish the catch history and associated linkages of other vessels in that cooperative and effectively switch processors simply by leasing another's catch history. Overall, this approach for switching processors would tend to decrease the amount of time harvesters spend in the non-cooperative fishery, but could result in a much different relationship between catcher-vessels and processors with catcher-vessels assuming greater leverage in negotiations over profits and other matters.

¹ Provisions exist for breaking the linkage in subsequent years. The decision to break the linkage ultimately rests with the catcher vessel, meaning the processor cannot defend the linked catch history from other processors over the longer term. This condition violates one of the principal definitions of a property right and is one principal reason why the processor linkage is not a resource access privilege.

One tool proposed in the Pacific whiting cooperative alternatives that does not exist in the Bering Sea Pollock fishery is the “mutual agreement exception”. In cases where a processor elects to not participate in the fishery, this tool allows processors and catcher vessels the ability to enter into a mutual agreement that allows a catcher vessel to deliver to another processor without permanently breaking the existing processor linkage. Upon the original processor’s return to the fishery, the original linkage is re-established. If such a mutual agreement exception did not exist, and a processor did not participate in a fishery in a given year, it is possible that processor would permanently lose its linked catcher vessels. This mutual agreement exception allows the processing sector the ability to increase or decrease the number of active processors in the fishery so that the amount of processing capital present in any one year is appropriate to the available harvest. If this provision did not exist, it is more likely that the amount of processing capital in the fishery would remain relatively constant even as the allowable catch varies, leading to years where excess processing capital exists in the fishery and cost inefficiencies are present. This would tend to occur because processors would risk losing their linked catcher vessels if they did not participate in the fishery, even if the allowable catch level was relatively low and may not justify the presence and activity of all qualifying processors in that year.

History on the Development of the Cooperative Alternative

The development of the non-catcher processor cooperative alternatives began with discussions among participants in the mothership fishery. Beginning in 2004, mothership catcher-vessel participants, mothership processor participants, and their technical advisers engaged in over 100 hours of discussion and deliberation to develop a rationalization alternative for Council consideration that was palatable to participants in the mothership sector. The objectives of these deliberations were that the alternative:

- Recognize historical participation in the mothership sector
- Ensure that rationalization benefit those that have participated in the mothership fishery (both harvesters and processors),
- That it strive to treat everyone fairly so that there were “no big winners and no big losers” {Paine, 2007. Personal communication}.

These discussions began with deliberations over the structure of a possible IFQ-based fishery that could accommodate the existing participants in the mothership sector and bring that fishery successfully into a rationalization program. However, the possibility of developing an agreed upon IFQ-based alternative with “no big winners and no big losers” was quickly abandoned due in large part to the friction created over allocation issues and how much IFQ mothership catcher-vessels and mothership processors would receive. Participants in the mothership fishery then turned to their experiences in the Bering Sea Pollock fishery and the cooperatives that were enacted in that fishery through the American Fisheries Act. The cooperatives developed through that legislation were constructed with the goal that “both processors and harvesters benefit from rationalization” {Stevens and Gordon, 1999; in Matulich, 2000}. Participants in the mothership fishery felt that a harvest cooperative model could be successfully applied to the Pacific whiting fishery (with some notable differences) because the whiting fishery is, in many ways, operationally similar to the Bering Sea Pollock fishery where cooperatives have been used successfully. Participants in the mothership sector also felt that a harvest cooperative model with processor linkage provisions could successfully accommodate existing participants in the fishery and ensure that all sides benefited from rationalization.

The mothership cooperative alternative developed by participants of the mothership fishery was intended to protect the interests of mothership processors and mothership catcher vessels. This was done by granting catcher vessels harvest privileges and linking those privileges to mothership processors. The

proposed alternative was intended to be relatively inclusive by considering the granting of permits to those that had participated in the mothership portion of the fishery after the separation of the two at-sea sectors (which occurred in 1997) and by considering the granting of catch history to catcher vessels with history since the introduction of limited entry (1994). This initial proposal was supported by the membership of United Catcher Boats (a trade association representing, at the time, 15 active catcher vessels in the fishery) and five of the six mothership entities operating in the fishery.

At the September 2006 Council meeting, representatives of the mothership sector presented their proposal for a harvest cooperative alternative in the mothership portion of the whiting fishery. The Council adopted the mothership sector cooperative proposal for analysis, officially moving the concept of a harvest cooperative alternative forward as one means of rationalizing portions of the limited entry trawl fishery.

In November 2006, the Trawl Individual Quota Committee (TIQC) discussed the newly added mothership cooperative alternative and the possibility of expanding the harvest cooperative model to the shoreside portion of the Pacific whiting fishery. The TIQC recommended modifications to the mothership cooperative alternative, including the consideration of additional harvest privilege qualification criteria, and an option to not have a mothership/catcher-vessel linkage provision. Several of these suggested additions and modifications took into account the concerns of those mothership sector participants that did not fully support the original mothership sector proposal. The TIQC also recommended that the Council consider a cooperative alternative for the shoreside portion of the whiting fishery, based largely on the mothership cooperative alternative.

Following this meeting, members of the shoreside whiting industry discussed the structure of a shoreside whiting harvest cooperative, with the intention of developing an industry-preferred alternative. The shoreside whiting industry members consulted with the National Marine Fisheries Service, members of the mothership whiting industry, and participants in the Bering Sea Pollock fishery.

At the March 2007 Council meeting, representatives of the shoreside whiting harvesting and processing industry presented a proposal for a shoreside whiting cooperative which included many similarities to the mothership sector alternative, but with differences in processor linkages and processor limited entry. These differences were based, in part, on the possibility that a shoreside processor limited entry program with shoreside processor linkages might not be allowable under the Magnuson-Stevens Act. During Council discussion on the alternative, General Counsel reaffirmed this. The Council voted to move all harvest cooperative alternatives forward for analysis.

At the November 2007 Council meeting, General Counsel again confirmed that the processor licensing requirements and linkage elements of the shoreside cooperative alternative went beyond the authority of the Magnuson-Stevens Act. Following this guidance, deliberation reverted to an IFQ-based model for rationalization of the shoreside whiting fishery, due in part to the notion that the lack of processor licensing and linkage provisions in a cooperative-based fishery could mean that processors would not benefit from rationalization. At this meeting, the Council also made several refinements to the options that comprised the mothership cooperative alternative. In particular, the option to not have a mothership linkage provision was discussed and the Council decided to drop that option from analysis because the lack of such a linkage was believed to mean that processors would not benefit from rationalization.

At the June 2008 Council meeting, the Council adopted their preliminary preferred alternative which included harvest cooperatives with processor linkages for the mothership sector, and a shoreside whiting cooperative program with processor linkages (pending Congressional approval). This motion came about after much public testimony from the harvesting and processing sectors of the fishery on the potential benefit and drawback of rationalizing the fishery. This motion to adopt a cooperative program in the

shoreside fishery appears to have been spurred by the idea that a harvest cooperative system with processor linkages may benefit both harvesters and processors while avoiding the friction created by a harvester and processor allocation issue found within an IFQ program. However, the Council also adopted an alternative that would manage the shoreside whiting fishery with IFQs if Congressional approval of a cooperative program with processor linkages does not occur.

Description of Approach for Components Analysis

The cooperative alternatives contain multiple elements and sub-options. This appendix is intended to address each of those elements and options that potentially make up the pieces of a cooperative-based fishery by including rationale and analysis of each of the elements of the alternative. The analysis for each option includes a description of related issues, and whether those issues are related in such a way that the selection of one element necessitates the selection of another. This appendix also includes a description of rationale and policy issues that are associated with each of the options and elements of the alternatives. Policy issues may include legal or implementation issues that are associated with each of the elements. Rationale includes the reasons, or basis, for considering each of the elements. Finally, an analysis that describes the effect of each of the options and elements is included.

The analysis in this section draws heavily on several different sources. In addition to economic and social theory, these sources include two National Research Council publications (Sharing the Fish and Drama of the Commons), multiple documents published by the North Pacific Fishery Management Council and the National Marine Fisheries Service Alaska Region relevant to cooperative-based management, and proceedings of the Tenth Biennial Conference of the International Institute of Fisheries Economics and Trade.

B-1 Whiting Sector Management under Co-ops

In the cooperative alternatives, all catcher vessels have a choice of whether to participate in a co-op or opt-out (non-cooperative) portion of the fishery. For catcher-processors, no formal co-op fishery would be established but rather a closed class would be established and a vessel could, at its option, decide not to participate in a co-op with other members of that fishery.

The existing allocation of whiting between the shoreside whiting, mothership, and catcher processor sectors remains under this alternative (42%, 24%, and 34%, respectively). Within each sector, this allowable catch is assigned each year to co-ops or to the non-co-op portion of the fishery. Co-ops will then be responsible for monitoring and enforcing the catch of the organization and of co-op members, and NMFS will monitor the catch of each sector and in the non-co-op fishery, as well as the overall catch by all three sectors. NMFS will make the following closures if limits are reached: close a co-op fishery if co-ops have collectively reached their limit; close the non-co-op fishery if it reaches its limit; and/or close the combined co-op and non-co-op fishery if that whiting sector reaches its limit.

Provisions may also address the catch of bycatch species (overfished species and non-target species). The Council is considering whether or not to make bycatch limits apply to the entire whiting fishery, individual whiting sectors, or to individual cooperatives and to which species bycatch limits will be developed. NMFS may close the whiting fishery, whiting sectors, or cooperatives, if a bycatch limit is reached.

B-1.1 Whiting Management

Under the co-op options for the mothership and shoreside sectors, catcher vessel permits will be endorsed for deliveries to these sectors and amounts of history assigned to each catcher vessel permit based on past harvest in the fishery.

The whiting catch history calculation for each mothership-endorsed catcher vessel permit [CV(MS)] and shoreside-endorsed catcher vessel permit [CV(SS)] will be assigned to a pool for the co-op in which the permit will participate or a pool for the mothership or shoreside non-co-op fishery. Co-ops are responsible for monitoring and enforcing the catch limits of co-op members. NMFS will monitor the catch in the non-co-op fishery, the co-op fisheries, and the overall catch of all three sectors. NMFS will close these fisheries when their catch limits have been achieved.

❖ Rationale and Policy Issues

Establishing a system of cooperatives is intended to rationalize the Pacific whiting fishery. Cooperatives create many of the same benefits attributed to other types of rationalization programs including slower paced fishing practices, consolidation of capital, and greater net economic benefits to participants in the fishery. In order for harvest cooperatives to achieve this outcome several necessary ingredients need to exist including a barrier to entry, an allocation of fish², and the establishment of a catch sharing arrangement among cooperative members (either through voluntary or regulatory means).

Endorsements for deliveries to the mothership and shoreside sectors are intended to stabilize participation in these sectors and act as a barrier to entry to these sectors. Catch histories are a harvest privilege which grant the holder of that catch history a defensible resource access privilege so long as they become part of a cooperative. If a participant elects to participate in the non-cooperative portion of the fishery, that catch history is not a defensible harvest privilege because other non-cooperative participants may compete for the catch available in that fishery. The presence of a non-cooperative fishery is intended to ensure that cooperative membership and the processor linkages that exist when vessels are part of cooperatives are voluntary. Voluntary membership of cooperatives is necessary to insure that cooperative members are of a like mind and can operate together successfully. Furthermore, structuring the non-cooperative fishery as an Olympic fishery is intended to act as a deterrent to catcher vessels that may be contemplating the departure from a cooperative and/or the breaking of a linkage to a processor. This deterrent is intended to stabilize relations between harvesters and processors and also stabilize cooperative membership and help foster longer term relationships among cooperative members. Longer term relationships tend to help the operation and success of cooperatives as those cooperatives rely heavily on relations between members.

Catch history designations, when combined with a “golden rule” provision, help solve resource sharing arrangements among participants in a cooperative managed fishery. Catch history assignments combined with a golden rule provision solves resource sharing for fishery participants ahead of time and helps ensure that cooperative agreements do not suffer due to negotiations and potential disagreements over catch sharing.

Making cooperatives responsible for the monitoring and enforcing of catch limits of co-op members is intended to accomplish several items. One rationale for requiring cooperatives to self monitor and enforce is that it reduces the administrative workload on management agencies. In addition to this, self

² Options exist for which species sectors would be responsible for covering with catch history or IFQ. This issue is covered under Appendix A.1. The allocation of non-whiting species to various sectors of the trawl fishery will be established through the inter-sector allocation process.

monitoring and self enforcement allows for cooperatives to engage in other types of self management that may not be possible (or that may take much longer to implement) through a regulatory process. Self monitoring and self enforcement are necessary ingredients in order for cooperatives to implement fishing restrictions such as bycatch performance standards and area closures. Without self monitoring and self enforcement (and access to the data necessary to self monitor and self enforce), cooperatives would not be able to verify and enforce management goals of the cooperative and, by extension, may not be able to adequately meet the goals specified by the Council.

Having NMFS close appropriate portions of the fishery is intended to ensure that overall management levels are adhered to. This ensures that catch levels do not exceed ABCs and OYs and that other fishery sectors are not impacted by higher than intended catch levels in sectors managed by cooperatives.

The consideration of factors in this subsection addresses several aspects of MSA and groundfish FMP guidance. Specifically, factors discussed here are related to guidance, goals, and objectives related to conservation, net benefits, harvester and sector health, and small entities and new entrants. These factors are outlined more specifically in the next section which serves as the analysis of this component.

Element of Cooperative Alternative	Related Category of Goals and Objectives									
	Conservation	Net Benefits	Disruption	Excessive Shares	Fairness and Equity	Harvester and Processor Sector Health	Labor	Communities	Small Entities and New Entrants	General Public
Divisibility of catch history and harvest cooperative stability	X	X				X			X	
Resource sharing and the golden rule	X	X				X				
Intra and Inter-cooperative management and responsibility	X	X				X				
Non-cooperative fishery	X	X				X				

❖ **Interlinked Elements**

Golden rule provision. This provision assures catcher vessels in a cooperative that they have access to their catch history, but no more (unless a private arrangement is developed for sharing catch differently). This is necessary in order for resource sharing arrangements to be solved. The lack of such a provision may make it difficult for some cooperatives to form.

Inter-cooperative agreements. An inter-cooperative agreement allows multiple cooperatives to enter into contractual arrangements for sharing catch with one another. This allows for harvest flexibility and risk sharing that may increase the potential for achieving economic benefits in the fishery while spreading the risk of unexpected bycatch events across more fishery participants.

❖ Analysis

Catcher vessels in the mothership and shoreside sectors would receive a non-divisible “catch history³” designation as well as a sector endorsement which assigns that permit to either the shoreside or mothership sector. The whiting catch history for each catcher-vessel permit will be assigned to a co-op where it is pooled with the catch history of other permits in that co-op, or assigned to the non-co-op fishery where it is pooled with other permits in the non-co-op fishery.

● Divisibility of Catch History and Harvest Cooperative Stability

Making these catch history assignments non-divisible⁴ fosters stability in terms of entities participating in the cooperative structure because it tends to reduce turnover in the fishery. As discussed in Chapter 4, stability in participation and relations is necessary for the successful operation of a cooperative. The written contracts governing the operation of a cooperative are a joint agreement among cooperative members, who will have arrived at that agreement through deliberation and negotiation. Having divisible catch history assignments makes it likely that new participants will be relatively frequent. These newer participants may not find the governing contracts agreeable, meaning that cooperative contracts may need to be frequently re-written. Alternatively, new entrants may elect not to join a cooperative, instead participating in the non-cooperative portion of the fishery. This would make participation in the non-cooperative fishery greater than it would be if catch history were not divisible and fishery participation were more stable.

Although non-divisible catch history may restrict new entry, historical information indicates that new entry in the mothership portion of the fishery is limited under status quo conditions, and that the criteria used for including/excluding participants from the fishery would be far more inclusive than exclusive under the existing alternative. When examined on a permit-by-permit basis, the number of permits that have participated in the fishery that would *not* receive a CV(MS) permit is two to three, depending on which criteria are used for granting a CV(MS) permit and catch history. All other catcher vessel permits that have engaged in mothership activity would be eligible to receive a CV(MS) permit with catch history, and would be allowed to participate in the fishery. This suggests that the restriction on new entry by having non-divisible catch history is slight, in part because many other barriers to entry into the whiting fishery exist. One such barrier is the cost of acquiring a catcher vessel with the equipment and capacity necessary to engage in whiting activity. These vessels typically have large horsepower and tend to range in size from 70 to over 100 feet in length, making them costly and acting as a barrier to entry to the fishery in and of themselves.

Cooperative institutions rely on close-knit relationships for success. Divisible catch history assignments make it more likely that new participants will enter and leave the fishery, possibly making cooperative operations more difficult and less successful, or making participation in the non-cooperative fishery more common than if relations were more stable. The reader is referred to Chapter 4 for more discussion of cooperative institutions and relationships in those institutions.

³ “Catch history” is a term used to describe a share of the allowable catch. The term “quota share” is not used in the cooperative analysis because quota share is divisible down to a single pound or percentage, while catch history is not divisible.

⁴ While catch history is not formally divisible, harvesters can enter into agreements with other harvesters in a cooperative and share all, or portions, of catch history through a private mutual agreement. In the absence of this agreement, each harvester has access to his/her catch history, but no more.

Enhanced cooperative stability may help foster fishery management and conservation for a variety of reasons. If a lack of cooperative stability results in more frequent participation in the non-cooperative portion of the fishery (which acts similar to an Olympic fishery), fishery participants may behave in a less “rational” way, resulting in higher bycatch or other impacts that are not beneficial to management. Cooperative stability depends on a relatively stable set of participants, for the reasons described above and in Chapter 4. Since cooperative stability is closely tied to having a non-divisible catch history designation, the creation of such non-divisible catch history helps foster conditions that are consistent with MSA – 303A(c)(1)(C)(ii) MSA – 303A(c)(1)(A) and Amendment 20 objectives 1 and 3.

In addition to conservation guidelines, the granting of non-divisible catch history to fishery participants appears to achieve net benefit and efficiency guidelines and guidelines referring to sector health. A fishery with a cooperative fishery structure that is relatively stable can be assumed to have a limited number of participants engaged in the non-cooperative portion of the fishery. If participation in that non-cooperative portion of the fishery is limited to a substantial degree, the behavior of participants in that portion of the fishery may continue to resemble the behavior of participants in a rationalized fishery. This is because with a limited number of participants in the non-cooperative fishery they are not likely to feel as threatened, or in as much competition, with one another. Less participation in the non-cooperative portion of the fishery equates to more participation in the cooperative portion of the fishery. The result of high degrees of cooperative membership and low participation in the non-cooperative fishery are operations that are “rational” and such rational behavior results in fishing operations that are relatively cost efficient, creating a net economic benefit. Such net economic benefits, and the consideration of such benefits, are consistent with the groundfish FMP objective 6, with groundfish FMP goal 2, and MSA National Standard 5. Such improvement in the cost efficiency of participants is also consistent with Amendment 20 objective 2, and with groundfish FMP goal 2.

The fact that catch history designations are not divisible may make it more difficult for new entrants to acquire permits. This is because new entrants would be required to purchase the entire catch history associated with a permit which is likely to be relatively costly. If new entrants cannot acquire the capital necessary to purchase a permit with catch history, then they are constrained in their ability to become the owner/operator of a vessel in a cooperative fishery. However, other means of becoming a new entrant may be available. A cooperative system in a high volume, capital-intensive fishery (like Pacific whiting) may be more conducive to the creation of fishing *corporations*, where multiple individuals have an ownership stake in fishing and processing operations, rather than a smaller volume, less capital-intensive fishery where independent owner operators are more common. Under a corporation-like structure, new entrants may purchase an ownership stake in a fishing company that is part of a cooperative-based fishery, work their way up the ranks in the business, and in this way become new entrants into the fishery.

● Resource Sharing and the “Golden Rule”

The amount of catch each vessel/permit in a cooperative can access may be the same as the catch history they bring to the cooperative, or it may be different if agreements are made among cooperative members for leasing catch history. In the absence of a leasing arrangement, the “Golden Rule” applies, where a vessel has access to the catch history associated with that permit even though catch history of vessels in a cooperative are pooled. This “Golden Rule” provision is intended to resolve resource-sharing arrangements if cooperative members cannot agree to sharing arrangements among themselves. If sharing arrangements are not resolved, participants may have trouble forming cooperative agreements, or (if an agreement is reached), a cooperative may de-stabilize as members continually deliberate over the sharing of catch. Therefore, allowing each vessel access to its own catch history in the absence of some other mutual arrangement helps foster stability among cooperatives and their members. In the absence of a Golden Rule, certain members could hold out against other cooperative members for a larger catch share

than they historically harvested (sometimes referred to as the “last man standing” effect). In the worst case scenario (where a group of individuals that cannot agree to catch-sharing arrangements), cooperative agreements can break down and members may move to the non-co-op fishery.

Non-divisible catch history and the Golden Rule both help ensure the stability of cooperative organizations. This affects the economic status of cooperative participants and the successful management of fishery resources. In the most extreme example of a cooperative structure without catch history assignments, participants might not be able to form or maintain cooperative agreements. In this event, fishing behavior would likely become more competitive, with more participants in the non-co-op fishery, and with higher rates of bycatch and less economically efficient fishing practices (for reasons explained above). As a result, the application of the “Golden Rule” to sectors of the fishery where catch history designations are necessary to form cooperative agreements is consistent with MSA – 303A(c)(1)(A), MSA – 303A(c)(1)(C)(ii), Amendment 20 Objective 1 & 3, MSA - 303A(c)(1)(B), groundfish FMP Goal 2, Amendment 20 Objective 2, and groundfish FMP Goal 2. However, it should be noted that catch history assignments and the Golden Rule provision are not always necessary for the successful operation of a harvest cooperative, as evidenced by the existing catcher-processor cooperative.

Intra and Inter-Cooperative Management and Responsibility

One likely outcome of having NMFS close cooperatives or sectors when catch limits are reached (and therefore treat participants in those cooperatives or sectors equally) means that cooperatives will manage individual members and develop procedures that shut down members when they have harvested their allowed catch. This reduces the burden on management agencies, but it also influences the agreements and governing contracts developed among cooperative members, simply because the cooperatives must be responsible for managing their members.

Since the cooperative is held responsible for a given amount of catch, more than the expected amount of catch by one member will reduce the catch available to other members. This fosters the development of rules for managing individual catches, and may include enforcement and penalty provisions that discourage behavior that may result in more catch than expected by a single cooperative member. Furthermore, because this arrangement requires cooperatives to self monitor and self manage, cooperatives and their members have a strong reason to require quality catch monitoring on board vessels so that one vessel is not at a relative advantage over others, and so that trust regarding catch levels is maintained. The lack of quality monitoring will erode trust in members’ catch levels, adversely impacting the cooperative.

Inter-cooperative agreements can be established for sharing bycatch or whiting harvest opportunities across cooperatives. Inter-cooperative agreements can be constructed to transfer catch history of whiting if one cooperative finds that it will not catch the rest of its available whiting and another cooperative has an interest in doing so. Inter-cooperative transfers of bycatch can also occur if one cooperative finds it needs more bycatch than another. The result of inter-cooperative bycatch agreements may lead to more “risk sharing” of bycatch species across fishery participants and greater utilization of available whiting. Inter-cooperative agreements can also be used by cooperatives to cover catch deficits if one cooperative has harvested more than its available catch history and another cooperative has catch history available. If an inter-cooperative agreement is formed between two cooperatives, NMFS will monitor the two cooperatives as one and close both cooperatives when the collective catch limit has been reached.

● Non-Cooperative Fishery

The presence of a non-cooperative fishery provides a way for catcher vessels to switch processors, while creating incentives for them to remain linked to their obligated processor. In order to switch processors, it

may be necessary for catcher vessels to participate in the non-cooperative fishery, which is expected to be less economically beneficial to participants for the reasons described above. Because of this, there is a strong incentive for catcher vessels to remain in the cooperative fishery, which entails retaining the existing processor linkage. This protects the interests of processors because it provides them with some certainty that catcher vessels and their deliveries will remain linked with their processing operations. This allows processors to engage in behavior that resembles a form of processor sector rationalization, leading to more profitability from processing activities.

Requiring that catcher vessels fish in the non-cooperative fishery before switching motherships will mean that catcher vessels will participate in a year (or more) of relatively economically inefficient production in order to do so. Harvesters may still generate revenue in the non-cooperative fishery, but they may also lose money. In any case, the net revenue generated by participants in the non-cooperative fishery is expected to be less than the net revenue generated by the cooperative fisheries.

The fact that the non-cooperative portion of the fishery is structured as an Olympic fishery means that non-cooperative fishery participants are likely to behave less “rationally” than they would in the cooperative fishery. Theory suggests that participants in the non-cooperative fishery would engage in a pure “race” for available catch. As a result, economic performance would deteriorate, bycatch would increase, and management performance of the fishery would suffer. In order to validate or invalidate this theory, it is useful to examine the operation of catcher vessels and processors in the existing fishery, which operates as a sector-wide non-cooperative fishery. In the current fishery, motherships are able to influence the behavior of catcher vessels that deliver to that mothership. It is possible that shoreside processors also influence the behavior of catcher vessels delivering to them, but it may be to a lesser degree. It is not unreasonable to expect this influence to temper the behavior of a catcher vessel in a non-cooperative mode and result in greater economic and bycatch performance in the non-cooperative fishery than may be expected based on theory.

When considering the operations of catcher vessels and processors in a cooperatively managed fishery with processor ties, the effect of the processor tie will influence the operations of a catcher vessel even if a catcher vessel is in a non-cooperative mode. This is because during this non-cooperative mode, catcher vessels and processors attempt to establish new linkages. In order to establish a new linkage, the non-cooperative catcher vessel must deliver the majority of its catch to a new processor in the year it participates in the non-cooperative mode. To do this, the catcher vessel will need to coordinate with the new processor and be folded into the processor rotation with other catcher vessels delivering to that processor. This tempers the speed and timing at which that catcher vessel harvests fish, translating into a more modest amount of effort exerted on the part of the catcher vessel and a more rational pace of fishing.

Differences exist between the mothership and shoreside sectors of the whiting fishery. In general, more coordination occurs between motherships and mothership catcher vessels than between shoreside processors and shoreside processing catcher vessels. In the mothership sector, catcher vessels must follow a mothership operation in order to make routine deliveries to that mothership and to coordinate the transfer of codends (codends are often owned by the mothership, while shoreside processors do not provide codends to harvesters). The mothership tries to optimize the economics of harvesting and processing operations, including measures to help ensure that catcher vessels linked to the mothership do not encounter bycatch problems that can prematurely shut down fishing and processing activity (especially if the catcher vessels linked to that mothership operation are in the same cooperative). By default, the non-cooperative catcher vessel will take on many of the same behaviors as the cooperative catcher vessels that deliver to that same mothership because it fishes the same general area and delivers in a rotation with those catcher vessels operating in the cooperative mode, and in this way the “race for fish” behavior expected of that non-cooperative vessel will be tempered. The shoreside sector appears to be slightly different in that harvesters operate more independently of shoreside processors, though some

coordination still occurs. While this information is largely anecdotal, several factors support this notion, including the fact that catcher vessels in the shoreside sector fish independently of the shoreside processor (except they fish within close enough proximity that they can make deliveries). Industry members have indicated that successful shoreside catcher vessels can leap another shoreside vessel that is in the same rotation. This means that participants in the non-cooperative portion of the mothership fishery may have more measured and paced fishing practices than shoreside catcher vessels in a non-cooperative mode. However, catcher vessels in both sectors may have their pace of fishing tempered to some degree by coordination with the processor.

Occurrences of catcher vessel participation in the non-cooperative fishery are expected to be relatively infrequent in an appropriately designed cooperative fishery. However, information suggests there may be more occurrences of shoreside vessels participating in a non-cooperative portion of the fishery than mothership catcher vessels. Supporting information is illustrated in the following tables. These tables show an ad-hoc vessel identifier and the associated processing company where that vessel delivered in 2004 through 2006. It is apparent that catcher vessels in the shoreside sector deliver to more processing entities than catcher vessels in the mothership sector. This may reflect the motivation catcher vessels in each sector have for switching processors, and by extension, participating in the non-cooperative fishery. If this shows motivation for switching processors, then there may be more frequent participation of shoreside whiting vessels in the non-cooperative fishery compared to catcher vessels in the mothership portion of the whiting fishery. Therefore, the performance of the shoreside sector would be less than that for the mothership sector, if both are managed with harvest cooperatives. This may be especially true when considering the influence processors have over catcher vessel activity in those sectors, and the effect this influence has on fishing behavior.

Table B-1. Mothership catcher vessel activity to mothership processing entities (2004 – 2006).

MS Catcher Vessel	MS Processor	2004	2005	2006
1	Supreme Alaska	X	X	X
2	Premier Pacific		X	X
3	Supreme Alaska		X	X
4	Premier Pacific		X	X
5	American Seafoods			X
6	Premier Pacific		X	X
7	Arctic Storm	X	X	X
8	Arctic Storm		X	
8	Premier Pacific			X
9	Supreme Alaska	X	X	X
10	American Seafoods		X	X
	Arctic Storm	X	X	X
11	Supreme Alaska	X	X	X
12	Arctic Storm	X	X	X
13	Arctic Storm			X
14	Arctic Storm		X	X
15	American Seafoods	X	X	X
16	Arctic Storm			X
	Premier Pacific			X
17	American Seafoods			X
18	Arctic Storm	X	X	X
19	American Seafoods		X	X
20	American Seafoods	X		
21	Arctic Storm	X	X	X

Table B-2. Shoreside catcher vessel activity to shoreside processing entities (2004 – 2006).

SS CATCHER VESSEL	SHORESIDE WHITING PROCESSOR	YEAR		
		2004	2005	2006
A	OCEAN GOLD SEAFOODS INC			X
B	PACIFIC BORNSTEIN DA YANG JESSIES ILWACO FISH CO INC	X	X	X X X
C	OCEAN GOLD SEAFOODS INC	X	X	X
D	PACIFIC OCEAN BEAUTY	X	X	X
E	JESSIES ILWACO FISH CO INC			X
F	PACIFIC BORNSTEIN	X	X	X
G	PACIFIC	X	X	X
H	PACIFIC		X	X
I	PACIFIC JESSIES ILWACO FISH CO INC	X	X	X X
J	PACIFIC			X
K	PACIFIC OCEAN GOLD SEAFOODS INC	X	X	X
L	PACIFIC DEL MAR OCEAN GOLD SEAFOODS INC	X	X	X
M	BORNSTEIN DA YANG			X X
N	TRIDENT	X	X	X
O	PACIFIC TRIDENT	X	X	X
P	PACIFIC SHORELINE WF ALBER	X	X	X
Q	TRIDENT	X	X	X
R	PACIFIC TRIDENT	X	X	X
S	JESSIES ILWACO FISH CO INC		X	X
T	OCEAN GOLD SEAFOODS INC	X	X	X
U	JESSIES ILWACO FISH CO INC	X	X	X
V	PACIFIC	X	X	X
W	OCEAN GOLD SEAFOODS INC	X	X	X
X	DEL MAR OCEAN GOLD SEAFOODS INC			X X
Y	DA YANG DEL MAR JESSIES ILWACO FISH CO INC			X X X
Z	PACIFIC DEL MAR	X	X	X
AA	PACIFIC	X	X	X
BB	PACIFIC JESSIES ILWACO FISH CO INC WF ALBER	X	X	X X
CC	OCEAN GOLD SEAFOODS INC		X	
DD	PACIFIC	X	X	X
EE	SHORELINE TRIDENT		X	X
FF	PACIFIC	X	X	X
GG	PACIFIC	X	X	X
HH	OCEAN GOLD SEAFOODS INC			X
II	PACIFIC	X	X	X
JJ	OCEAN GOLD SEAFOODS INC	X	X	X
KK	HALLMARK OREGON BRAND			X X
LL	TRIDENT	X	X	X

Element of Cooperative Alternative	Related Category of Goals and Objectives									
	Conservation	Net Benefits	Disruption	Excessive Shares	Fairness and Equity	Harvester and Processor Sector Health	Labor	Communities	Small Entities and New Entrants	General Public
Divisibility of catch history and harvest cooperative stability	X	X				X			X	
Resource sharing and the golden rule	X	X				X				
Intra and Inter-cooperative management and responsibility	X	X				X				
Non-cooperative fishery	X	X				X				

B-1.2 Annual Whiting Rollovers

- ▶ **Whiting Rollover Option 1:** There will not be a rollover of unused whiting from one whiting sector to another.

Whiting Rollover Option 2: Each year rollovers to other sectors may occur if sector participants are surveyed by NMFS and no participants intend to harvest remaining sector allocations in that year. Current provisions for NMFS to re-allocate unused sector allocations of whiting (from sectors no longer active in the fishery) to other sectors still active in the fishery will be maintained (see 50CFR660.323(c)—Reapportionments).

❖ Interlinked Elements

Bycatch limits. The interaction of bycatch limit management and a roll over provision may prove controversial if a sector is closed because of attainment of bycatch and has not harvested its full whiting allocation. That sector may plan to petition the Council for an increase in the bycatch limit at a later date, and if so, consideration would need to be given regarding the time at which a roll over of that sector's whiting to another should occur.

❖ Rationale and Policy Issues

A roll-over mechanism is intended to facilitate the attainment of the Pacific whiting OY if one or more sector does not intend to harvest the full allocation of Pacific whiting. If a rollover mechanism is not established, harvestable amounts of the whiting OY are likely to be foregone, resulting in less revenue than would otherwise be the case.

The consideration of a roll-over mechanism is related to MSA and groundfish FMP guidance that are related to net benefits, harvester and processor sector health, and labor. The rationale for considering this provision is largely economic, and the intention to allow a roll-over is to allow for greater economic

activity than would otherwise occur without a roll over. This ties into harvester and processor sector health because it stimulates economic activity and may be expected to facilitate a healthier economic status of harvesters and processors. Labor is affected by the same reasons.

Element of Cooperative Alternative	Related Category of Goals and Objectives									
	Conservation	Net Benefits	Disruption	Excessive Shares	Fairness and Equity	Harvester and Processor Sector Health	Labor	Communities	Small Entities and New Entrants	General Public
Roll over		X				X	X			

❖ Analysis

A rollover provision provides a mechanism for the Pacific whiting fishery OY to be fully taken if one or more directed whiting sectors does not intend to harvest their full allocation. Rolling over a sector's allocation to another sector grants access to harvestable surplus that otherwise may be foregone if such a rollover does not occur, and a sector does not intend to harvest their entire allocation. Under status quo conditions, this action occurs if NMFS determines that one sector does not intend to harvest their full allocation. Upon such a determination, NMFS reapportions the unused amount of whiting to a sector that is still active in the fishery. This action has occurred several times in recent years, as some sectors have failed to harvest their allocation. In a cooperative program, the rollover of one sector's whiting to another will likely require NMFS to calculate the available catch that is to be allocated to each cooperative in the sector that is the recipient of the rollover. Presumably, this will be done on a pro-rata basis. This is an additional administrative step above that which occurs under status quo.

If bycatch is managed at the sector, a sector may close due to bycatch limit attainment, but still have whiting available. In this case, a sector may petition the Council for an increase in the bycatch limit in order to re-open the fishery. Through the roll-over provision, that sector's whiting may be rolled-over to another sector before that sector can petition the Council for an inseason increase to the bycatch limit. Therefore, if a roll-over mechanism is adopted and a sector is closed because of attainment of a bycatch limit, the possibility of an inseason increase to the bycatch limit may need to be considered before rolling the closed sector's whiting to another sector.

Not having a rollover provision from one sector to another is a change from status quo. Not allowing a rollover may mean that the available harvest is not realized in some years, potentially reducing economic activity.

As discussed above, bycatch management is related to a carryover provision. It is not clear how a carryover provision would work if a sector is closed upon attainment of bycatch, but wants to increase its bycatch limit at a later date. If bycatch is managed at the sector level, it is possible that a sector may be shut down upon bycatch limit attainment. However, if a sector intends to lobby for an increase in the bycatch limit, it is not clear when NMFS would roll the unharvested whiting over to another sector. If

bycatch limits are set at the fishery-wide level, this concern does not exist.

B-1.3 Bycatch Species Management

The whiting fishery will be managed under bycatch limits for select groundfish species.

B-1.3.1 Bycatch Allocation Subdivision

Subdivision Option A (No Subdivision): Do not subdivide bycatch species.

Subdivision Option B (Subdivide by Sector): Subdivide bycatch species allocation among each of the whiting sectors (sector allocations will be determined in the intersector allocation process).

Subdivision Option C (Subdivide by Sector and Co-op/Non-co-op Fisheries): Subdivide bycatch species allocation among each of the whiting sectors, and within the sectors subdivide between the co-op fishery and non-co-op fishery (subdivision for the non-co-op fishery does not apply to the catcher-processor co-op program).

- ▶ **Subdivision Option D** (Subdivide by Sector, Co-op/Non-co-op Fisheries, and Among Co-ops): Same as C, but in addition subdivide bycatch among the co-ops.

B-1.3.2 Bycatch Management

- ▶ *Under the Council's preliminary preferred alternative, the references to "seasonal releases" would be eliminated from the following paragraph.*

All sectors and co-ops will close as soon as the whiting fishery bycatch cap is reached for one species. The Council may use *seasonal releases* of allocations and area closures (seasonal or year-round) to manage overfished stocks in the co-op and non-co-op fisheries. The *seasonal releases* and area closures may be the same or different for different species. Area closures may be year-round, seasonal, or triggered automatically by the attainment of certain levels of catch.⁵

For Subdivision Option A (No Bycatch Subdivision): If bycatch species are not allocated among the sectors, then:

Bycatch Management Option 1: Initially, the Council will not use seasonal releases and a controlled pace may be established if the sectors choose to work together cooperatively, potentially forming an inter-sector/inter-co-op cooperative.

Bycatch Management Option 2: There will be seasonal releases of bycatch allocation. At the outset, it is envisioned that the seasonal approach will be used to manage widow rockfish bycatch; for canary rockfish and darkblotched rockfish, status quo management will be maintained (i.e., no sector allocation and no seasonal apportionment).

A seasonal release bycatch management program will be implemented through regulation.⁶

In practice, seasonal releases protect the next sector entering the fishery. For example, a May 15-June 15 release will be used by the catcher-processors and motherships, but it protects the shoreside fishery; the June 15-September release will be used by shoreside and whatever catcher-processors and

⁵ The Council asked for analysis of *seasonal releases* and area management at the sector, individual, and co-op levels (if here is an inter-co-op agreement).

⁶ For reference, a similar program is used to manage halibut bycatch in NPFMC-managed flatfish and Pacific cod fisheries, see 50CFR679.21(d).

motherships are still fishing whiting, and to protect a fall at-sea season after September 15; the final release in September will again be shared by the catcher-processors and motherships, assuming shoreside is done fishing.

For example:

1. Status quo for canary and darkblotched rockfish; i.e., no seasonal or sector allocation.
2. May 1-June 15: 40 percent of widow hard cap released.
3. June 15-August 31: An additional 45 percent of widow hard cap released.
4. September 1-December 31: Final 15 percent of widow hard cap released.
5. Once a seasonal release of widow rockfish is reached, the whiting fishery is closed to all three sectors for that period. The fishery re-opens to all three sectors upon release of the next seasonal release of widow rockfish.
6. Unused amounts from one seasonal release rollover into subsequent release periods.

(Note: percentages are for illustration purposes only, actual release percentages will be developed through the Council process).

For Subdivision Options B, C, and D (Bycatch Subdivision Among Trawl Sectors):

► **Rollover Option 1:** If each sector has its own allocation of bycatch, unused bycatch may be rolled over from one sector to another if the sector's full allocation of whiting has been harvested or participants in the sector do not intend to harvest the remaining sector allocation.

Rollover Option 2: Rollovers are not allowed.

For Subdivision Options C, and D (Bycatch Subdivision Among the Co-op and Non-co-op Fisheries):

A sector's bycatch allocation will be divided between the co-op and non-co-op fishery of the sector, in proportion to the whiting allocated to each fishery. The co-op fishery will close based on attainment of its allocation.

Option 1: For the non-co-op fishery there will be a bycatch buffer. When only the buffer remains, the fishery would close temporarily while a determination is made as to a possible re-opening. If the fishery is reopened it will close based on attainment of its allocation. The buffer amounts considered will be:

Sub-option i: 20 percent

Sub-option ii: 10 percent

Sub-option iii: 5 percent

► **Option 2:** For the non-co-op fishery there will not be a buffer. The fishery will close based on projected attainment of its allocation.

For Subdivision Option D (Bycatch Subdivision Among Co-ops):

Bycatch will be allocated to each co-op pro rata in proportion to its whiting allocation. Each co-op will cease fishing when its bycatch allocation is reached.

❖ Interlinked Elements

Roll over. See previous.

❖ Rationale and Policy Issues

Bycatch limits in a cooperative program are put in place as a catch management tool in order to prevent exceedance of ABCs and OYs, and also to prevent harm to other fishery sectors that may be impacted by higher than expected catch amounts of bycatch species. The appropriate level of bycatch management is a trade-off between the appropriate level of individual accountability, and the appropriate level of risk sharing across fishery participants. For stocks with low OYs and highly variable and uncertain catch events, the risk posed to fishery participants and their fellow cooperative members may be quite high if bycatch is managed at the cooperative level and there is a potential for relatively few tows to catch the full bycatch limit of that cooperative. However, the spreading of bycatch management across a relatively wide enough number of participants may mean that those participants cannot agree on bycatch management conditions and successfully manage that bycatch collectively. Therefore, the appropriate balance is a mix of risk spreading and individual accountability.

A seasonal release of bycatch acts similarly to a sector-specific allocation to each of the whiting sectors, but with more flexibility, and with less risk to individual harvesters. If a common bycatch limit is specified and a bycatch limit is reached (and the fishery is closed) all three sectors can again prosecute the fishery after the subsequent release. This seasonal release acts like a sector allocation because each fishery operates at different times of the year. Depending on how bycatch is released, it may play more into the hands of some sectors during specific times of the year and less into the hands of another sector during that same time period.

Area management of bycatch is intended to minimize the encounters of bycatch species through a regulatory mechanism which would close areas where bycatch is relatively high.

A bycatch roll-over gives other sectors access to bycatch that may not be necessary to another sector. This provides increased certainty to the sectors receiving the bycatch that they will not be closed due to attainment of a bycatch limit and increases the chance that the whiting OY will be attained.

A non-cooperative fishery bycatch buffer is intended to serve as a risk-mitigating factor that protects cooperative fishery participants from the actions of non-cooperative fishery participants.

Management of bycatch in a cooperative fishery meets conservation goals because it restricts the harvest of a non-target species and provides some assurance that management targets will not be exceeded. This helps rebuild overfished species, promotes conservation and management, and reduces bycatch (compared to no bycatch management). As a result, bycatch management in a cooperative program is consistent with MSA-303A(c)(1)(A), MSA-303A(c)(1)(c)(ii), and Amendment 20 Objective 1&3.

The type of bycatch management can have an effect on the operations of a sector, the economic status and operation of that sector, and the net benefits associated with engaging in fishing operations. In particular, if bycatch is managed across the three whiting sectors, it is possible that a race for fish would ensue because of the common bycatch limit (often described as a “race for bycatch”). Such behavior is contrary to goals of capacity reduction and efficiency. However, it is not necessarily the case that a common bycatch limit would lead to such behavior, although it is possible. A common bycatch limit has the effect of spreading the risk of unexpected bycatch events across a wider number of participants, thus relating bycatch management to equity concerns contained in the MSA.

Element of Cooperative Alternative	Conservation	Net Benefits	Disruption	Excessive Shares	Fairness and Equity	Harvester and Processor Sector Health	Labor	Communities	Small Entities and New Entrants	General Public
Bycatch Management	X	X			X	X				X
Bycatch Subdivision	X	X			X	X				X
Seasonal Releases and Area Management	X	X			X	X				X
Bycatch Buffers	X	X			X	X				X

❖ Analysis

● Bycatch Management and Bycatch Subdivision

As shown above bycatch limits can be imposed in several ways, including a common bycatch limit for the entire directed whiting fishery; a specific limit for each sector; a specific limit for each sector where each sector's limit is divided between the cooperatives and the non-cooperative portion of the sector; and a limit applied to each cooperative and to the non-cooperative portion of the fishery.

Bycatch limits in the whiting fishery introduce several types of risk. As noted above, bycatch limits (and the successful management thereof) require that harvesters agree to management conditions. As bycatch limits are spread across more participants, the possibility that those participants can agree decreases. In the worst case scenario, harvesters will not be able to agree to bycatch management terms. Because attainment of a bycatch limit means closure of the fishery, sector, or cooperative (depending on the level of management), harvesters may fear preemption of their target opportunities if a bycatch limit is attained. If they cannot successfully agree to bycatch management conditions, they are therefore liable to begin engaging in Olympic-style behavior, potentially eroding the gains typically attributed to rationalization. Such behavior may mean faster-paced harvest activity, more capital used in the fishery, and lower quality products, among other things.

Bycatch limit management at a smaller, cooperative scale may mean that harvesters are more likely to agree to bycatch management terms. However, it also increases individual risk and makes it less likely that a large and unexpected catch event can be absorbed by the collective. This may lead to a bycatch-induced closure that would be limited to the cooperative (rather than the entire fishery) but the impact on the individual harvester would be greater than if bycatch management were spread across a wider collective because it would be more likely to eliminate the future harvest opportunities for that individual.

One factor that may mitigate the risk to individual harvesters if bycatch is managed at the cooperative level is the presence of an intercooperative agreement to manage bycatch. An intercooperative agreement can allow individual cooperatives to develop relationships between one another for successfully managing

bycatch species and sharing the amount of bycatch between them, thus spreading the risk across a wider array of participants. Since intercooperative agreements rely on each cooperative agreeing to enter into that relationship, the development of such relationships is likely to rely heavily on each individual cooperative having a successful management plan for their own cooperative members. This provides greater certainty to the other cooperative that management is likely to be successful and therefore, mutually beneficial.

The following table illustrates the type and level of risk associated with each level of bycatch management starting with the lowest level (IFQs) and ending at the highest level (fishery wide bycatch limits). This table is also found in Chapter 4 of the EIS. This table illustrates two forms of risk faced by harvesters when dealing with bycatch species, particularly for overfished rockfish where relatively large and unexpected tows can occur. This table shows that if bycatch is managed at a small level, the implication of an unexpected catch event spilling over and affecting other harvesters is relatively small compared to a case where bycatch is managed at a relatively large level. Inversely, if bycatch is managed at a low level, the burden faced by individuals from an unexpected catch event is large relative to a case where bycatch is managed at a larger level.

Level of Bycatch Management	<u>Collective Risk</u> (risk of a race for bycatch)	<u>Individual Risk</u> (risk posed to individuals from catch uncertainty and individual accountability)
IFQ	Low	High
Co-op level	Med-Low	Med-High ⁷
Sector Level	Med-High	Med-Low
Fishery Level	High	Low

● Seasonal Releases and Area Management

Seasonal releases of bycatch can have a similar affect to sector-specific allocations of bycatch. The difference, however, is in the amount of risk spread across fishery participants. In a seasonal release strategy, risk is spread across a wider number of participants, while in a sector-specific allocation, risk is spread across fewer participants.

Seasonal releases are one method of protecting one sector from another (since the sectors operate at different times) and minimizing the risk of bycatch in one sector affecting opportunities in another sector. If the amount of bycatch allocated to each season is well structured, such releases may allow successful prosecution of whiting activity while insuring that the sector that starts later in the year is not pre-empted by the attainment of a bycatch limit from sectors operating earlier in the year. However, a seasonal release tool will almost certainly have an allocative effect. Depending on how the seasonal release is structured, it may benefit some sectors more than others. For example, if a substantial portion of widow

⁷ If inter-cooperative agreements are formed for managing bycatch across co-ops, a co-op level allocation of bycatch species may have a low level of risk posed by individual accountability and catch uncertainty, while also having a low level of risk that a race for bycatch could develop. This is because a co-op level allocation of bycatch forces the cooperative to internalize bycatch management and this would be evident in the cooperative agreement signed by harvesters in that cooperative. Such internalization of bycatch management in the co-ops would tend to foster the development of high levels of individual accountability for bycatch by members. Allowing inter-cooperative agreements to form would allow cooperatives to spread the risk of catch uncertainty across cooperatives (thus reducing individual risk) if those cooperatives can agree to terms.

rockfish is released in May and then released again in September, the shoreside sector may be at a relative disadvantage. This is because the at-sea sectors could benefit from the first release before the shoreside sector opens, and would then benefit from the September release when the shoreside sector begins losing access to the whiting resource. The following figure illustrates the average catch of widow rockfish by month and sector in 2006 and 2007.

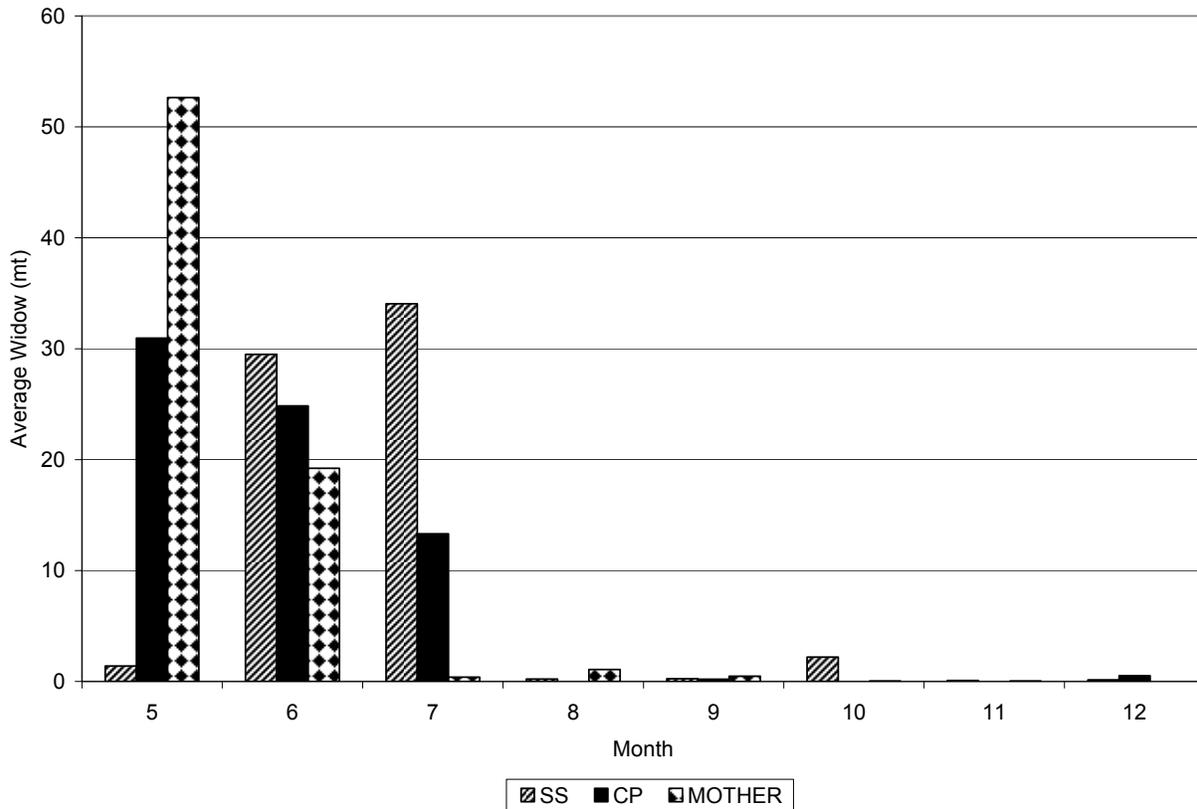


Figure B-1. Average monthly catch of widow rockfish by month and sector (2006 and 2007).

Seasonal releases of bycatch may make it more difficult for harvesters to change the timing of their fishing activity. If, for example, 50 percent of the widow rockfish is allocated between May and June based on past fishing practices, that allocation may preserve fishing opportunity based on past practice. If one sector wants to spend more time fishing in the fall months, however, that widow allocation may make it difficult for harvesters to fish later in the year (because there would presumably be less widow later in the year than would otherwise be the case). In contrast, if each sector or cooperative has its own bycatch limit, harvesters can time their activity for when they find it most appropriate, and use the allocated bycatch during that time. In this case, changing harvest timing may be relatively simple compared to having seasonal releases of bycatch.

One benefit of the seasonal release strategy is that (assuming it is applied to a fishery-wide bycatch limit), the seasonal release strategy will continue to minimize the risks faced by individuals (as would be the case under a fishery level bycatch allocation) while preserving fishing opportunity throughout various times of the year. For example, if a fishery-wide bycatch limit is used and harvesters cannot agree to a bycatch management plan, then a seasonal release strategy would continue to protect the shoreside whiting sector from the at-sea sectors (which start earlier). In addition, harvesters who encounter large and unexpected catch events would face a relatively low burden for doing so because the covering of that

catch event would be spread out across the multiple participants in the fishery instead of being concentrated on that one harvester or that one harvester's cooperative.

Area Management is a tool that can be described as one used to reduce the risk of unexpected tows of bycatch species. It may be reasonable to expect that a successful bycatch management plan from a cooperative would include provisions for area management, and therefore establishing area management through regulation and implementation by the agency would be used to reduce risk if bycatch limits are set at the fishery level, or to mitigate the risk that a harvester in the non-cooperative portion of the fishery will unexpectedly encounter a large amount of a bycatch species. Area management may be necessary if bycatch is managed at the fishery level because individual cooperatives would not be internalizing management of their own bycatch and would still be sharing some of the burden with other cooperatives. If cooperatives are internalizing the management of their own bycatch, bycatch management provisions in the cooperative agreements are likely to be relatively more robust. As cooperatives become less responsible for their own bycatch, it is not unreasonable to expect that the cooperative agreements, and the bycatch management plans contained therein, would be less robust, possibly making the implementation of area management restrictions through regulation more necessary.

● Bycatch Buffers

Bycatch buffers can be used to protect co-op fishery participants from unexpectedly large bycatch events in the non-co-op fishery. If buffers do not exist and a non-cooperative fishery exceeds the amount of bycatch allocated to it, then that overage would need to come from other fishery participants. If bycatch is managed at the co-op and non-co-op level with aggregate limits on each sector, then an overage in a non-co-op fishery can restrict opportunities for co-ops in that same sector. If the non-co-op fishery has a buffer, then that buffer would hedge against the possibility of a bycatch overage restricting the fishing opportunities for co-op fishery participants.

The appropriate buffer size is likely to vary by species. Empirical evidence from the fishery under status quo conditions provides one example of catch uncertainty and the magnitude of buffers that may be necessary for a non-co-op fishery. This is a non-co-op fishery may act similarly to the existing fishery. Based on evidence from past recent years, canary rockfish and darkblotched rockfish appear to be subject to less variability or less potential for "disaster tows". However, in one of the last four years, a large tow of canary rockfish occurred which jeopardized the continued operations of all three whiting sectors. In this event, there is not likely to be a buffer large enough to matter. However, ignoring that particular event, other data suggests that canary rockfish encounters are less variable and therefore less likely to need a large buffer. Darkblotched rockfish appears to exhibit a similar pattern with less variable catch events. Widow rockfish is different from these two species because there is substantial variability in catch events. Some tows encounter relatively little, while others may encounter several dozen metric tons. In the case of widow rockfish, a large buffer on the non-co-op fishery may be necessary to minimize the risk to the co-op fisheries posed by the presence of a non-co-op fishery. In any event, there does not appear to be a "one size fits all" buffer and therefore if buffers are used, a range of available buffer sizes to be used on a case by case basis may be the best approach.

B-1.4 At-sea Observers/ Monitoring

❖ Provisions and Options

The Council has not determined provisions and options specific to the co-op design components; however, the Council has fleshed out extensive provisions for Tracking, Monitoring, and Enforcement for trawl sector management under the IFQ alternative. See Section A-2.3.1 for a description of the provision

and options pertaining to discard, at sea catch monitoring, shoreside landings monitoring, catch tracking mechanisms, cost control mechanisms, program performance measures, and cost recovery.

❖ **Interlinked Elements**

Self monitoring and self enforcement of cooperative members by the cooperative organization is related to the type of observers/monitoring in place for the fishery and access to information reported by the observation/monitoring system. In addition to having access to catch information from the observation/monitoring system, self monitoring and self enforcement relies on relatively robust monitoring systems. The lack of a robust monitoring system may make it problematic to self enforce if cooperative members can successfully question the accuracy of the data and avoid enforcement penalties that may be brought by the cooperative organization. Furthermore, the lack of robust data may decrease the confidence that individual cooperative members have in the actions of other members and this can begin to compromise the success of the cooperative agreement. In addition to the need to support self enforcement, management of the fishery throughout the year (such as cooperative-imposed area restrictions to minimize bycatch) can be compromised if monitoring of the fishery is not relatively robust, largely for the same reasons that enforcement is compromised. A cooperative manager could, for example, suggest area closures be put in place mid season, but if catch data is questionable then the ability for that cooperative manager to implement management measures may be compromised.

❖ **Rationale and Policy Issues**

At sea monitoring is necessary to support a rationalization program that manages total catch (retained catch and discards) because it documents events at sea which may not be documented by fish tickets alone (such as discard events). If at sea monitoring was not in place in a rationalized fishery intended to manage total catch, then individual harvesters would have a large incentive to misreport catches of species that may constrain harvest activities. If such misreporting were to occur, the total mortality attributed to fishing activity would not be known, thus compromising the ability to successfully manage fisheries within ABCs and OYs. Furthermore, such misreporting may tend to benefit those that misreport (in an economic sense), but if such misreporting is eventually accounted for, it may affect all fishery participants equally.

Element of Cooperative Alternative	Conservation	Net Benefits	Disruption	Excessive Shares	Fairness and Equity	Harvester and Processor Sector Health	Labor	Communities	Small Entities and New Entrants	General Public
At Sea Observers/Monitoring	X	X			X	X				

❖ Analysis

The following paragraph and table describing status quo was excerpted from Appendix A, Section 2.3.1 on Tracking, Monitoring and Enforcement.

Vessel monitoring systems (VMS) are employed by all vessels except motherships. Paper logbooks are in place in all harvest sectors - they are mandatory for shoreside vessels but voluntary for the at-sea motherships and catcher-processors. The state fish tickets and logbooks are integrated into a single fish ticket database by the Pacific States Marine Fisheries Commission and are supported by a federal grant to the Pacific States Marine Fisheries Commission and by state funding. The industry pays for the cameras while NMFS pays for review and analysis of the resulting video. Observer coverage in the Non-whiting fishery is about 25 percent which is funded through NMFS while the at-sea motherships and catcher processors use hire observers from a private company. The equipment, training, and data collection and analysis associated with these observers is paid for by NMFS. Plant monitors and electronic fish tickets are currently employed in the shoreside whiting fishery. Plant monitors are paid for by the industry where as NMFS covers the cost of their equipment, training, and collection and analysis of the data developed by the plant monitors.

Status Quo	Shorebased	Shorebased	At-Sea	At-Sea	At-Sea
	Non-Whiting	Whiting	Mothership	Mothership Processor	Catcher-
	Trawl	Trawl	Trawl	Processor	Processor
VMS	X	X	X		X
Logbooks	X	X	X	X	X
Cameras		X			
Observers	25% WCOP		2	2	2
Fish Tickets	X	X			
Electronic Fish Tickets		X			
Plant Catch Monitors		1			

Catch monitoring is a necessary tool for cooperative function. In order to hold the overall fishery, each sector of the fishery, and each cooperative to a catch limit, catch monitoring must be in place to verify catch relative to that catch limit. Furthermore, catch monitoring must be applied in a manner that is substantially equal to all participants harvesting fish in a fishery that is managed with cooperatives. Equal application of catch monitoring to all participants in a fishery is arguably necessary because it puts all participants on an equal footing, and this equality is necessary for self management of the fishery by the cooperative and their governing contracts. If catch monitoring was not applied equally, cooperative members may “second guess” the reported catch of other cooperative members, or feel that other cooperative members are at a relative advantage in some fashion. This second guessing among cooperative participants would tend to result in a destabilization of a cooperative because of an erosion of trust among cooperative members. If substantial second guessing, or questioning, of other participants’ catch reporting comes into play, it may begin to break down the strength of the cooperative and the strength of the cooperative contract.

One necessary component to a catch monitoring program in a cooperative based fishery is that cooperative members have access to catch data. This is necessary in order for the cooperatives to self manage and enforce the catch quantities of the cooperatives and the cooperative members. It is also necessary so that cooperatives can develop responsive management tools, such as voluntary area management closures, to reduce bycatch. Without access to catch information, it may prove quite difficult for cooperative members to self manage and enforce the actions of cooperative members.

Catch monitoring will likely cost fishery participants. Estimates for an at sea observer range from approximately \$300 to \$400 per day, and video cameras are generally less. Participants in the whiting fisheries already have observer coverage, or are expected to be required to comply with monitoring requirements prior to the implementation of a rationalization program (because of Amendment 10). Therefore, rationalization itself is not expected to substantially change the cost that fishery participants bear, but successful management of a cooperative-based rationalization program is likely to require that participants have access to catch data.

The cost to the agency of monitoring a fully rationalized trawl fishery may be somewhere on the order of \$5.2 million. Most of this additional cost can be attributed to the non-whiting sector because of the number of vessels and days spent at sea and the relative change of that fishery from status quo to rationalization. Costs to the agency that are not attributed to a change in the observer program may be on the order of \$2 million if all sectors of the trawl fishery are rationalized.

The sector specific monitoring costs for sectors that may be managed with cooperatives are as follows:

- For the shoreside whiting portion of the fishery, the cost may be on the order of \$0.9 to \$1.1 million, with roughly half of that cost being directly attributed to rationalization.
- The cost of monitoring the mothership sector may be on the order of \$600,000 to \$800,000, with much of that being attributed to status quo conditions where observers exist on processing vessels, and because of the cost of placing cameras or observers on catcher vessels (which is being implemented prior to rationalization). Therefore, minimal cost is expected to be attributed to rationalization.
- The cost of rationalizing the catcher processor sector is expected to be minimal, if at all. The existing cost of monitoring that fishery is on the order of \$400,000. Rationalization may add up to \$60,000 depending on whether additional features are added to the monitoring system.

The following paragraphs excerpted from Appendix A, Section 2.3.1 and speak to catch monitoring, catch tracking, landings monitoring, cost control.

Catch Monitoring: Under status quo, mothership processing vessels and catcher-processors currently carry two observers. This monitoring requirement would remain for these vessels under trawl rationalization. However a new requirement would be the placement of observers, possibly supplemented by cameras, on catcher-vessels that deliver to motherships. (Note that for the 2009-10 Groundfish Harvest Specifications and Management Measures the Council is proposing video monitoring for these vessels.) Cameras are currently employed as an electronic monitoring system (EMS) in the shoreside whiting fishery as a monitoring tool. The EMS system employed under the EFP for Pacific whiting allows shoreside vessels to dump unsorted catch directly below deck and would allow unsorted catch to be landed, providing that an electronic monitoring system (EMS) is used on all fishing trips to verify retention of catch at sea. The EMS is an effective tool for accurately monitoring catch retention and identifying the time and location of discard events. Catch monitors are already employed in the shorebased whiting fishery. The addition of observers and EMS monitoring measures for catcher-vessels that deliver to motherships is to assure that all fish including discards are delivered to the mothership. See also discussion under Program Costs.

Catch Tracking: Other than the declaration reports and the processor production reports, these catch tracking mechanism are largely the conversion of existing state paper-based systems. Converting to electronic reporting is seen as aid for improved accuracy of reported data and better quota monitoring at the individual vessel, co-op, and sector level. Declaration reports and processor production reports are seen as tools that improve ability to enforce regulations. One of the issues facing the implementation of

these reporting systems is how best to adapt the existing state paper-based systems to the needs of the Trawl Rationalization Program.

Landings Monitoring: For shoreside nonwhiting trips there is a proposed requirement for 100 percent observer coverage on vessels and for shoreside whiting trips, observers in addition to or as a replacement for video monitoring. Note that the Council's preferred alternative is for the Shoreside Whiting and Nonwhiting Fisheries to be managed under an individual fishing quota (IFQ) system and as a single combined sector. However, if Congress provides the needed legislation, the shoreside whiting fishery may be managed as a co-op with processor linkages rather than with IFQs. In addition to 100 percent observer coverage, there is also being proposed a 100 percent shoreside monitoring as the sorting, weighing, and reporting of any ITQ or IBQ species must be monitored by a catch monitor.

Cost Control: All trawl sectors (shorebased non-whiting, shorebased whiting, mothership catcher vessels and processors, and catcher-processors) would require certification or licenses that show they meet the monitoring requirements. In order to reduce costs, landing hours could be restricted.

Many of the other requirements will be similar to those currently specified as part of the 2008 Pacific Whiting Shoreside Fishery Maximized Retention and Monitoring Exemption Program (see http://www.pcouncil.org/bb/2008/0308/F1a_SUP_ATT2.pdf). This program outlines the reporting requirements, equipment needs, and vessel and plant responsibilities including relationships with plant monitors, notification and declaration procedures, and the requirement of a NMFS monitoring plan. For ITQ and co-op fisheries, these elements would have to be expanded to include existing observer requirements including safety requirements as well as the responsibilities of the crew to assist the observer in the weighing and sorting of catch and responsibilities of the captain to assure that vessel operations do not hinder observer efforts. For ITQ vessels, there is likely to be a need to purchase appropriate scales to meet these requirements. The actual design of these reports are under development and most likely be more fully analyzed for public comment under the rule making process which converts the Council's preferred alternative into regulation. This process includes addressing reporting issues under the Paperwork Reduction Act process and under the Regulatory Flexibility Act (regulatory reporting burden on small businesses).

With respect to a catcher-processor voluntary co-op, it is not clear that the sector as it currently operates is a LAPP as the management alternatives developed by the Council do not include a special permit or endorsement. In the MSA, the term "limited access privilege:"

- (A) means a Federal permit, issued as part of a limited access system under section 303A to harvest a quantity of fish expressed by a unit or units representing a portion of the total allowable catch of the fishery that may be received or held for exclusive use by a person; and
- (B) includes an individual fishing quota; but
- (C) does not include community development quotas as described in section 305(i).

However, under the tracking and monitoring provisions vessels are to be certified and under the catcher-processor provisions, there are fall-back ITQ processes in case the voluntary co-op breaks up. It is not clear if these requirements can be deemed a limited access privilege. In addition, NMFS is in the process of developing formal LAPP guidance which may affect this determination. (See <http://www.nmfs.noaa.gov/sfa/PartnershipsCommunications/lapp/LAPPguidance.htm>)

The tables and text below were excerpted from Section A-2.3.1 and they show current tracking and monitoring costs by sector and what the costs of additional observers, plant monitors, and cameras may be as a result of the trawl rationalization program.

Mothership Whiting: This analysis follows a similar approach to the shoreside whiting analysis (A-2.3.1). Under status quo, mothership processors are required to carry two observers and the catcher vessels have no direct monitoring, therefore the costs are about \$250,000. Adding observers to the catcher vessels increases the costs to \$672,000 and adding observers and cameras to \$828,000.

		Mothership Whiting		
<u>Catcher Vessels</u>				
Number		20		
Season Length		60		
observer days		1200		
observer variable cost per day		\$350		
Observer Cost			\$420,000	
Camera unit cost		\$6,000		
Camera Cost			\$120,000	
<u>Processor</u>				
Number		6		
Season Length		60		
Operating Days		360		
Number observers		2		
Observer cost per day (1)		350		
Total monitor variable cost			252000	
Camera Unit cost		6000		
Camera cost			36000	
Status Quo -Observers Processors				\$252,000
T&M Alternative 1 Observers Catcher vessels and Processors				\$672,000
T&M Alternative 2 Observers, Monitors, and Cameras				\$828,000

Catcher-Processor Whiting—Unless cameras are required, there will be no change to industry costs of tracking and monitoring as catcher-processors already carry 2 observers. If cameras are also required, industry costs rise from \$378,000 to \$432,000.

Catcher-Processor Whiting			
<u>Processor</u>			
Number		9	
Season Length		60	
Operating Days		540	
Number observers		2	
Observer cost per day (1)		350	
Total monitor variable cost			378000
Camera Unit cost		6000	
Camera cost			54000
Status Quo			378000
Alternative 1 observers			378000
Alternative 2 observers and cameras			432000

To read a summary of the comparison of costs and revenues, see the summary at the end of Section A-2.3.1.

□ **B-1.5 Mandatory Data Collection (Option)**

- Mandatory submission of economic data for LE trawl industry (harvesters and processors).
- Voluntary submission of economic data for other sectors of the fishing industry.
- Include transaction value information in a centralized registry of ownership.
- Formal monitoring of government costs.

Mandatory Provisions: The Pacific Fishery Management Council and the National Marine Fisheries Service shall have the authority to implement a data collection program for cost, revenue, ownership, and employment data, compliance with which will be mandatory for members of the West Coast groundfish industry harvesting or processing fish under the Council’s authority. Data collected under this authority will be treated as confidential in accordance with Section 402 of the MSA.

A mandatory data collection program shall be developed and implemented as part of the groundfish trawl rationalization program and continued through the life of the program. Cost, revenue, ownership, employment and other information will be collected on a periodic basis (based on scientific requirements) to provide the information necessary to study the impacts of the program, including achievement of goals and objectives associated with the rationalization program. This data may also be used to analyze the economic and social impacts of future FMP amendments on industry, regions, and localities. The program will include targeted and random audits as necessary to verify and validate data submissions. Data collected under this authority will be treated as confidential in accordance with Section 402 of the MSA. Additional funding (as compared to status quo) will be needed to support the collection of these data. The data collected would include data needed to meet MSA requirements (including antitrust).

The development of the program shall include: A comprehensive discussion of the enforcement of such a program, including discussion of the type of enforcement actions that will be taken if inaccuracies are found in mandatory data submissions. The intent of this action will be to ensure that accurate data are collected without being overly burdensome on industry in the event of unintended errors.

Voluntary Provisions: A voluntary data collection program will be used to collect information needed to assess spillover impacts on non-trawl fisheries.

Central Registry: Information on transaction prices will be included in a central registry of whiting endorsed permit and processor permit owners. Such information will also be included for sales and lessees.

Government Costs: Data will be collected and maintained on the monitoring, administration, and enforcement costs related to governance of the rationalization program.

❖ **Interlinked Elements**

There do not appear to be any elements substantially interlinked with data collection.

❖ **Rationale and Policy Issues**

The goal of the Council's rationalization alternatives involves several economic components. One stated goal of the program is to:

Create and implement a capacity rationalization plan that increases net economic benefits, creates individual economic stability, provides for full utilization of the trawl sector allocation, considers environmental impacts, and achieves individual accountability of catch and bycatch

The Council has also enumerated several objectives and constraints for the program that involve economic components and monitoring of the program.

The Magnuson-Stevens Fishery Conservation and Management Act (as amended through January 2007) also places importance on social and economic outcomes resulting with a rationalization programs. Sec. 303A.(c)(1)(C) states that any limited access privilege program (LAPP) to harvest fish submitted by a Council or approved by the Secretary under this section shall promote social and economic benefits.

The Act also contains a monitoring requirement to determine whether a LAPP is meeting its goals. Sec. 303A.(c)(1)(G) states that any LAPP shall:

include provisions for the regular monitoring and review by the Council and the Secretary of the operations of the program, including determining progress in meeting the goals of the program and this Act, and any necessary modification of the program to meet those goals, with a formal review 5 years after the implementation of the program and thereafter to coincide with scheduled Council review of the relevant fishery management plan (but no less frequent than once every 7 years).

In order to meet the monitoring requirements for the economic goals, improved and expanded economic data would be needed for the trawl IFQ fishery. One of the current trawl rationalization alternatives

provides for a mandatory economic data collection provision. Regardless of whether the economic data collection is mandatory or voluntary, the types of data necessary to monitor the effects of the program are the same. However, the choice of mandatory or voluntary data collection will likely have a large effect on the Council's and the NMFS' ability to consistently and systematically collect the necessary data.

Despite the NWFSC's recent progress in voluntary economic data collection, economic analysis of the limited entry trawl fishery has historically been severely constrained by a lack of economic data. Incomplete cost-earnings data on vessels and processors has been a particular problem. While PacFIN provides data on most, but not all, earnings sources for limited entry trawlers, little data on the cost of operating harvesting vessels has been available. Data on the costs and earnings of processing plants has not been available to NMFS or Council economists. This lack of economic data has hampered attempts to measure economic performance, build regional economic input-output models, assess overcapacity, and build models which predict economic behavior.

The first attempt to collect economic data from limited entry trawl vessel owners occurred in 1999 and 2000. This mail survey utilized a lengthy questionnaire asking for considerable fishery specific information, but obtained a response rate well below 20%. Because of the low response rate and non-respondent bias, data collected through this survey was of limited value. A processor survey conducted at about the same time obtained an even lower response rate.

A second voluntary economic survey of limited entry vessel owners was conducted in 2005-2007. In order to obtain higher response rates, this second survey utilized a much shorter questionnaire and collected data through in-person interviews. This survey obtained a fairly high response rate of over 70%, but at the cost of considerably less data collection from each respondent due to the shorter questionnaire. While this second survey provides much data of value for assessing industry economic performance and regional economic impacts, our ability to evaluate the contribution of individual fisheries (such as groundfish) to vessel economic performance is limited by the reduced questionnaire length. Collecting data through in-person interviews helped to substantially increase the response rate, but at considerably increased survey cost.

Mandatory economic data collection offers the advantages of reduced non-response bias, the ability to collect more detailed fishery specific data, and reduced survey fielding costs. These advantages would apply to data collection from both the harvesting sector and the processing sector.

The collection of such data is related to several aspects of MSA and groundfish FMP guidance on rationalization. These include the categories of net benefits, fairness and equity, and harvester and processor sector health. To a large degree these broad categories are addressed by data collection because such data collection allows for the measurement of these categories. The measurement of these categories may help inform future decisions on the part of the Council.

Element of Cooperative Alternative	Conservation	Net Benefits	Disruption	Excessive Shares	Fairness and Equity	Harvester and Processor Sector Health	Labor	Communities	Small Entities and New Entrants	General Public
Data Collection		X			X	X				

❖ Analysis

The effect of a data collection program includes the effects of increased ability to monitor and measure the economic performance of the industry, as described in the rationale above. Other effects include the burden on agencies involved in the data collection and analysis, and the burden on industry members in the form of time spent reporting data.

The NWFSC has gone through two voluntary survey efforts. The first effort resulted in a relatively low response rate which minimized the ability to use the survey. The second effort used face to face interviews and resulted in a response rate of over 70 percent. This relatively high response rate has resulted in several pieces of analysis utilized in the rationalization process and may prove useful for other means as well. While this survey has largely been considered to be successful, the face to face interview technique is estimated to have cost somewhere on the order of \$700 to \$800 per interview. This cost does not include the time and cost of developing the survey and analyzing the data. Given that the trawl fishery is over 100 vessels, the field cost of conducting a voluntary survey using a face to face technique could be on the order of \$100,000 to the agency each year it is conducted.

On the other hand, a mandatory survey may be able to avoid the need for face to face interviews. Face to face interviews were used in the voluntary survey for several means including as a means of returning a favorable response rate. If a survey is mandatory, a face to face technique may not be necessary. However, differences may exist between a mandatory and a voluntary survey which can make the burden on the industry greater for a mandatory survey than a voluntary survey.

Factors affecting the response rate of a voluntary survey include the length of the survey and the difficulty of the questions. If a survey is viewed as being overly lengthy and/or requests information that is not readily available and that may take time to uncover, the response rate is likely to suffer. The response rate from a mandatory survey may not suffer in the same fashion. Therefore, it is reasonable to expect that a voluntary survey may (at least at times) be simpler and shorter than a mandatory survey simply to get a favorable response rate. If this is the case, a mandatory survey may impose a larger burden on industry than a voluntary survey. In the worst case scenario (one where the survey is highly burdensome), industry members may at times respond with a “protest response” or information that is of poor quality. This can affect the ability to use the survey responses even if the response rate is high.

The collection of economic data relates to several aspects of policy guidance from the MSA, the Groundfish FMP, and Amendment 20 goals and objectives. If better data collection leads to more informed decisions relating to net benefits and efficiency, then data collection is related to MSA-National

Standard 5, MSA – 303A(c)(1)(B), Amendment 20 objective 2 and 6, and potentially others. In particular, Amendment 20 objective 6 (Promote measurable economic benefits) is related to data collection because data collection allows economic benefits to be measured. Many benefits may not be able to be measured without the acquisition of additional economic data. If additional data collection helps in the development of policies, then such data collection may also relate to policy guidance on sector health including Amendment 20 objectives 2 and 6, GF FMP goal 2, and GF FMP objective 7 and 15. Finally, data collection is directly related to several aspects of policy guidance that related to program performance monitoring and modification. MSA – 303A(c)(1)(G) calls for a regular review and monitoring of the program for progress in meeting goals.

B-1.6 Adaptive Management (Option)

- ▶ During the biennial specifications process, up to 10 percent of the available aggregate harvest pounds for the co-op program (including harvest potentially available both to co-ops and the non-co-op fisheries) will be set aside for use in an adaptive management program that could create incentives for developing gear efficiencies, or community development or to compensate for unforeseen outcomes from implementing the trawl rationalization program. Examples of unforeseen outcomes include, but are not limited to, unexpected geographic shifts in the distribution of catch or landings, unexpected effects on certain segments of the industry (e.g. processors), or an unexpected barrier to new entry into the fishery. This provision will apply to the overall trawl sector (whiting and non-whiting) but the allocation set aside from each trawl sector would be specific to that sector.

❖ Interlinked Elements

There do not appear to be other cooperative components substantially interlinked with the adaptive management provision. However, if adaptive management is used to facilitate new entry into a cooperatively-managed fishery, it is likely that such new entry will mean greater participation in the non-cooperative fishery, as those new entrants may not immediately become cooperative members. This new entry may cause some disruption to the particular sectors in which it occurs.

❖ Rationale and Policy Issues

The adaptive management provision is intended to be used to respond to unforeseen consequences or to achieve goals and objectives for the rationalization program that may not be seen as being adequately met. Therefore, by definition the adaptive management provision is not clearly specified because clear specificity implies that one would know the potential unforeseen consequences that may occur.

The consideration of an adaptive management provision is related to multiple categories of guidance related to the MSA and the groundfish FMP that are related to rationalization. Ultimately the degree to which adaptive management is related to these categories of guidance depends on how the program is used. Several uses have included conservation, assisting new entrants, and assisting disadvantaged communities. These potential uses are arguably related to issues of fairness and equity.

Element of Cooperative Alternative	Conservation	Net Benefits	Disruption	Excessive Shares	Fairness and Equity	Harvester and Processor Sector Health	Labor	Communities	Small Entities and New Entrants	General Public
Adaptive Management	X				X			X	X	

❖ Analysis

As noted above, an adaptive management provision can be used to achieve multiple objectives. The outcome of the provision depends on the objective and manner in which the provision is used to achieve these objective(s). In order to facilitate analysis, we assume that the adaptive management provision is used for several different outcomes in the whiting fishery including salmon bycatch reduction; overfished species bycatch reduction; community protection; and to facilitate new entry into the fishery, where new entry is defined as the establishment of new vessel owner-operators.

The use of adaptive management to facilitate salmon bycatch reduction may benefit harvesters who have a demonstrated ability to reduce bycatch, or harvesters who plan to experiment with new gear designs to reduce salmon bycatch. If the latter approach is used, the testing of new gears may eventually be followed up by a regulatory amendment requiring whiting harvesters to use a different gear type that has demonstrated success in reducing salmon bycatch. It should be noted that the Council has given no indication that this is the process that would be followed. However, assuming this is the process that would be followed is useful to illustrate the possible effects of this provision.

If the adaptive management provision is used to encourage the development of new gears, it is likely that any benefit to harvesters from experimenting with new gears would be short-term. As the success of experimental gears is determined, the need to direct adaptive management to those harvesters would lessen because the next logical action would either be a regulation designed to implement those gears, or a determination that the gear is not successful. In either case, it may not be necessary to continue directing adaptive management quota toward those harvesters after a particular goal has been achieved, thus freeing up the quota for another use. However, the original recipients of that adaptive management quota would have future opportunities to receive adaptive management quota by attempting to achieve other, future objectives specified by the Council.

If adaptive management quota is used to reward those with a demonstrated ability to reduce salmon bycatch, then the quota may be allocated on a longer-term basis, depending on the long-term success of harvesters in reducing salmon bycatch. If harvesters demonstrate a continued ability to reduce salmon bycatch more than others, then they may continue to receive adaptive management quota. However, this also depends on the way the measures used to achieve the objectives are specified. For example, if the adaptive management quota is distributed to the top five harvesters (in terms of salmon bycatch reduction), then harvesters could receive the quota on a long-term basis. However, if the objectives set a benchmark for reducing salmon bycatch to a specified rate, then more and more harvesters may begin meeting that benchmark, thus reducing the amount of adaptive management quota available to each

harvester meeting the benchmark.

Using adaptive management for overfished species bycatch reduction may work in the same way. Again, the specific effects depend on the objectives of the program and the manner in which they are achieved. The effects may be short- or long-term. If the program objectives are to allow harvesters to benefit over the long-term from adaptive management, harvesters who alter fishing practices in order to achieve overfished species bycatch reduction may receive adaptive management quota over the long term. However, if adaptive management quota is used to encourage the development of new gears, which are then put into regulation if successful, then recipients are likely to receive that quota only for as long as it takes to determine whether a new gear design is successful.

The use of adaptive management quota for community protection will almost certainly have positive effects for recipient communities. However, it may have differing effects for fishery participants, processors, and fishing-dependent businesses. For example, since the at-sea fishery does not make routine deliveries to shoreside processors and does not make routine stops into port, except perhaps cities in the Puget Sound region, it is not clear how the adaptive management provision could be used for community protection for the at-sea fishery. In the shoreside whiting fishery, activity is more closely aligned with a geographic place. Using adaptive management quota in the shoreside whiting fishery could be used to direct landings of whiting to certain ports, thus spurring fishing-related activity in a distinct area. It is unclear how the specific mechanisms would work in order to achieve this outcome, but one method could tie adaptive management to vessels that home-port in specific locations, thus increasing the chances that whiting would be landed in those ports.

The use of adaptive management to facilitate new entry (in the form of new owner-operators) may achieve that very outcome. This could be accomplished by allocating the adaptive management shares to entities that desire to enter the fishery. However, there is some question about how this would work, since catch history assignments made to CV(MS) permits are not divisible and not separable from the permit. Thus, a new entrant to the fishery would still need to acquire a CV(MS) permit with catch history to remain in the fishery. Adaptive management quota may make it easier for a new entrant to acquire the CV(MS) permit since that new entrant would have access to the catch associated with the CV(MS) permit, as well as to the catch attributed to him/her from the adaptive management provision. This would tend to increase revenues (both gross and net) to the new entrant, increasing the ability of that new entrant to purchase the new permit.

Although the adaptive management provision could be constructed in a manner that facilitates new owner-operators, cooperatives rely on close-knit and long-term relationships for success. This means that some barriers to new entry are necessary in order to maintain stable relationships between harvesters in a cooperative. As discussed in Chapter 4, collective institutions – like cooperatives – often develop complex relationships and/or function in complex systems effectively. The ability to work within these complex systems requires that participants be stable, and that entry and exit be limited, in order for relationships to develop and for knowledge to be shared across participants. Fostering the entry of new owner-operators into a cooperative system may inject uncertainty and instability into cooperative relationships. This instability, in the worst case scenario, may jeopardize the success of cooperatives. Therefore, while an adaptive management program could be used to assist new entrants, a relatively large number of new entrants could compromise the operation of harvest cooperatives which rely on relationships among participants who are familiar with one another.

□ **Unresolved Issue – Length Endorsement for Catcher Vessels in a Cooperative-Based Fishery**

Within this analysis there are discussions regarding the effect of retaining or eliminating the length endorsement. As part of the preliminary preferred alternative, the Council decided to eliminate the length

endorsement for vessels operating in an IFQ-based fishery. It was inferred from this decision that the Council's intention was to eliminate the length endorsement for catcher vessels in a cooperative-based fishery as well, but this issue will need to be specifically addressed through Council action.

B-2 Whiting Mothership Sector Co-Op Program

Overview. Qualified permits will be endorsed for mothership (MS) co-op participation. Each year the holders of those permits will choose whether their vessels will fish in the co-op fishery, in which individual co-ops will direct harvest, or fish in a non-co-op fishery that will be managed by NMFS as an Olympic style fishery. The co-op will be obligated to deliver its fish to specific mothership processors based on the obligations of each permit in the co-op. LE permits will be issued for motherships and required for a mothership to receive whiting from catcher vessels.

B-2.1 Participation in the Mothership Sector

a. Catcher Vessels

Vessels with CV(MS)-endorsed permits may participate in either the co-op or non-co-op portion of the mothership fishery. They will choose annually which fishery they will participate in for the coming year. Additionally, any groundfish LE trawl permitted vessels may participate in the co-op portion of the fishery if they join a co-op (as described in Section B-2.3.3).⁸ No other catcher vessels may participate in the mothership fishery.

- ▶ **Option:** A vessel may not engage in the processing of whiting during any year in which a catcher vessel (mothership) (CV(MS)) endorsed permit is registered for use with the vessel.

b. Processors

Only motherships with a mothership LE permit may receive deliveries from catcher vessels participating in the co-op or non-co-op portions of the mothership sector whiting fishery. (Note: motherships may acquire such permits by transfer; see Section B-2.2.2.)

c. Vessels Excluded⁹

Motherships also operating as a catcher-processor may not operate as a mothership:

- ▶ **Option 1:** During a year in which it also participates as a catcher processor.
- Option 2:** During a month in which it also participates as a catcher-processor.
- Option 3:** At the same time it is participating as a catcher-processor.

⁸ When such permits participate in a co-op the co-op will not be allocated any additional fish based on participation by such a vessel.

⁹ A vessel that has been under foreign registry after the date of the AFA and that has participated in fisheries in the territorial waters or exclusive economic zones of other countries will not be eligible to participate as a mothership in the mothership sector of the Pacific whiting fishery, as per Section 12102(c)(6) of the AFA.

❖ **Interlinked Elements**

CV catch history. Catcher vessel license limitation and catch history designations are both necessary for rationalizing the harvesting side of the fishery. Without these provisions, other catcher vessels could enter the fishery and compete with existing catcher vessels. Such competition runs counter to the ingredients necessary for rationalization. The issuance of catch history to catcher vessels must be implemented alongside a license limitation program in order for the amount of catch available to each cooperative to be calculated and to ensure that members of that cooperative do not compete with other vessels for that catch.

Processor linkage. Processor license limitation and processor linkages work in concert to help insure that processors will achieve some benefit from rationalization. Processor license limitations and linkages restrict other processors from entering the fishery and reduce competition between existing processors for deliveries from catcher vessels.

❖ **Rationale and Policy Issues**

● **Mothership Sector Licensing**

◆ *Catcher Vessels*

Limiting participation of catcher vessels in the mothership sector is one component necessary for the rationalization of a fishery managed with harvest cooperatives. Limitation means that only those participants with appropriate licensing may harvest or process fish in the sector, creating a barrier to entry which is necessary for rationalization – and associated benefits – to occur. If other vessels were able to harvest fish in the sector, this would introduce competition that would tend to eliminate the rational type of behavior expected from setting up a cooperative based fishery. Furthermore, allowing other vessels to harvest fish in the sector would lead to more fishing capital than necessary, eroding the potential economic gains induced through fleet consolidation and associated cost savings. However, if other licensed trawl vessels are allowed to join cooperatives, and therefore be subject to legally binding agreements which would manage the participation of those vessels, this would give participants in the mothership sector additional tools for harvesting the catch available to them while also managing the participation of those non-CV(MS) endorsed vessels through the cooperative contract.

Restricting a vessel from engaging in mothership opportunities if it has been registered to a CV(MS) permit during the year is intended to maintain the distinctions between motherships and catcher vessels and also prevent opportunities for participants in the mothership sector from engaging in catcher processor activity.

◆ *Motherships*

Since there are two possibilities for licensing motherships (one would license motherships and one would not), the rationale for both possibilities is described here. The rationale against establishing a mothership limited entry program is that under status quo, vessels are not required to have a permit to operate as a mothership and there is no limit on the number of vessels that can participate as a mothership. Under these unrestricted conditions, the entire mothership sector allocation is often not harvested completely, so limiting the number of motherships would limit the ability for realizing the full economic potential of the mothership sector harvest. Furthermore, establishing a mothership limited entry provision would limit the number of motherships that catcher vessels can deliver to.

A mothership limited entry program is intended to stabilize participation of motherships in the mothership sector. This is an important component of a fishery managed with cooperatives, especially if the fishery includes processor linkages; linkages require relationships between catcher vessels and motherships, and will affect the behavior of catcher vessels and the operation of the cooperatives. Allowing unfettered participation in the mothership sector would cause instability in mothership participation, affecting the entire fishery. Furthermore, it would negatively affect existing motherships. Because of the competition that could occur between motherships if a limited entry mothership program were not implemented, existing mothership processors might not benefit from rationalization.

Restricting catcher processors from also engaging in mothership activity is intended to protect existing mothership processors in the sector and help ensure that they benefit from rationalization in addition to catcher vessels. Catcher processor vessels may have the ability to attract catcher vessels from other motherships due to their relatively greater efficiency and the ability to pay higher prices for raw fish deliveries as a result.

One policy issue that exists in the current alternatives is that there would be no restrictions on who could hold a mothership processor endorsed permit. Although it is not necessary to specify any restrictions, this is different from those who could hold quota where restrictions do exist.

License limitation for mothership catcher vessels and mothership processors arguably is intended to help achieve net benefits and efficiency guidance contained in the MSA and groundfish FMP and to foster a healthy catcher vessel and mothership sector. Furthermore, license limitation of catcher vessels is a necessary ingredient for rationalization through a harvest cooperative structure. The result of such successful rationalization tends to achieve such things as bycatch reduction, thereby relating to conservation goals found within the MSA and groundfish FMP. Considering the allowance of catcher-processors to also operate as a mothership addresses several aspects of policy guidance on rationalization from the MSA, the Groundfish FMP, and Amendment 20 goals and objectives. In particular, allowing catcher processor to operate as motherships would arguably increase the efficiency of the program and would contribute toward achieving the greatest benefit to the nation, thus meeting MSA Standard 5, GF FMP objective 6, and GF FMP objective 2. However, allowing catcher processors to operate as motherships may cause disruption in mothership sector participation, which is contrary to GF FMP objective 14. Allowing catcher processors to operate as motherships is also related to policy guidance referring to sector health - GF FMP goal 2 in particular.

Element of Cooperative Alternative	Conservation	Net Benefits	Disruption	Excessive Shares	Fairness and Equity	Harvester and Processor Sector Health	Labor	Communities	Small Entities and New Entrants	General Public
Catcher vessel license limitation	X	X				X				
Mothership license limitation		X				X				
Catcher-processors operating as a mothership		X	X			X				

❖ Analysis

● Catcher Vessel Participation in the Mothership Sector

Catcher vessels participating in the mothership sector must be a limited entry trawl vessel. Only those vessels that have a CV(MS) endorsement are able to fish in either the co-op or in the non-co-op portion of the fishery. Vessels with a limited entry groundfish trawl permit may participate in a co-op and harvest the catch available to that co-op, but those vessels that do not have a CV(MS) endorsement cannot participate in the non-co-op fishery. These participation requirements effectively limit participation in the sector, but mechanisms exist that allow capital in the fishery to change and adapt to varying conditions by allowing non CV(MS) vessels into a cooperative. Allowing any limited entry trawl vessel to participate in a co-op allows the cooperatives the flexibility to determine the amount and type of capital appropriate for harvesting the fish available to the cooperative. This also provides a greater certainty that the harvest available to the cooperative will be realized. If a situation occurs where CV(MS) endorsed vessels in a cooperative all travel to the Bering Sea to participate in the Pollock fishery and cannot leave the Bering Sea without foregoing Pollock catch, that mothership whiting cooperative can use other licensed trawl vessels on the west coast that are members of that cooperative to harvest their allowable catch, thus providing a mechanism to cooperative members for harvesting the cooperative catch while not foregoing other harvest opportunities. For those motherships that may be relying on harvest from mothership whiting cooperatives, allowing licensed trawl vessels without a CV(MS) permit to harvest cooperative fish provides a greater certainty that the catch in that cooperative will be realized and the motherships will be able to expect delivery activity from the catch attributed to those cooperatives.

● Mothership Processor Limited Entry

Establishing a mothership limited entry program stabilizes participation of motherships in the mothership sector. In addition to stabilizing the capital involved in the processing of whiting, a mothership limited entry program will tend to stabilize the relations between motherships and catcher vessels. This is because it restricts the ability for different mothership participants to enter into the fishery. As described previously, and in Chapter 4, cooperatives rely heavily on close knit relationships between participants. While mothership entities are not members of a cooperative, the relationships established between motherships and catcher vessels will almost certainly have an effect on the prosecution of the fishery and

influence cooperatives, especially in a fishery where processor/catcher vessel linkages are established. By extension, the relationships between motherships and catcher vessels will tend to influence the relationships present in a cooperative. It may be reasonable to expect that more stable relations between individual catcher vessels and individual motherships will affect the stability of relationships that exist among catcher vessels in a cooperative.

The stability in mothership participation created through a mothership limited entry program may lead to longer term and more stable relationships between catcher vessels and motherships compared to a case where there is no limited entry for motherships. If mothership participation is not limited, new motherships may enter into the fishery. If catcher vessels are allowed to freely deliver to any mothership, this would lead to increased competition between motherships for catch from catcher-vessels. This is likely to play into the catcher-vessels favor because it is likely that catcher vessels would receive higher prices as a result of bidding among motherships for catcher vessels. However, if switching motherships requires that a catcher vessel fish in the non-cooperative fishery, having new motherships enter into the fishery may make it more likely that catcher vessels will move into the non-cooperative portion of the fishery in greater numbers, or on a more frequent basis. Increased participation in the non-cooperative portion of the fishery may decrease the management performance of the fishery because of increased probability of bycatch events or other matters. This may occur because this non-cooperative portion of the fishery is a competitive, derby fishery and behavior in that type of a fishery may be less rational.

If new motherships were allowed to enter into the fishery, the effect on existing motherships would tend to be adverse. New motherships would likely reduce the number of catcher vessels (and therefore catch) delivering to the average mothership, which would lead to reduced revenue being generated by each mothership operation. Limiting the number of motherships would work in the opposite direction with more catcher vessels delivering to the average mothership. When combined with processor linkages, processor limited entry may also allow processors to rationalize, similar to what may occur among the catcher vessel portion of the fishery.

● Catcher Processors Operating as a Mothership

Several factors determine the effect of allowing a catcher-processor to also operate as a mothership. These include institutional factors affecting participation in both activities, and the marginal amount of revenue generated by catcher-processor activity and mothership activity. These are outlined briefly below with additional explanation following.

- Institutional factors
 - Through the catcher processor cooperative governing contract, catcher processors have a defensible harvest privilege that may allow them to be flexible and accommodating to mothership catcher vessels without giving up access to fish in the catcher processor sector. Catcher processors that operate in BSAI Pollock also have a defensible harvest privilege that allows them to be flexible because they do not risk losing BSAI Pollock opportunities.
 - Mothership vessels may not be able to be as flexible and accommodating because the mothership sector does not have linkages in BSAI Pollock, meaning they compete with other mothership vessels for deliveries and can lose potential deliveries if they accommodate a whiting catcher vessel and (as a result) show up late to the BSAI Pollock fishery.
 - A mothership sector managed with cooperatives and processor linkages allows motherships to realize benefits from rationalization, but those linkages can be broken by catcher vessels. This means that motherships do not have defensible resource access

- even with processor linkages, and can lose those linkages to other processing vessels.
 - Mothership vessels could participate in catcher processor activity (if they acquire the necessary license), but flagging requirements make several mothership vessels unable to participate in the harvesting of fish. This means that only three existing motherships would be able to engage in catcher processor activities, but all catcher-processors would be able to engage in mothership activities (subject to appropriate licensing).
- Cumulative and marginal revenue
 - A vessel that engages in both catcher processor and mothership activity may be able to take a smaller profit margin in the mothership sector than a vessel that operates exclusively as a mothership vessel and still generate cumulatively more revenue. This means that a catcher processor could pay catcher vessels higher prices (and attract catcher vessels from other motherships) and still be more profitable than a mothership which processes the same volume through mothership activity exclusively.

◆ *Catcher Processors Operating as a Mothership, the Potential Attainment of Cost Minimization, and the Effect on Efficiency*

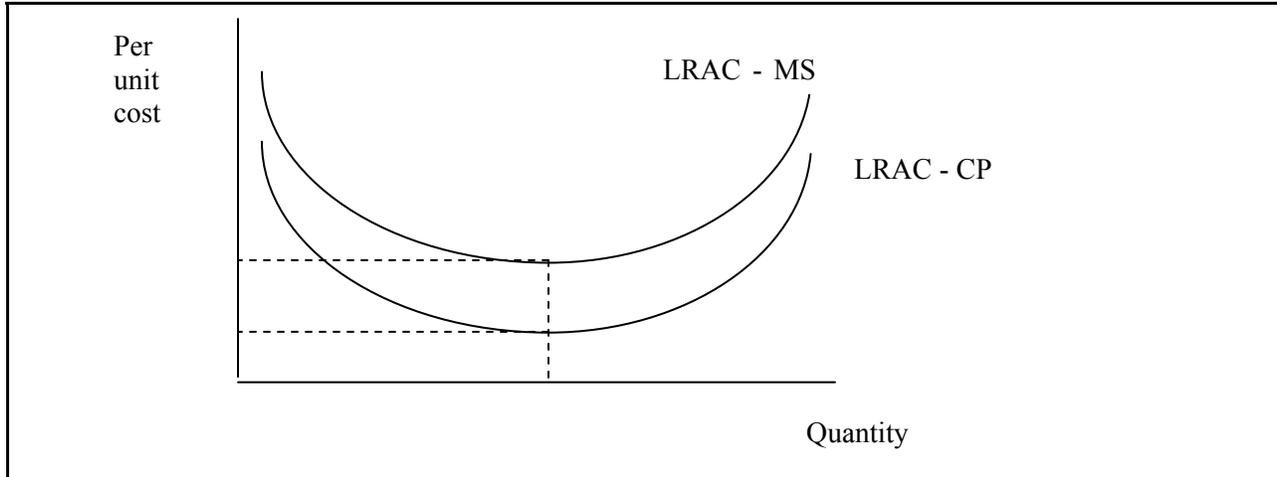
Allowing catcher processors to operate as a mothership is a change from status quo, and breaks down some of the barriers created through the division of the mothership and catcher processor sectors (created in 1997). This allows both motherships and catcher processors to access greater volumes of whiting. Assuming both motherships and catcher processors have a limited entry program restricting access, then some catcher processors are likely to acquire mothership permits and some motherships acquire catcher processor permits, resulting in consolidation in both sectors.

Assuming motherships can engage in catcher processor activity and vice versa, then the least efficient motherships will theoretically drop out of the fishery as catcher processors move into the mothership sector, and the least efficient catcher processors will theoretically drop out of the fishery as motherships move into the catcher processor sector. Vessels that remain would participate in both sectors of the fishery simultaneously (if allowed), and the outcome would be an improvement in the economic efficiency of the fishery. However, because of flagging requirements restricting the ability of some motherships to harvest fish, just three existing motherships would be able to operate as catcher-processors, meaning that several others would be restricted from operating as catcher processors even if they were the more efficient vessels. Catcher processors would not be restricted from operating as motherships (so long as they hold a mothership permit). This means that most existing motherships would not be able to capitalize on this breakdown in sector divisions, and would be more likely to be consolidated out of the fishery even if they are more efficient.

◆ *Catcher-Processor and Mothership Cost Structure Comparison*

The cost structure associated with catcher-processing activity is generally acknowledged to be different than that cost structure associated with mothership activity. While a catcher processor and a mothership platform may be made up of entirely the same capital, a mothership operation must pay for fish deliveries from catcher vessels, while a catcher-processor operation does not. A mothership operation uses more capital than a catcher-processor operation because of the involvement of catcher vessels. This additional capital arguably makes mothership operations more costly than catcher-processor operations (assuming a catcher processor vessel and a mothership vessel are made up of the same capital). The higher cost associated with mothership operations may come in the form of purchasing fish from catcher vessels, or (if the mothership and CV are vertically integrated), higher operational costs from operating both a catcher vessel and a mothership. The following figure illustrates, conceptually, the difference between a

mothership operation's cost structure, and a catcher-processor's cost structure. Both operations could theoretically have the same minimum cost point of production quantity, where the same production quantity is their minimum cost level, but the cost of producing at that minimum point is less for a catcher processor operation than a mothership operation.



When a catcher processor operates as a mothership, it may have the same variable cost per unit of production as a mothership that only operates as a mothership. However, when combined with catcher processor activity, the cumulative amount of revenue generated will be greater, because the catcher processor portion of the operation is more profitable. Revenue from combined catcher processor and mothership activity will be greater than revenue from producing the same volume only through mothership activity. This allows a catcher processor operating as a mothership to make a smaller return on mothership activity than a mothership vessel that only engages in mothership activity, while still generating more net revenue. This is simply because the rate of return attributed to catcher processor activity is greater than mothership activity and the catcher processor that also operates as a mothership may be able to assume a smaller rate of return in mothership activity (to some degree) and still realize greater total net revenue. To illustrate this concept, we develop a simple conceptual example illustrating the return on catcher processor and mothership operations:

Assume that a catcher processor vessel generates a 15% return on catcher processor activity, while a mothership vessel that only operates as a mothership processor generates a 10% return on mothership activity. Now suppose that both the mothership and the catcher processor vessel handle the same volume and the catcher processor vessel generates \$1.5 million and the mothership vessel generates \$1 million. The catcher processor vessel may elect to participate in the mothership sector and operate at a 10% return. However, if that catcher processor /mothership vessel increases payments to catcher vessels, and subsequently decreases its mothership sector return to 8%, that catcher processor /mothership vessel could theoretically induce all mothership sector catcher vessels to deliver to it over the long term because it is paying more than the other mothership processing vessels. If that catcher processor vessel is able to double total production through mothership activity by paying higher prices to catcher vessels and subsequently decreasing its mothership sector return to 8%, that catcher processor/mothership vessel could generate a cumulative return of \$2.3 million, with \$1.5 million coming from catcher processor activity plus \$800,000 from mothership activity.

This is compared to a mothership vessel that doubles production at a 10% rate of return and generates \$2 million.

This example shows that a catcher-processor vessel also operating as a mothership can generate cumulatively more revenue, even if they pay more for catcher vessel catch, than other motherships. The effect is that those motherships that do not, or cannot, engage in catcher-processor activity may be at a disadvantage when bidding over prices to attract mothership catcher vessels.

◆ *Institutional Factors and Catcher-Processors Operating as a Mothership*

The ability for a catcher-processor/mothership vessel to acquire deliveries from mothership catcher vessels is related to the time at which a catcher-processor can engage in mothership activities. Since a catcher-processor vessel has a defensible harvest privilege in its participation in the catcher-processor sector (either in the form of an IFQ, or as part of the cooperative agreement), it can elect to harvest its share of the catcher-processor allocation at a time of its choosing without fear that another catcher-processor will take its catch. This is different from a mothership operation, which is not granted a defensible resource access privilege, but is granted a linkage to a vessel with a harvest privilege in a cooperative program that can be broken over the long term. This structure takes on some of the characteristics of a limited access privilege in the short term, but means the mothership linkage is not ultimately defensible because it can be broken and moved to another processing vessel.

While motherships with processor linkages have more stable and predictable production volumes than motherships without linkages, they must negotiate arrangements with catcher vessels in order to accept deliveries from those vessels. Such negotiations will undoubtedly take into account the timing of opportunities in Bering Sea Pollock and the shoreside whiting sector. At times, the objectives of the two vessel types may be at odds. If an agreement is not reached, a mothership can lose that catcher vessel, if not in the current year, then in the subsequent year. This is different from the catcher-processor sector, where a catcher-processor does not risk losing catch privileges if it participates in other fisheries or sectors. A catcher-processor's catch privileges are protected by a cooperative contract. This allows catcher-processors to better accommodate the harvest timing of mothership catcher vessels, because they do not risk losing their catcher-processor opportunity. This flexibility may make a catcher-processor/mothership operation more attractive than a pure mothership operation that is constrained by its participation in other fisheries, especially since not participating in those other fisheries may mean foregoing deliveries from catcher vessels. For example, motherships that participate in the BSAI Pollock fishery do not have processor linkages, so arriving late to the Pollock fishery as a result of accommodating catcher vessels in the whiting fishery would mean losing potential deliveries to other motherships that do participate in the Pollock fishery at the start of the season. This timing advantage is true regardless of whether catcher-processors can operate as a mothership simultaneously, or cannot operate in the same month, though the timing advantage is certainly larger if a catcher-processor can operate as a mothership simultaneously.

◆ *Motherships Operating as a Catcher-Processor*

One way in which a mothership could more easily attain a cost minimization strategy, and attain a cost minimization structure that is comparable to a catcher processor, would be to acquire a catcher-processor endorsed permit and also operate as a catcher-processor. In this way, the mothership would take on the (arguably more efficient) operation of a catcher-processor model for a portion of that vessel's production. If the cost efficiency that vessel can attain is greater than the cost of the catcher processor permit, that vessel would find participation in the catcher processor sector profitable and effectively generate rents.

However, a mothership also operating as a catcher processor raises a question about how that participant may impact the existing catcher-processor cooperative. Depending on the catcher processor cooperative agreement, a mothership that acquires a catcher-processor permit and participates in the catcher-processor sector may introduce some aspect of “new entry” that causes instability in that voluntary cooperative. However, it is important to note that this instability is no different than that caused by any other new participant that acquires a catcher processor permit. Another possible model is the lease of a catcher-processor permit by a mothership capable of engaging in catcher processor activity. This could occur if a catcher processor company does not desire to participate in the whiting fishery and instead allows a mothership operation to fill their role in the catcher processor sector. This may prove less disruptive to the existing catcher processor cooperative because, presumably, the cooperative agreement would still apply to the entity leasing a catcher processor permit from an entity that has signed the cooperative agreement. However, only two existing motherships would be allowed to engage in catcher processor activities because of flagging requirements. Other existing mothership operations cannot engage in the harvest of Pacific whiting¹⁰. This is contrary to the catcher processor vessels that exist in the fishery – all of which could potentially engage in mothership activity.

◆ *Entities Qualifying for Catcher Processor and Mothership Permits*

The qualification rules for receiving a catcher-processor endorsed permit and a mothership permit result in one entity receiving both a catcher-processor permit and a mothership permit. Other entities involved in the catcher-processor or mothership sectors would receive a mothership permit, a catcher-processor permit, but no other entity would receive both. This means that other entities that may desire to participate in the other sector would face a barrier to entry in the form of the cost of a permit.

◆ *Effect on Efficiency from Allowing Catcher Processors to Engage in Mothership Activity*

While the information above indicates that allowing catcher processors to operate as a mothership may tend to benefit vessels capable of engaging in catcher processor activity at the expense of some pure mothership vessels, net benefits and the efficiency of a rationalization program are expected to be greater if catcher processors are allowed to engage in mothership activity. This increase in net benefit and efficiency is a result of breaking down the barriers between the 2 sectors that will tend to eliminate less efficient vessels in favor of the more efficient vessels and result in consolidation overall. Unfortunately no empirical information is readily available with which to estimate the relative effect on net benefits and efficiency.

B-2.2 Permits/Endorsement Qualification and Characteristics

B-2.2.1 Catcher Vessel Mothership Whiting Endorsement (CV(MS) Whiting Endorsement)

a. Endorsement Qualification and History Assignment

Permits with a qualifying history will be designated as CV(MS) permits through the addition of an endorsement to their LE groundfish permit. At the time of endorsement qualification, each permit will

¹⁰ Since 1995, 11 vessels have engaged in mothership activity. 6 vessels have participated between the years of 1997 and 2004.

also be assigned a catch history that will determine the share of the mothership whiting allocation associated with that permit.

Qualifying for a CV(MS) Whiting Endorsement. A LE permit will qualify for a CV(MS) whiting endorsement if it has a total of more than 500 mt of whiting deliveries to motherships from:

- ▶ **Qualification Option 1:** 1994 through 2003
- ▶ **Qualification Option 2:** 1997 through 2003

Catch History Assignment (Identification of Endorsement Related Catch History). The following are options for the initial calculation to be used in determining NMFS distribution to co-op and non-co-op fishery pools. A CV(MS) whiting endorsement calculated catch history will be based on whiting history during the related permit's:

- ▶ **Catch History Assignment Option 1:** best 6 out of 7 years from 1997 through 2003.
- ▶ **Catch History Assignment Option 2:** best 8 out of 10 years from 1994 through 2003.

(Note: for vessels qualifying in both the shoreside and mothership co-op programs, the same year must be dropped.)

For the purpose of the endorsement and initial calculation, catch history associated with the permit includes that of permits that were combined to generate the current permit.

b. Whiting Endorsement Transferability and Endorsement Severability

Transfer Option 1: The CV(MS) whiting endorsement (together with the associated catch history) *may not be severed* from the groundfish LE trawl permit.

- ▶ **Transfer Option 2:** The CV(MS) whiting endorsement (together with the associated catch history) *may be severed* from the groundfish LE trawl permit and transferred to a different LE trawl permit. Catch history associated with the whiting endorsement may not be subdivided.

c. Accumulation Limit

CV(MS) Permit Ownership: No individual or entity may own CV(MS) permits for which the allocation totals greater than:

- ▶ **Option 1:** 10 percent,
- ▶ **Option 2:** 15 percent, or
- ▶ **Option 3:** 25 percent
- ▶ **Option 4:** the amount of the largest current owner (no grandfather clause) of the total mothership sector whiting allocation.

d. Combination

CV(MS) Permit Combination to Achieve a Larger Size Endorsement. When a CV(MS)-endorsed permit is combined with another permit, the resulting permit will be CV(MS) endorsed, except when the CV(MS) permit is combined with a CP permit, in which case the CV(MS) endorsement will not survive on the resulting permit.¹¹

¹¹ Specifically, a CV(MS)-endorsed permit that is combined with a LE trawl permit that is not CV(MS) endorsed or one that is CV(Shoreside) [CV(SS)] endorsed will be reissued with the CV(MS) endorsement. If the other permit is CV(SS) endorsed, the CV(SS) endorsement will also be maintained on the resulting permit. However,

❖ **Interlinked Elements**

Permit length endorsement. If the permit length endorsement is eliminated, bullet D above is irrelevant.

The definition of “largest current owner” should be better defined. If “current” is interpreted to mean the date immediately before rationalization goes into effect, there will likely be a race to accumulate permits prior to the implementation of the rationalization program. Existing ownership data can support a date up to January 1, 2008.

❖ **Rationale and Policy Issues**

● **Qualifying years formula**

Two options exist for years making up the catch history formula. One option includes the time period between the separation of the at-sea sectors (1997) and the control date (2003), while the other includes the time between the establishment of limited entry (1994) and the control date. Both options require at least 500 metric tons of deliveries to motherships in order to insure that the permit has substantially participated in the fishery.

● **Catch history formula**

Two options exist for years making up the catch history formula. One option is intended to reflect participation during the years between the time the at sea sectors were separated and the control date. This time period is intended to be more reflective of existing mothership fishery participation patterns while taking into account the control date. The second option (1994 to 2003) is intended to reflect participation in the mothership sector between the time of limited entry and the control date. This option reflects participation by catcher vessels delivering to processing vessels after limited entry. Going back to 1994 is arguably reasonable because catcher vessels that delivered to processing vessels prior to 1997 still operated in mothership activity, and the separation of the at sea sectors in 1997 affected mothership vessels and catcher processors, not catcher vessels necessarily.

Dropping the worst year, or worst two years, is intended to excuse a poor year or two a vessel may have had for a variety of issues including the possibility that a vessel may have broken down within the catch history calculation period.

A variety of other dates were considered but dropped. These other options included the years 2004 as the end year for the qualifying period, and 1998 as the start year for the qualifying period. The year 2004 was dropped because it was after the control date, while the year 1998 was dropped because the at sea sectors were separated in 1997, not 1998. Further explanation of other catch history formulas and supporting rationale can be found in Appendix A, section 2.1.3.a.

CV(MS) and CV(SS) catch histories will be maintained separately on the resulting permit and be specific to participation in the sectors for which the catch histories were originally determined. If a CV(MS) permit is combined with a CP permit, the CV(MS) endorsement and history will not be reissued on the combined permit. The size endorsement resulting from permit combinations will be determined based on the existing permit combination formula.

- **Endorsement Transferability and Endorsement Severability**

The rationale for not allowing endorsements to be severed from the limited entry trawl permit is that it stabilizes the membership of harvesters in the mothership sector and this helps foster better relationships among cooperative members.

Allowing endorsements to be severed from the permit is a mechanism which allows for more fluid transfer of access to the mothership sector while retaining a limitation on participation. If an existing bottom trawl vessel were to desire to participate in the mothership fishery, that vessel could participate by purchasing a CV(MS) endorsement, and this may be less costly than having to purchase the entire CV(MS) endorsed permit.

- **Accumulation limits**

Limits on the accumulation of catch history are intended to prevent excessive control by any single entity. A range from 10 percent to 25 percent analyzes the effect of requiring a minimum of 10 to 4 entities controlling harvest privileges in the fishery. Establishing an accumulation limit that is equal to the amount of the largest current owner is intended to recognize existing ownership and participation in the fishery, but not allow an entity to acquire more. In order to implement an accumulation limit that is equal to the amount of the largest current owner, the term “current” will need to be defined, presumably as a particular date.

- **CV(MS) Permit Combination to Achieve a Larger Size Endorsement**

In cases where permits are combined to achieve a larger size endorsement, the permit will be CV(MS) endorsed (except if a permit is combined with a CV(SS) permit, in which case it will have both endorsements). This is intended to insure that a permit cannot become dually endorsed and be able to participate in another sector. This restriction is intended to act as a capacity control measure.

The consideration of permit qualification years and catch history years is related to disruption and fairness and equity goals found within the MSA and groundfish FMP because it grants permits and catch history to certain entities based on historic participation in the fishery. Endorsement transferability is related to disruption, fairness and equity, and harvester and sector health, while accumulation limits are related to excessive share guidance found with the MSA and groundfish FMP.

Element of Cooperative Alternative	Conservation	Net Benefits	Disruption	Excessive Shares	Fairness and Equity	Harvester and Processor Sector Health	Labor	Communities	Small Entities and New Entrants	General Public
Qualifying years formula			X		X					
Catch history formula			X		X	X				
Endorsement transferability and severability			X		X	X				
Accumulation limits				X						

❖ Analysis

● Endorsement Qualification and History Assignment

The issuance of permits with CV(MS) endorsements is necessary to limit access to the mothership sector. A limitation on participation in the mothership sector is necessary for a cooperative-based fishery to rationalize itself, otherwise new participants may enter the fishery and introduce an element of competition which is intended to be eliminated through rationalization. This was described in more detail under section B.2.1. Catch history assignments are a resource access privilege. The collective catch history of a cooperative determines the pool available to that cooperative, while the collective catch history of participants in the non-cooperative fishery determines the pool available to that fishery. Catch history assignments help solve resource sharing problems among cooperative members, thus helping to stabilize relations among participants in cooperatives. This effect was described previously under section B.1.1.

● Qualification for a CV(MS) Endorsement and Catch History

In order to receive a CV(MS) endorsement, vessels must have a total of more than 500 mt of whiting deliveries to motherships from either 1994 through 2003, or 1997 through 2003. Applying a 500 metric ton filter excludes two permits that participated in the fishery. One participated in 1994, while the other participated in 1995. Of those permits that harvested more than 500 metric tons, only one permit is affected by the choice of qualification formulas. The inclusion of this permit and associated catch history into the initial allocation does not appear to substantially affect the total amount of catch history available to the other permits because the amount of quota allocated to this permit is small. However, these other permits are affected by the years upon which catch history calculations are made.

Table B-3. Permit level participation in the mothership whiting fishery and the effect of qualification years (only includes permits that meet the minimum metric ton threshold for CV(MS) endorsement qualification).

	AD-HOC PERMIT ID	Qualification Years Considered for Receiving a Mothership CV Endorsement									
		1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Permits Included/ Excluded by Formula	A		X								
Permits Not Affected by Formula	B		X		X						
	C			X	X	X					
	D			X			X	X			
	E	X		X	X						
	F	X	X		X	X					
	G	X			X	X					
	H	X	X	X	X		X		X		
	I	X			X	X	X				
	J			X	X	X	X	X			
	K					X	X	X	X		
	L					X	X	X	X	X	X
	M	X	X	X	X	X	X	X			
	N	X	X	X	X	X	X	X			
	O	X		X	X	X	X	X	X		
	P	X	X	X	X	X	X	X			X
	Q	X	X		X	X	X	X	X		
	R	X		X	X	X	X	X	X	X	
	S	X	X	X	X	X	X	X	X		
	T					X	X	X	X	X	X
	U	X	X	X	X	X	X	X	X		X
	V	X	X	X				X	X	X	X
	W	X	X	X	X	X	X	X	X		
	X	X	X	X	X	X	X	X	X	X	X
	Y	X		X	X	X	X	X	X	X	X
Z	X	X	X	X	X	X	X	X	X	X	
AA	X	X	X	X	X	X	X	X	X	X	
BB	X	X	X	X	X	X	X	X	X	X	
CC	X	X	X	X	X	X	X	X	X	X	
DD		X	X	X	X	X	X	X	X	X	

● **Effect of Catch History Calculation Formulas**

The effect of the two catch history calculation formulas is shown in the figure below. The results of both formulas are plotted against the average catch share for each permit during the years 2003 to 2006. This compares the allocation of catch history to status quo participation, and shows that both allocation formulas grant catch history to more permits than were active over the 2003 to 2006 time period. The difference between the two catch history formulas is slight for most permits, though some permits see differences of several percentage points. When compared to catch during the 2003 to 2006 period (the period after the control date), some permits receive catch shares that differ very little, while others receive catch shares that are several percentage points different.

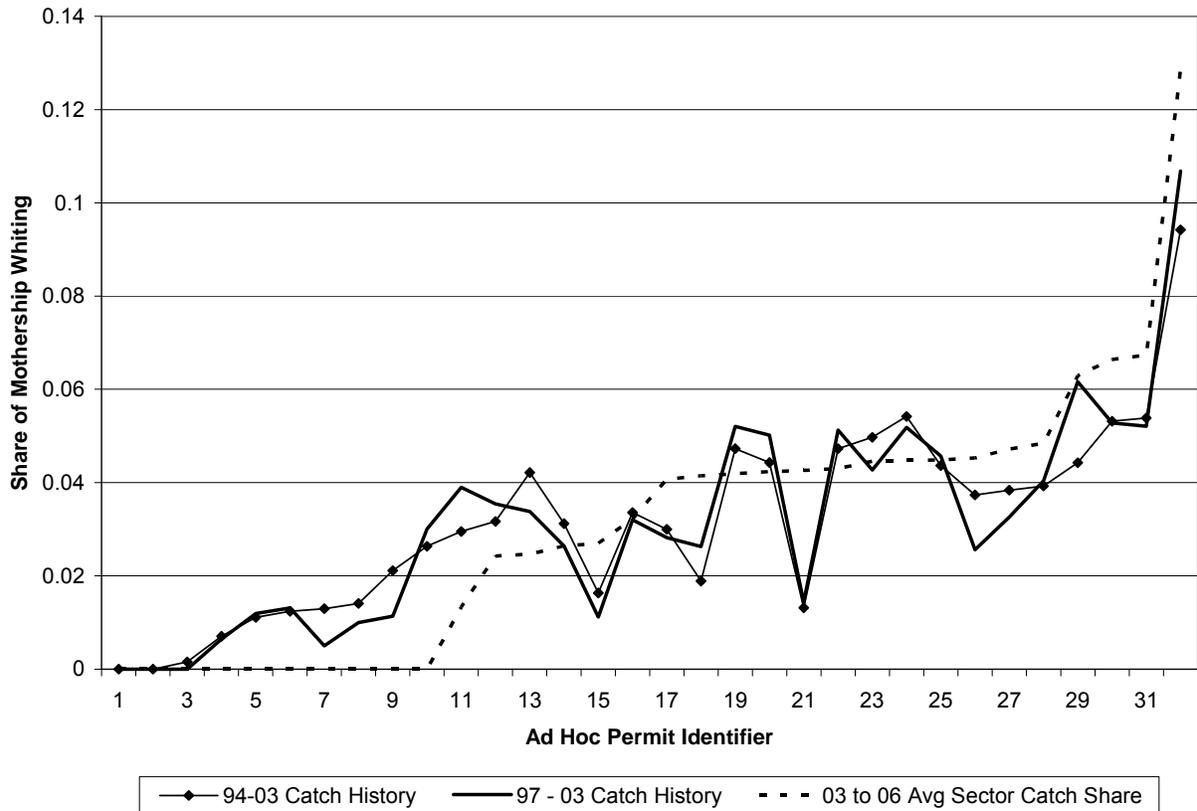


Figure B-2. Catch history distributions to permits by calculation formula.

When catch history distributions are estimated at the business entity level, the effect is somewhat different than when examined at the permit level. Like the permit level, only one entity exceeds the 10 percent accumulation limit (because it only holds a single permit), but the distribution across entities looks different than the distribution across permits. Some entities receive catch histories that are several percentage points different than their recent catch shares regardless of the allocation formula.

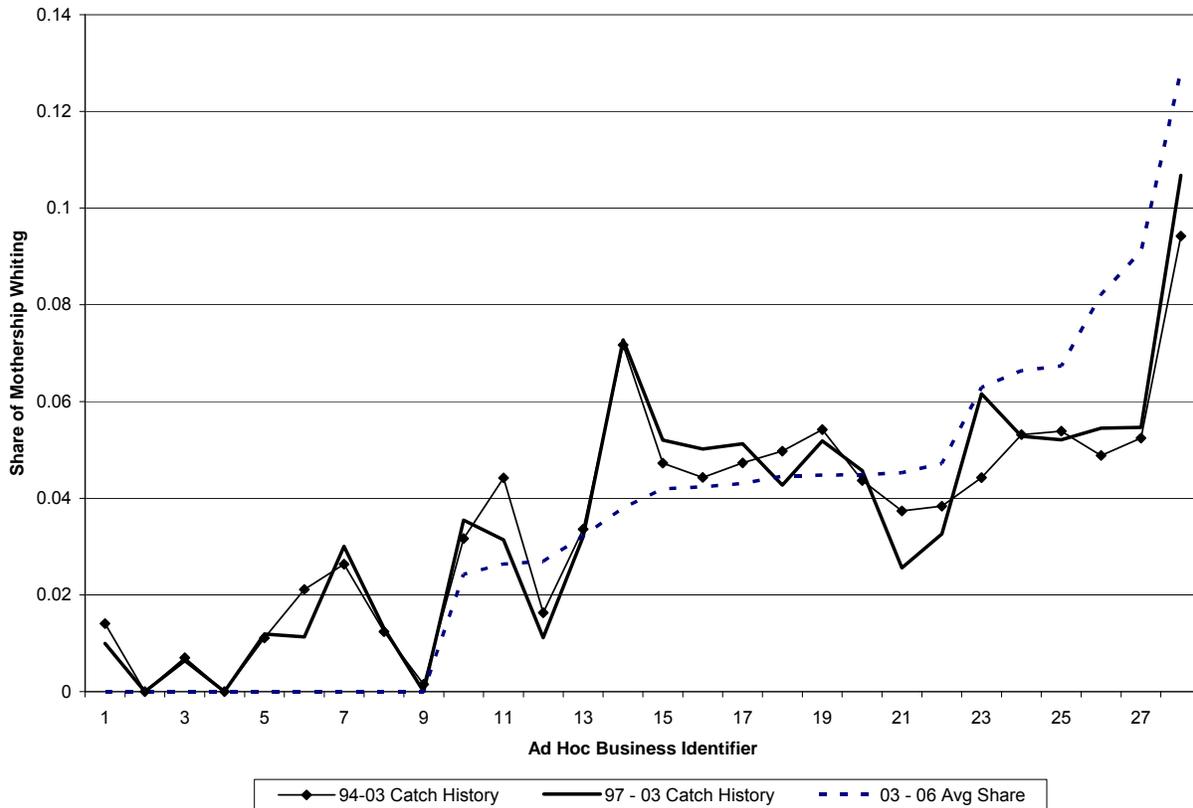


Figure B-3. Catch history distributions to business entities by calculation formula.

● **Endorsement Transferability and Endorsement Severability**

Making the CV(MS) endorsement transferable makes the endorsement, or the permit to which it is tied, take on value that is reflected by the amount of revenue that could be generated from CV(MS) activity. Transferability means that the market will be able to determine the participants in the fishery as the more efficient operators purchase those permits and less efficient operators drop out. Transferability also helps ensure that there are harvesters engaged in the fishery over the long run. If, for example, the owner of a permit is deceased, allowing the estate to transfer that permit to another owner will ensure that participation in the fishery remains. If permits could not be transferred, participation in the fishery may eventually disappear.

While a restriction on endorsement severability is intended to maintain stability in the participation of catcher vessels in the sector, it is not immediately clear that restricting the endorsement from being severed from the permit would make participation in the fishery more stable. To the extent that holding endorsements and permits together creates “stickiness” in the market and makes it more difficult for those permits to be transferred, then restricting endorsement severability may make participation more stable.

❖ Accumulation Limits

The accumulation limits of 10 to 25 percent could allow for a minimum of 10 to 4 entities to control the mothership sector allocation of Pacific whiting. Under the 97 to 03 catch history calculation, one permit may be restricted by the 10 percent accumulation limit. Other accumulation limits do not appear to be restrictive. However, when past catch quantities are compared to catch quantities that would be restricted by the accumulation limits under a status quo whiting OY (of 269,545) the effect is somewhat different. One expected effect of rationalization is fleet consolidation. This is expected to occur because doing so reduces the cost of engaging in fishing opportunity. Past information is useful for illustrating the annual catch capability that harvesters in the mothership sector have, and this information is useful for illustrating one potential effect of the accumulation limits.

Since 1995, several vessels have caught more than 4,600 metric tons of whiting in the mothership sector. When compared to the metric tonnage that would be restricted by a 10 percent limit under a US whiting OY of 269,545, the catch of some of these vessels would exceed that accumulation limit. It is reasonable to expect that the average catch of mothership catcher vessels would increase as a result of rationalization and the associated fleet consolidation. An accumulation limit of 15 to 25 percent does not appear to be as restrictive.

When considering these accumulation limits at the entity level (and the possibility that fewer entities will likely control catch history in a rationalized fishery), it may be reasonable to expect that both the 15 percent and 25 percent accumulation limit could be restrictive to some entities since it appears that some individual vessels have caught more than the tonnage associated with those accumulation limits.

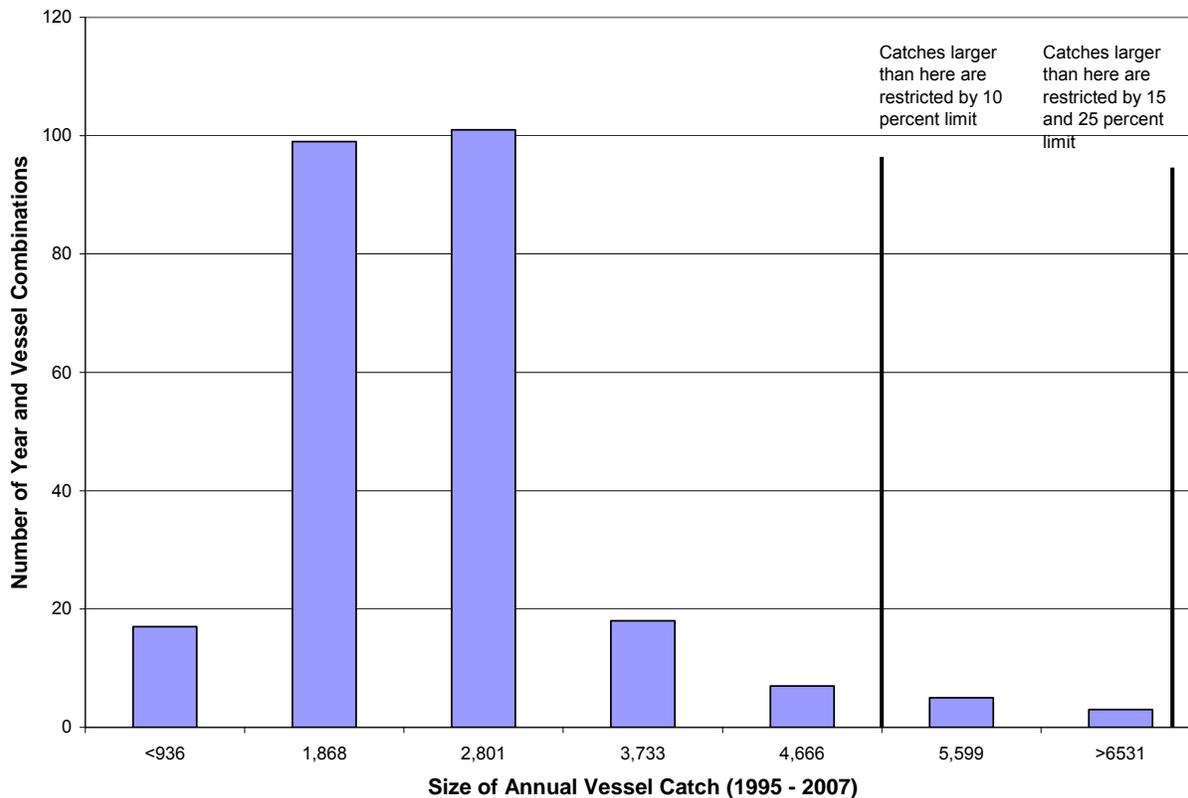


Figure B-4. Frequency of annual vessel catches by metric tonnage category (1995 through 2007).

The information shown above can be complimented with information showing the tonnage associated with the various accumulation limits and two possible whiting OYs. These OYs reflect a range of future whiting OYs based on ranges specified in the recent past. This information shows that in years where the whiting OY is relatively large, each of the accumulation limits is larger than the annual size of catch by vessels over the past several years. When the OY is relatively small, the 10 percent accumulation limit may restrict some vessels, but the other accumulation limits are not substantially restrictive.

When viewed in the context of consolidation, the effect of accumulation limits may be quite different. It is difficult to determine the degree to which rationalization will affect accumulation of catch history at the entity level. However, the accumulation limits of 10, 15, and 25 percent would result in a minimum of 10, 7, and 4 entities owning the CV catch history in the mothership sector.

Table B-4. Mothership catcher vessel accumulation limits and associated metric tonnage based on two hypothetical whiting OYs.

Hypothetical mothership Sector Allocation (mt)	Associated US Whiting OY (mt)	Accumulation Limit and Associated Metric Tonnage		
		10%	15%	25%
63,120	300,000	6,312	9,468	15,780
34,320	170,000	3,432	5,148	8,580

B-2.2.2 Mothership Processor Permit

a. Qualifying Entities

- ▶ **Option 1:** The owners of qualifying motherships will be issued MS permits. In the case of bareboat charters, the charterer of the bareboat will be issued the permit.

Option 2: The owners of qualifying motherships will be issued MS permits.

b. Qualification Requirements

A qualifying mothership is one which processed at least 1,000 mt of whiting in each of any two years from 1997 through 2003.

c. Transferability

1. MS permits will be transferable, and
2. MS permits may be transferred to a vessel of any size (there will be no size endorsements associated with the permit)
- ▶ 3. **Option 1:** MS permits **may not** be transferred to a vessel engaged in the *harvest* of whiting in the year of the transfer.
Option 2: MS permits **may** be transferred to a vessel engaged in the *harvest* of whiting in the year of the transfer.
4. Limit on the Frequency of Transfers:
 - Option 1:** MS permits may not be transferred during the fishing year.
 - Option 2:** MS permits may only be transferred one time during the fishing year.
 - ▶ **Option 3:** MS permits may be transferred two times during the fishing year.

d. Usage Limit

No individual or entity owning a MS permit(s) may process more than:

- Option 1:** 20 percent,
 - Option 2:** 30 percent,
 - ▶ **Option 3:** 40 percent, or
 - Option 4:** 50 percent
- of the total mothership sector whiting allocation.

❖ Interlinked Elements

There do not appear to be any components that are substantially interlinked with the mothership permit provisions. However, the sub-options may have a wide ranging array of effects depending upon which sub-option is chosen. The reader is referred to the subsequent options for a more in depth discussion of these effects.

❖ Rationale and Policy Issues

● Owner of the Vessel or Bareboat Charterer

Eligible entities may include the bareboat charterer of a mothership or the owner of the mothership. The rationale for granting permits to the bareboat charterer is that the chartering entity has engaged in effort

and operation of the vessel that has generated historical participation. Therefore, if a permit is to be granted to historical participants, it is the bareboat charterer that has participated in the fishery and that participation should be recognized. Furthermore, granting a permit to the bareboat charterer does not necessarily mean that the charterer will seek out another mothership vessel, so granting a permit to the charterer does not imply the owner of the vessel will be adversely affected.

The rationale for granting the permit to the owner of the vessel is that the owner of the vessel has made an investment in that vessel, and that investment should be recognized and protected by granting a permit to the owner. Granting such a permit to the owner increases the likelihood of that vessel remaining in the fishery and/or protecting the investment of the vessel owner.

- **Processing of 1,000 metric tons between 1997 and 2003**

Minimum processing requirements are intended to recognize those participants that have substantially participated as a mothership in the Pacific whiting fishery. Using the years 1997 to 2003 is intended to reflect the time period between the date the catcher-processor sector and the mothership sector were separated in regulation (1997) and to be consistent with the control date (2003).

- **Transferability**

The ability to transfer to a vessel engaged in the harvest of whiting is covered in previous sections documenting the effect of allowing a catcher-processor to operate as a mothership.

The ability to transfer a mothership permit to another mothership may be necessary if, for example, a mothership vessel breaks down. It may also allow mothership vessels to take advantage of unexpected opportunities in other fisheries (such as BSAI Pollock). Allowing a mothership to transfer its permit to another mothership in such a case would provide a way for one mothership to fill the role of the original mothership.

A restriction on the number of transfers insures that participation in the mothership processing portion of the fishery remains limited. This helps maintain stable relations between motherships and catcher vessels. In a fishery managed with processor linkages, stable relations between processors and catcher vessels translates into more stable operation of cooperatives.

- **Usage Limit**

A usage limit protects against excessive control of processing and fish purchases. The range of usage limits of 20 to 50 percent examine the effect of allowing a minimum of two to five entities to process the entire mothership sector whiting allocation in a season.

Element of Cooperative Alternative	Conservation	Net Benefits	Disruption	Excessive Shares	Fairness and Equity	Harvester and Processor Sector Health	Labor	Communities	Small Entities and New Entrants	General Public
Owner of the vessel or bareboat charterer			X		X					
Minimum processing requirements					X	X				
Transferability		X				X				
Usage limit				X						

❖ Analysis

● Qualifying Entities

Two options exist for identifying a qualifying entity. One grants the permit to the “bareboat charterer,” while the other grants the permit to the owner of the mothership vessel. The decision of which entity to allocate the permit to is, to a large degree, a distributional decision. However, there are some implications associated with this decision, described below.

As described previously, a cooperative program relies heavily on relationships between participants in a cooperative. Relationships between motherships and catcher vessels will likely affect relationships among catcher vessels in a cooperative. The charterer of a mothership vessel operates the mothership, and in this capacity has established relations with catcher vessels. Maintaining this relationship helps make the transition to a cooperative-based fishery more seamless, while disrupting the relationship may make the transition to a cooperative fishery (especially one where linkages are established based on past delivery patterns) more difficult. Therefore, granting a permit to the bareboat charterer of a mothership should help make the transition to a cooperative-based fishery easier than it would be if the permit were granted to the owner of the mothership. Granting a permit to the mothership owner means a different entity could operate that mothership, and could have different objectives or relationships with catcher vessels than the previous mothership operator.

On the other hand, granting a permit to the mothership owner makes it more likely that the owner will continue to see his/her investments (in the form of the mothership) participate in the whiting fishery. If the owner is not granted the permit, the charterer could move the permit to another mothership vessel, and the mothership owner could find his/her mothership investment less active, or inactive, in the fishery. This could lead to a loss of revenue and a de-valuation of the mothership as an asset. The likelihood of this outcome is unknown.

● Qualification Requirements

The requirement that a mothership must have processed at least 1,000 mt in each of any two years between 1997 and 2003 means that six motherships, owned by five different entities, would qualify. The following table shows the participation of vessels and entities that have taken deliveries from catcher vessels from the years 1995 to 2007. This indicates that five of those vessels would not receive a mothership permit. Two of these vessels may be better described as catcher-processors that have taken deliveries from catcher vessels in the past, two other vessels are no longer present on the west coast, and the remaining vessel only participated in a single year, after the control date. Based on the information shown below, the qualification requirement eliminates one mothership that only participated in a single year after the control date. Other vessels that have received deliveries from catcher vessels have either left the west coast or are better defined as catcher-processors, meaning the qualification formula does not affect their activities.

Table B-5. Historic participation and mothership qualification.

Company	Vessel Name	Qualify/ Does Not Qualify	Year													
			95	96	97	98	99	00	01	02	03	04	05	06	07	
All Alaskan	Heather Sea	Does Not	X													
	Saga Sea	Does Not	X													
American Seafoods	American Dynasty	Does Not		X												
	American Triumph	Does Not		X												
	Ocean Rover	Qualifies	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Arctic Storm	Arctic Fjord	Qualifies	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	Arctic Storm	Qualifies	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Peter Pan/ Nichiro	Golden Alaska	Qualifies	X	X	X	X	X	X								X
Premier Pacific	Ocean Phoenix	Qualifies	X	X	X	X	X	X	X					X	X	X
MV Savage Inc/ Cascade Fishing/ Suisan	Sea Fisher	Does Not														X
Supreme Alaska	Excellence	Qualifies	X	X	X	X	X	X	X	X	X	X	X	X	X	X

● Transferability

Making an asset transferable allows it to take on value. A transferable mothership permit acts as a capital asset to the permit holder. The value of the permit is theoretically equivalent to the net present value of a future stream of profits associated with engaging in activities allowed by that permit. Unfortunately, no data is available with which to calculate the potential value of a transferable permit. Furthermore, the amount of value a processor permit can generate depends on whether processor linkages exist, and to what degree. Greater processor linkages will tend to make the transferable permit more valuable, as they

provide more certainty over future deliveries and grant processors more leverage in negotiations with catcher vessels over profit sharing.

Wide-spread transferability of mothership permits can affect the relations between catcher vessels and motherships, with repercussions to a fishery managed with harvest cooperatives if processor linkages exist. As stated previously, harvest cooperatives rely heavily on long-term, stable relationships among catcher vessels. In a cooperative-based fishery with processor linkages, catcher vessels must negotiate arrangements with processors. When negotiating arrangements with other catcher vessels in a cooperative, each catcher vessel implicitly brings the interests and arrangements made with the processing entity to the cooperative. In order for the arrangements made with the processing entity to work, it is important that the cooperative agreements allow for those arrangements between the catcher vessel and the processor. If mothership permits are transferred frequently, this can lead to a change in arrangements between processors and catcher vessels, and may change or disrupt the relationships and agreements made among catcher vessels in a cooperative. Therefore, fewer transfers of mothership permits during a fishing year will help stabilize relations between processors and catcher vessels, leading to more stable operations among cooperative members if processor linkages exist.

Allowing a permit to be transferred to a vessel of any size allows capital in the mothership portion of the fishery to be determined by market conditions, rather than by regulation. This makes it more likely that capital in a rationalized fishery will attain a level that is near, or at, a cost efficient condition (so long as processor ties exist in the program). This is different than an Olympic fishery, where excess capital is more likely to exist. However, if limited entry is put in place but processor linkages are not established, competition would occur among processors for catcher vessel deliveries and this may inhibit the ability of processors to effectively match capital to production volume due a variety of reasons. One reason is because processors will not be able to plan for delivery volumes as effectively because they will have relatively uncertain expectations about those delivery volumes in any given year.

Allowing a permit to be transferred to a vessel engaged in whiting harvest is covered under the section describing the effect of allowing catcher-processors to also operate as a mothership. While it is theoretically possible for a catcher vessel to acquire a mothership permit and engage in mothership activities, the most likely type of vessel that would engage in harvesting and mothership activities (if allowed) is a catcher-processor, because of the amount of capital required to process and handle deliveries of Pacific whiting.

● Transfer Restrictions

Restricting mothership permits from being transferred during the fishing year helps foster stability in relationships between motherships and catcher vessels, and by extension, to the cooperatives. This is especially true if arrangements have been made between motherships and catcher vessels prior to the start of the fishing period. If a mothership permit is transferred during the fishing period to another entity, there is no certainty that the arrangements initially made between the mothership and catcher vessel would remain in place. If those arrangements are not maintained, that can cause instability in the plans of the catcher vessel and the new owner of the mothership permit, especially if linkages between the mothership and the catcher vessel are established, and those linkages follow the permit when it is transferred. By extension, allowing mothership permits to be transferred twice during a fishing year would cause greater instability than a single transfer during a year.

If a mothership experiences a breakdown or other similar event, the ability to transfer permits would allow for another mothership to take its place.

● Usage Limit

A usage limit affects the amount of consolidation that can occur in the mothership processing portion of the whiting fishery. Consolidation can affect exvessel price negotiations and/or revenue sharing. The fewer mothership processors, the more leverage each mothership processor has in negotiating over exvessel prices or profit sharing arrangements. In addition, consolidation can improve the efficiency of the mothership processing sector. If greater quantities per mothership vessel result in greater cost efficiencies, then consolidation may result in a more efficient use of capital resources and greater net benefits to society. Consolidation also depends on fluctuations in the whiting OY. During a low OY year, it may be appropriate to allow fewer motherships to process whiting compared to a year when the whiting OY is relatively high.

Assuming the entire mothership whiting allocation is attained, then the four options for usage limits of 20%, 30%, 40%, and 50% could result in a minimum of 5, 4, 3, and 2 mothership vessels processing in the year respectively. Unfortunately no data is available with which to estimate the cost efficiencies associated with this number of vessels, nor is data available with which to estimate the potential leverage over exvessel prices and profit sharing arrangements that may be associated with these numbers of vessels.

The following information, which uses a reasonable high and low bound for mothership sector allocations of whiting based on the range of Pacific Whiting OYs specified in recent years, may help determine the appropriate usage limit. Historical fishery information was reviewed in an attempt to establish a potential amount of daily mothership capacity (estimated at 450 mt), and this was used to establish an estimate of season length based on a) a possible number of motherships, and b) two possible mothership sector allocation tonnages. For reference purposes, the mothership fishery predominately operates over a month and a half. From this information it appears that a single mothership may mean the season could last nearly five months long in years where the whiting OY is large, though this seems unlikely given that catcher vessels may not be able to access whiting during the fall months. With two motherships, the season may last just over two months during years when the whiting OY is large. With three motherships, the season may last just over a month if all motherships operated at daily capacity. This is similar to status quo, though the season length under status quo occurs with four to five mothership vessels, suggesting that every mothership is not operating at capacity. If this is true, then establishing an accumulation limit restricting the minimum number of motherships to three may still result in/allow for some consolidation among motherships.

Therefore, even if consolidation limits are set at a level that allows for a single mothership, it is likely that more than one mothership would continue to participate. This is because it is unlikely that a single mothership would have the capacity to handle that volume within the seasonal time constraints. However, even if more than one mothership participates under an accumulation limit system that allows for a single entity to purchase all of the mothership whiting, it is possible that those motherships operating could be owned by a single company. Therefore, an accumulation limit that allows for a single entity to process all of the whiting may result in that entity engaging two motherships to do so.

Table B-6. Potential mothership sector season length based on number of motherships and two hypothetical mothership sector allocation amounts.

Hypothetical Mothership Sector Allocation (mt)	Associated US Whiting OY	Season Length with 1 mothership (in days)	Season Length with 2 mothership (in days)	Season Length with 3 mothership (in days)
63,120	300,000	140	70	47
34,320	170,000	76	38	25

Even if aggregate consolidation occurs among motherships, individual mothership entities may be restricted by the accumulation limits. Past information shows the amount of volume handled by mothership processing entities/companies, and shows the potential constraint on mothership processing activity from each of the usage limits depending on the mothership whiting allocation. From this information, it is apparent that even with a usage limit of 50 percent, some mothership entities may have their historic production volumes restricted. This is especially true in years when the whiting OY may be relatively low.

Table B-7. Range of mothership usage limits in metric tons based on two hypothetical mothership sector allocation amounts - compared to historic mothership company usage amounts.

		Usage Limit and Associated Metric Tonnage				Historic Mothership Activity	
Hypothetical mothership Sector Allocation (mt)	Associated US Whiting OY (mt)	20%	30%	40%	50%	Max mothership company % (1997 - 2006)	Average mothership company mt (1997 - 2006)
63,120	300,000	12,624	18,936	25,248	31,560	36%	9,764
34,320	170,000	6,864	10,296	13,728	17,160		

B-2.3 Co-op Formation and Operation Rules.

B-2.3.1 Who and Number of Co-ops

Co-ops will be formed among CV(MS) permit owners.

Co-op Formation Option 1 (Multiple Co-ops): *Multiple co-ops would be organized around motherships.* Permit owners choosing to participate in the co-op fishery must form a separate co-op based on the mothership where the CV(MS) permit holders delivered the majority of their most recent year's catch.

- **Co-op Formation Option 2:** Multiple co-ops are not required. Catcher vessels may organize a single co-op or multiple co-ops but are obligated to deliver to the processors as proscribed in B-2.4.

B-2.3.2 When

Each year at a date certain prior to the start of the fishery, mothership and CV(MS) permit holders planning to participate in the mothership sector must register with NMFS. At that time CV(MS) permit

holders must identify which co-op they will participate in or if they plan to participate in the non-co-op fishery.

□ B-2.3.3 Co-op Agreement Standards

These cooperative agreement standards are being reviewed by the NWR and NOAA GC. Comments and suggested modifications will be provided prior to the November 2008 Council meeting if necessary.

a. **Submissions to NMFS and the Council**

Co-op agreement. Co-op agreements will be submitted to NMFS for approval. Signed copies of the cooperative contracts must be filed with the Council and NMFS and available for public review before the co-op is authorized to engage in fishing activities. (DURING COUNCIL DISCUSSION THIS WAS FLAGGED BY NOAA GC AS A POTENTIAL LEGAL PROBLEM) Any material changes or amendments to the contract must be filed annual with the Council and NMFS by a date certain.

Letter to Department of Justice. Co-ops must also file with the Council and NMFS a copy of a letter from the co-op requesting a business review letter on the fishery cooperative from the Department of Justice and any response to such request.

b. **Number of Participants in Each Co-op (Including Inter-co-ops)**

Two or more permits may form a co-op for harvesters but participation must conform to the requirements of Section B-2.3.1. Co-ops may form co-ops with other co-ops. Within one of the whiting sectors, these co-ops may be formed to manage directed catch and/or bycatch.

c. **Catch History Distributions Among Permits**

Co-op agreements must stipulate that catch allocations to members of the co-op be based on their catch history calculation distribution to the co-op by NMFS.

d. **Participation by Non-CV (mothership) Endorsed Permits**

Through temporary arrangements a co-op allocation may be harvested by any catcher vessel holding a valid limited entry trawl permit which has joined the co-op (including one that does not have a CV(MS) endorsement).¹²

e. **Other Required Co-op Agreement Provisions**

- 1) a list of all vessels and permit holders participating in the co-op and their share of allocated catch which must match the amount distributed to individual permit holders by NMFS,
- 2) signature by all permit holder owners participating in the co-op
- 3) a plan to adequately monitor catch and bycatch,
- 4) adequate enforcement and penalty provisions to ensure that catch and bycatch [for] overages do not occur,
- 5) measures designed to reduce bycatch of overfished species
- 6) obligation to manage inseason transfers of catch history,
- 7) a requirement that at least a majority of the members are required to dissolve a co-op, (DURING COUNCIL DISCUSSION THIS WAS FLAGGED BY NOAA GC AS A POTENTIAL LEGAL PROBLEM)
- 8) an obligation to produce an annual report to the Council and NMFS by a date certain documenting the co-op's catch and bycatch data and inseason transfers (the report is to be available for review by the public),
- 9) identification of a co-op manager who will
 - a. serve as the contact person with NMFS, the Council and other co-ops,
 - b. be responsible for the annual distribution of catch and bycatch,
 - c. oversee transfers,

¹² As a member of the co-op, such a vessel would be subject to paragraph B-2.4 and the indicated processor obligations.

- d. prepare annual reports and
- e. be authorized to receive or respond to any legal process against the co-op.
- 10) provisions that prohibit co-op membership by permit holders that have incurred legal sanctions that prevent it from fishing groundfish in the Pacific Fishery Management region,
- 11) a provision that requires new owners to comply with membership restrictions in the co-op agreements.
- f. **Additional Provisions for Inter-co-op Agreements**
 - 1) In the case of two or more cooperatives entering into an inter-cooperative agreement, the inter-co-op agreement must incorporate and honor the provisions of the individual co-op agreements unless all such agreements (or modifications thereof) are resubmitted for approval.
 - 2) The requirements of paragraph a through e apply to the inter-co-op agreement, except that for the purpose of subparagraph e.7, the members of the inter-co-ops are the co-ops and not the participants in each co-op.

❖ **Interlinked Elements**

The requirement that at least two entities are required to form a cooperative may conflict with some of the cooperative agreement standards shown above. In particular, the requirement that a cooperative file a report at the end of the season documenting catch and bycatch may violate the confidentiality provisions of the Magnuson-Stevens Act. If at least three entities are required to form a co-op, the requirement to file a report may not violate MSA confidentiality provisions.

A requirement that cooperatives are/are not required to form around the motherships to which they deliver is related to processor ties and movement between processors. If a catcher vessel can switch processors simply by switching the processor to which they deliver the majority of their catch, then not requiring cooperatives to be formed around motherships may erode the benefits motherships can realize from a processor tie. If a single cooperative is formed for the mothership sector, then a catcher vessel with linkages to processor B can lease catch history from a catcher vessel linked to processor A. Through that simple voluntary lease agreement, the catcher vessel could switch processors because it will have delivered the majority of its catch to another processor in that year. Compared to a requirement that catcher vessels fish in the non-cooperative portion of the fishery in order to change processors, this simple switching arrangement provides little disincentive to catcher vessels considering switching processors and may reduce the benefits processors see from rationalization.

Other interlinked elements may be identified by NOAA GC and NMFS – NWR.

❖ **Rationale and Policy Issues**

● **Who can form co-ops**

Cooperatives are intended to coordinate the harvest of members. Allowing entities that are not harvesters to join a cooperative may affect the performance of those cooperatives. This may mean a different manner of harvesting than if just left up to harvesters. In order to optimize the harvesting performance (both bycatch and economic) of those cooperatives, it is important that those cooperatives be formed by those engaged in harvesting. Therefore, cooperatives should be formed by catcher vessels.

- **Number of co-ops**

Requiring cooperatives to form around motherships helps ensure that cooperatives are formed by a like-minded group of individuals, and protects the interests of the mothership by allowing more certainty about who is providing deliveries. This helps motherships facilitate delivery coordination and timing, allowing the mothership to optimize business operations.

Allowing harvesters to form cooperatives that are not necessarily associated with a particular mothership allows harvesters to determine the most appropriate composition of the cooperatives and ensures that they are comprised of like-minded individuals.

Ensuring that cooperatives are formed by like-minded individuals is important to their success. Since cooperatives are voluntary and rely on agreed-upon standards by members, having like-minded members increases the potential for cooperative success and long-term cohesion. This helps ensure optimal performance of the cooperative and of the fishery as a whole.

- **When**

Requiring harvesters to state their intention to participate in a cooperative or in the non-cooperative portion of the fishery by a particular date facilitates the administration of the cooperative program on the part of the agency.

- **Cooperative agreement standards**

Requiring standards for cooperative agreements (and requiring that they be filed with and reviewed by NMFS) assures that goals and objectives specified by the Council are being met through a legally binding agreement by cooperative members. Requiring these agreements be filed with NMFS assures that a review process exists to verify that the Council's goals and objectives are likely to be met by the agreement.

Requiring that cooperatives develop a report that is made publicly available aids in the transparency of the cooperative program and allows the Council and NMFS to verify the success of management tools used by the cooperative. If those tools are specified as part of a cooperative agreement, the production of annual reports allows the public and NMFS to determine whether the tools described in that cooperative agreement are likely to be successful in meeting the cooperative's intentions. This helps inform future approval/disapproval decisions on the part of NMFS reviewers and whether particular elements of the cooperative agreement are likely to meet the goals specified by the Council.

Element of Cooperative Alternative	Conservation	Net Benefits	Disruption	Excessive Shares	Fairness and Equity	Harvester and Processor Sector Health	Labor	Communities	Small Entities and New Entrants	General Public
Who can form co-ops	X	X	X			X				
Number of co-ops	X	X	X			X				
When co-ops must be formed										
Cooperative agreement standards	X	X	X	X	X	X	X	X	X	X

❖ Analysis

● Who Can Form Co-ops and Number of Co-ops

Two options exist for co-op formation. One option requires that co-ops form around the mothership processor to which they deliver to, while the second option allows a single cooperative to form among all catcher vessels in the sector, but participants in that single cooperative may deliver to several different motherships.

One intention of establishing the multiple co-op requirement was the idea that if multiple co-ops were required, they would be more likely to be made up of like-minded individuals. Other rationale was that operational timing between the mothership and associated catcher vessels would be improved if multiple co-ops were required.

In regards to the first rationale, theory would indicate that requiring multiple co-ops to be formed may actually restrict the ability for like-minded individuals to co-op with one another. This is because harvesters may have more in common with other harvesters that deliver to another mothership, but those harvesters may have formed a relationship with different motherships for business reasons. Contrary to theory, the logistical operations of the mothership sector will likely lead to a set of catcher vessels that deliver to a mothership to be fairly similar in their goals and objectives and in their relationships with that mothership. Such similarities would tend to lead to those catcher vessels belonging to the same cooperative. This is because cooperatives are formed among parties that can agree to a set of terms. If those parties are similarly minded, it is much more likely they will form cooperatives and agree to terms. The reason similarly minded catcher vessels are likely to have the same mothership in common is because of the relative degree of coordination that occurs among motherships and catcher vessels; in order for the entire mothership operation to be successful, that coordination activity must be successful and be reasonably agreed-upon by both catcher vessels and motherships. Furthermore, agreed-upon delivery timing and delivery rotation is related to coordination of harvest activity among catcher vessels. If catcher vessels delivering to the same mothership also belong to the same cooperative, those catcher

vessels can engage in catch history leasing agreements that align with the coordination that occurs with the mothership.

However, allowing catcher vessels to form a broader cooperative that stretches across multiple mothership operations may further enhance the ability of catcher vessels to optimize their operations. A broad cooperative that includes vessels linked to multiple motherships would allow catcher vessels delivering to various motherships to coordinate harvest activity across a wider number of participants. Enhanced flexibility in harvest activity coordination may lead to more desirable results. However, this enhanced flexibility could also be achieved through an inter-cooperative agreement.

In addition to the above factors, not requiring that cooperatives form around motherships may make it more difficult for the mothership to engage in coordination with catcher vessels and this may reduce the ability for motherships to successfully plan business activities for the year. If cooperatives are formed around motherships, those motherships know which entities and catcher vessels they should expect deliveries from during the year, and they know which entities and catcher vessels to coordinate with over operational issues. If catcher vessels form a single cooperative that stretches across the entire mothership sector, motherships may not know which catcher vessels are delivering to them. This is because of the private lease agreements that exist as part of the cooperative and the ability that gives catcher vessels to have another vessel(s) fish their catch and deliver to their obligated processor. This type of uncertainty may make it difficult for the mothership to plan and coordinate delivery activity with catcher vessels. In addition, this makes the processor tie obligations (and the catcher vessels which have those obligations at any given time) less visible. This may reduce the ability for motherships to negotiate with catcher vessels over delivery timing and prices because they may not know who is planning to fish those obligated deliveries. The result may be a reduction in the benefits motherships may otherwise expect to see from rationalization.

● Co-op and Non-Co-op Fishery Declaration

Filing the intention to fish in the co-op or non-co-op portion of the fishery is likely to be a necessary rule for administration and implementation of a cooperative-based fishery. In addition, requiring that harvesters state their intention to fish in the cooperative or non-cooperative portion of the fishery for that entire season means that cooperative membership will be more stable. Stability in membership during a year increases the incentives for harvesters in a cooperative to work with one another to resolve any potential issues. If harvesters could leave cooperatives or enter cooperatives as the season progresses, substantial administrative work-load could result in order to track and modify membership, track appropriate catch histories, and attribute ongoing catch to appropriate cooperatives. In addition, if membership of cooperatives can change throughout the year, there is far less incentive for cooperative members to jointly resolve any unforeseen and problematic issues.

● Cooperative Agreement Standards

In general, requiring that cooperative agreements meet certain standards increases the chances that cooperatives will operate in a manner that achieves objectives stated by the Council. For example, requiring that cooperatives have a bycatch management plan which includes monitoring and penalty provisions means that harvesters in that cooperative will be striving to reduce bycatch. This behavior is consistent with objectives specified by the Council and found in the MSA. In addition, requiring that cooperative agreements be validated by NMFS ensures that those standards are being met. NMFS and GC are reviewing the proposed list of cooperative agreement standards and will provide proposed revisions, if necessary, prior to the November 2008 Council meeting.

B-2.4 Processor Ties

Permits will be obligated to deliver:

- Option 1:** all
- ▶ **Option 2:** 90 percent
- Option 3:** 75 percent
- Option 4:** 50 percent

of their catch (the permits' "obligated deliveries") to certain motherships, as specified in the following sections. Catch that is not so obligated may be delivered to any mothership with an MS permit.

NOTE: During discussion of processor linkage provisions at the Council's June 2008 meeting, the Council members expressed that by selecting a 90 percent linkage option as part of their preferred alternative it was their intent to provide a means for vessels to move between motherships without entering into the non-co-op fishery. In order to achieve this intent, additional modifications will be required. Specifically, in the last paragraph of the following section, the sentence

"Thereafter, each year, CV(MS) permit owners choosing to participate in a co-op will deliver their obligated catch to the same mothership to which they were obligated in the previous year."

would need to be changed to read:

"Thereafter, each year, CV(MS) permit owners choosing to participate in a co-op will deliver their obligated catch to the mothership to which they delivered the majority of their catch in the previous year."

B-2.4.1 Formation and Modification of Processor Tie Obligations

In the first year of the program, the CV(MS) permit owner's choice will be between delivering in the non-co-op fishery and making deliveries as part of a co-op. If the permit chooses to participate in a co-op its obligated deliveries must go to the licensed mothership to which the permit delivered the majority of its whiting catch in:

- Option 1:** The most recent year that it fished before the program was implemented
- Option 2:** From 1997 through 2004
- Option 3:** From 1994 through 2003
- ▶ **Option 4:** If the permit chooses to participate in a co-op its obligated deliveries must go to the licensed mothership to which the permit made a majority of its whiting deliveries in 2009

If a mothership does not qualify for an MS permit in the first year of the program,¹³ the catcher vessel which delivered to that mothership in the previous year may deliver its obligated catch to the qualified mothership to which it last delivered the majority of its catch. If none of the motherships to which the permit would be obligated qualify for an MS permit, the permit may participate in the co-op and deliver to a licensed mothership of its choosing. Alternatively, the permit may choose to participate in the non-co-op fishery.

¹³ If a mothership that does not qualify for a permit acquires such a permit (i.e., arranges for the transfer of a permit) by the time co-ops are established for the first year of the program, would it be the Council's intent that such the catcher vessel obligation to that mothership remain in place?

Thereafter, each year, CV(MS) permit owners choosing to participate in a co-op will deliver their obligated catch to the same mothership to which they were obligated in the previous year. However, if the CV(MS) permit owners chose to participate in the non-co-op fishery in the previous year, or did not participate in the mothership whiting fishery, they are released from their obligation to a particular mothership and may deliver to any mothership with an MS permit.

Mothership Permit Transfer. If a mothership transfers its MS permit to a different mothership or different owner, the CV(MS) permit obligation remains in place and transfers with the MS permit to the replacement mothership unless the obligation is changed by mutual agreement or participation in the non-co-op fishery.

B-2.4.2 Flexibility in Meeting Processor Tie Obligations

a. Temporary Transfer of the Annual Allocation Within the Co-op or from One Co-op to Another

When CV(MS) permit owners transfer co-op allocations from one co-op member to another within the co-op or from one co-op to another within an inter-co-op, and the allocation that is transferred is part of the obligated deliveries, such allocations must be delivered to the mothership to which the allocation is obligated, unless released by mutual agreement.

b. Mutual Agreement Exception

By mutual agreement of the CV(MS) permit owner and mothership to which the permit is obligated, and on a year-to-year basis, a permit may deliver its obligated deliveries to a licensed mothership other than that to which it is obligated. Such an agreement will not change the permit's future-year obligation to the mothership (i.e., the permit will still need to participate in the non-co-op fishery for one year in order to move its obligated deliveries from one mothership to another).

B-2.4.3 Mothership Processor Withdrawal

Mothership Withdrawal. If a mothership does not participate in the fishery and does not transfer its permit to another mothership, or does not agree to transfer delivery to another mothership, the CV(MS) permit holders obligated to that mothership may

► **Option 1:** participate in the non-co-op fishery

Option 2: join a different co-op and deliver their obligation to a different mothership; or the entire co-op which delivered to that mothership may deliver its obligated catch to a different mothership. The permits will not be required to participate in the non-co-op fishery in order to shift from one mothership to another.

SubOption 2a: If the mothership returns within two years, any permit with an obligation to that mothership prior to its departure will have the obligation reinstated, unless the permit has participated for one year in the non-co-op fishery. After two years, the permit's obligation will become linked to the mothership to which it most recently delivered its obligated catch.

SubOption 2b: The permit will become obligated to the mothership that it delivers its obligated catch to subsequent to the withdrawal of the mothership to which it was previously obligated.

❖ Interlinked Elements

Processor limited entry. See earlier section on processor licensing

Processor ties are associated with the mutual agreement exception and whether a catcher vessel must fish in the non-cooperative fishery in order to switch motherships, or whether a vessel can fish the unlinked portion of catch history of other vessels in his cooperative and establish a new linkage without ever going into the non-cooperative fishery. While each of these elements can technically work together, there may be a substantial cumulative effect that occurs through the combined selection of a number of these sub-options.

Processor ties and the ability for catcher vessels to move processors by delivering the majority of their catch to a different processor in a given year is substantially related to the decision of whether to require cooperatives to be formed around motherships or whether a single cooperative could form which delivers to multiple motherships. If a single cooperative is allowed and a catcher vessel can switch motherships by delivering the majority of their catch to a different mothership in a given year, then catcher vessels could simply lease catch history (and the associated linkages) between one another regardless of the processor those catch histories are tied to. Through a simple voluntary lease agreement with catcher vessel B (whom is connected to another processor), catcher vessel A could switch processors because it will have delivered the majority of its catch to another processor by leasing catcher vessel B's catch history. If cooperatives are required to be formed around motherships to which they deliver, but can still switch processors by delivering the majority of their catch to a different processor, then movement is relatively more difficult (though still easier than if a vessel is required to fish in the non-cooperative fishery). This movement would require a catcher vessel desiring to switch processors to fish the unlinked portion of other vessel's catch history in that cooperative and deliver to a different processor. If that catcher vessel does so, it would need to leave the original cooperative in order to join the new cooperative linked to that new processor and effectively reduce the pool of catch available to that original cooperative. This means that catcher vessels in the original cooperative may be against the idea of a catcher vessel switching motherships because it would involve a departure from the cooperative and a reduction in the pool of catch available to that cooperative. Therefore, other catcher vessels in a cooperative may be reluctant to allow a single catcher vessel to fish their unlinked catch history in order to switch motherships and this may make it more difficult for processor switching to occur.

Mothership withdrawal and the mutual agreement exception are inter-related. The selection of sub-option 2b for mothership withdrawal may affect the good faith negotiations over a possible mutual agreement exception. This could be avoided through the selection of sub-option 2a for mothership withdrawal.

Mutual agreement and the ability for processors to switch motherships by fishing the unlinked portion of other catcher vessels are inter-related and may directly conflict with one another. A mutual agreement allows a catcher vessel to deliver all of its catch to a different processor during the year a mutual agreement is in effect. However, if catcher vessels can switch processors by fishing the unlinked portion of other vessel's catch histories, then language regarding the establishment of a mothership linkage would state:

“Thereafter, each year, CV(MS) permit owners choosing to participate in a co-op will deliver their obligated catch to the mothership to which they delivered the majority of their catch in the previous year.” (for more detail the reader is referred to B-2.4 above)

This language is in direct conflict with the intention of a mutual agreement exception. A mutual agreement would allow another vessel to deliver the majority of its catch to another processor, but the

quoted language shown above would imply that doing so would result in the permanent switching of processor linkages. This result would be in conflict with the intention of a mutual agreement exception. In order to resolve this issue, staff is interpreting the intention to be the following:

If a mutual agreement is established between a catcher vessel and a mothership, that linkage is not permanently broken regardless of the mothership(s) which the catcher vessel delivers to during the year(s) the mutual agreement exception is in place. Those linkages may be broken, however, if the catcher vessel participates in the non-coop fishery. This provision effectively supersedes the language above describing the rules for switching motherships by delivering the majority of one's catch in a given year to another mothership.

Mothership withdrawal and the subsequent treatment of processor linkages if the processor returns is related to the ability for catcher vessels to switch processors by fishing the unlinked portion of catch history of other catcher vessels. If the language shown above is used for determining the processors to which a catcher vessel is linked to, then this could be in direct conflict with some of the processor withdrawal and return provisions. Council staff is interpreting the interlinkage of these two provisions as the following:

If a mothership withdraws from the fishery, and option 2a is chosen for the mothership withdrawal topic, then the linkages will be re-established with the original mothership if that mothership returns within two years. Other sub-options would result in a permanent switching of processor linkages. This provision effectively supersedes the language above describing the rules for switching motherships by delivering the majority of one's catch in a given year to another mothership.

If a provision to allow mutual agreement exceptions is selected, these mutual agreements may need to be filed with NMFS prior to a date certain. This may be necessary in order to adequately monitor the fishery.

❖ **Rationale and Policy Issues**

● Processor ties

Processor ties help to insure that processors benefit from rationalization in addition to harvesters. Processor ties increase the certainty that processors have over deliveries from catcher vessels and helps ensure that both processors and harvesters have negotiation power when deliberating over profit sharing arrangements.

● Formation and Modification of Processor Tie Obligations

The years considered for processor tie formation reflect periods intended to match with catch history assignments and also to reflect recent relationships that exist in the fishery prior to rationalization. Maintaining recent relationships is intended to make the transition to a rationalized fishery easier, while aligning linkages to catch history calculation years is intended to match processor participation and receipt of linkages to the catch history that catcher vessels receive.

Making mothership permits transferable while maintaining the linkages that exist during that transfer is intended to help ensure that processors have a means of benefiting from rationalization and that the purchaser or seller of a mothership permit has a reasonable expectation of having catcher vessel deliveries associated with that permit.

- Flexibility in Meeting Processor Ties

Requiring that ties remain in effect even if catch histories are leased to another catcher vessel in a cooperative, or to another cooperative through an inter-coop agreement, helps to maintain the relative degree of certainty motherships have over whiting deliveries in the current year. If catcher vessels could avoid ties by temporarily leasing catch history to another vessel, the relative certainty that ties are intended to provide to processors would not be meaningful because the ability to avoid processor obligations would be relatively easy.

The mutual agreement exception is a tool intended to allow mothership participation to vary appropriately according to the size of the whiting OY while also allowing catcher vessels to temporarily fish for a different mothership vessel without having to go into the non-cooperative fishery. Motherships with a mutual agreement exception option are not liable to find it necessary to participate in the fishery during years when the whiting OY is low, and potentially lose money as a result, just to maintain the existing linkages with catcher vessels. Inversely, catcher vessels with a mutual agreement option can deliver to another mothership temporarily while still being part of a cooperative and realizing the benefits of cooperative membership.

- Mothership withdrawal

The options for dealing with the withdrawal of a mothership from the fishery are intended to reflect different potential ways of handling such a situation. One way would require that the catcher vessel fish in the non-cooperative fishery in order to deliver to another mothership. The other option explores different ways of leaving the catcher vessel relatively harmless from such a withdrawal.

Element of Cooperative Alternative	Conservation	Net Benefits	Disruption	Excessive Shares	Fairness and Equity	Harvester and Processor Sector Health	Labor	Communities	Small Entities and New Entrants	General Public
Processor ties			X		X	X				
Formation and modification of processor ties	X		X		X	X				
Flexibility in meeting processor ties		X	X		X	X				
Mothership withdrawal		X	X			X				

❖ Analysis

● Processor Ties

Processor ties act differently than an initial allocation of quota shares. Where an initial allocation of quota shares to processors can directly reduce the quota share that may otherwise be allocated to harvesters (or to some other potential group), a processor tie provision does not impact the amount of catch history, or quota share, a harvester may receive. Furthermore, a processor linkage takes on some of the characteristics of a defensible resource access privilege (like quota shares), but with less “defensibility” on the part of the processor. This is because catcher vessels can switch motherships and break that tie.

Through a processor tie, mothership processors become a more interested party in the harvesting activities of a linked catcher vessel. This linkage provides the processor more certainty over delivery volumes and more leverage in negotiations with catcher vessels over delivery timing and profit sharing compared to a case where no tie or no initial allocation of quota shares exists. The arrangements created between the catcher vessel and the linked processor may influence the manner in which the catcher vessel prosecutes fishery resources, and because of this influence, the creation of processor linkages means that processors have some indirect bearing on the operations of members of a harvest cooperative. However, because that linkage can be broken by the actions of the catcher vessel, such a linkage does not appear to resemble the conditions of a property right (like a quota share does) where assets must be defensible from the actions of others. In other words, the mothership processor cannot “defend” and maintain the linkage if a catcher vessel wishes to switch mothership processors.

Processor ties in a cooperative program may serve several different purposes. One goal of the American Fisheries Act was to construct a rationalization system that benefited both harvesters and processors, and the processor tie provision that exists in the shoreside portion of the Pollock fishery appears to have been one means of achieving that goal. The cooperative structure possible under the mothership alternative resembles those created for the shoreside sector of the Pollock fishery under the American Fisheries Act. Establishing a processor tie makes the harvester and processor both strong entities in the negotiation over profits and the likely outcome is one where profits are shared between both the harvester and processor. In addition, a processor linkage creates a relationship between a harvesting and processing operation that takes on the characteristics of a vertically integrated firm where the harvester and processor work in concert toward a similar goal. However, as the degree of the processor tie diminishes it is reasonable to expect the amount of profit sharing to move more toward the harvesters favor because the harvester has more influence over negotiations and can “shop around” for the highest price for the un-tied catch history.

In addition to profit sharing, processor ties influence stability in the relationships between harvesters and processors. It may also affect the willingness of a catcher vessel to remain in a co-op if a catcher vessel and a mothership are at odds, and this may influence the manner in which the fishery is prosecuted. This issue is addressed in more detail in a following sub-section.

The effect of processor ties, and the appropriate degree of processor ties, should be considered along with the degree of vertical integration that exists in a sector. Relatively high degrees of vertical integration may reduce the need for processor ties since a processor that owns a catcher vessel effectively buys fish from itself and can direct the harvest activity of that catcher vessel. In the mothership sector, available information indicates that 5 trawl permits are “owned” by mothership processing companies and these 5 permits catch approximately 25 percent of the sector’s catch in any year. Anecdotal information indicates that partial ownership of other permits and vessels exist, making vertical integration even larger.

● **Effect of Processor Ties on Profit Sharing**

If properly constructed, processor ties are likely to result in profits being shared between harvesters and processors. This appears to have been one objective of the AFA and the cooperative structure formed through that legislation. The mothership and shoreside whiting cooperative alternatives resemble AFA cooperatives. One of the most notable differences between processor ties and an initial allocation of shares to processors is the fact that issuing ties results in an outcome between harvesters and processors that begins to resemble the operation of a vertically integrated firm. This is because both the harvester and processor are bound to one another and cannot operate independently, at least in one year. The processing entity cannot process fish without an action on the part of the harvester, and the harvester cannot sell fish without an action on the part of the processor. Furthermore, the harvesting entity cannot move to another processor, and the processor cannot acquire harvest from a vessel that is linked to another processor. This construct leads to two powerful entities involved in negotiation over profits generated by the collective harvest and processing activity, and this type of mutual negotiation power may result in profits being shared between both harvesters and processors. However, over the long term, the harvester can fish in the non-co-op fishery and break the tie, thus potentially leaving the initial processor or mothership with no guaranteed catch. This ability on the part of the harvester to un-link themselves from a mothership by participating in the non-co-op fishery provides some long term flexibility and also provides some negotiation power over motherships simply through the threat of breaking the linkage.

Establishing a partial tie between and harvester and a mothership or processor can alter the relationship that results in profit sharing by playing toward the hands of the harvesters. If shares are allocated to harvesters and processors in an IFQ program, both harvesters and processors can attempt to reach an agreement, but if one is not made, then both the processor and harvester can walk away and fish their quota share independently. In a cooperative system with a processor tie, the processor and harvester cannot walk away from negotiations unless the harvester participates in the non-co-op fishery. If that tie is only partial, then the harvester can fish the un-tied portion of the allowable catch and deliver to any processor or mothership. However, both the harvester and the processor are still linked to one another through the tied portion of the catch. Such a situation with a partial mothership tie is likely to shift the balance of power into the harvester’s favor, and that balance of power will increase as the percent of linked catch history decreases. The harvester gains power by being able to “shop around” with the un-tied portion of the catch history and to leverage higher prices from mothership processors. Motherships are likely to bid among one another for the un-tied catch history, resulting in higher prices paid to harvesters and eroding profits motherships might otherwise realize if all catch history is linked. Inversely harvesters are likely to realize greater profits and operational flexibility if less catch history is linked to a mothership.

Degree of Mothership Linkage	Benefit to Catcher Vessel	Benefit to Mothership	Effect on Mothership/Catcher vessel relationship
100%	Smallest price negotiation scenario to catcher vessel	Greatest certainty over deliveries and price negotiation	Most stable relations between mothership and catcher vessel
90%	Moderately low price negotiation	Moderately high	Moderately high stability in relations
75%	Moderately high price negotiation	Moderately low	Moderately low stability in relations
50%	Greatest price negotiation scenario to catcher vessel	Lowest certainty over deliveries and price negotiation	Lowest stability over mothership and catcher vessel relations

● Effect of Processor Ties on Cooperative and Fishery Stability

Stability in the relationship between the catcher vessel and mothership has an economic effect through increased levels of business planning. Establishing a full processor tie creates a relationship that resembles a vertically integrated firm, and operations between the harvester and processor become more aligned as a result. However, reducing the degree of processor tie may stabilize cooperative membership and make it less likely that a catcher vessel will fish in the non-co-op fishery in order to break the tie with a mothership. If a catcher vessel is at odds with a mothership, but needs to fish in the non-co-op fishery in order to break that tie, the catcher vessel may continue to remain in the co-op if that catcher vessel can deliver part of his catch to someone else. Since the non-co-op fishery is inherently less stable than the co-op fishery (because of competition among non-cooperative participants), increasing the chances that a catcher vessel will remain within a cooperative may result in more rational fishing practices among participants in a fishery.

On the other hand, if a catcher vessel is engaged in a non-cooperative mode, but is intending to establish a linkage with a new mothership, that mothership and catcher vessel will have established relations even though that catcher vessel is in the non-cooperative mode. This will undoubtedly affect the behavior of a catcher-vessel in that non-co-op fishery and may temper some of the irrational behavior theoretically expected of participants in the non-cooperative fishery. This is simply because that catcher vessel will need to take into account the needs of the to-be-linked mothership, and that mothership will effectively pace the operations of the catcher vessel to some degree by folding that vessel into its delivery rotation.

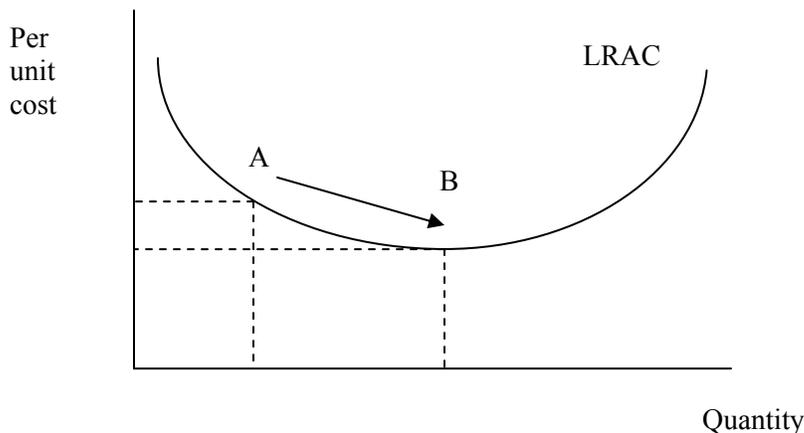
Therefore, a cooperative fishery with processor linkages helps ensure that processors benefit from rationalization by giving processors some negotiation power. Furthermore, processor linkages affect the operations of catcher vessels in a cooperative based fishery because negotiations between catcher vessels and processors will include such topics as delivery timing. These linkages also affect the behavior of participants in the non-cooperative fishery if those catcher vessels are attempting to establish new relations with processors, and these participants are likely to fish in a more paced manner than simple theory would suggest.

Degree of Linkage	Effect on Profits and Stability
Full processor linkage	Profits likely to be shared between harvesters and mothership processors. Stability exists between the harvester and mothership leading to paced harvest timing Increases the probability that a catcher vessel will fish in the non-co-op fishery to break a processor linkage if the catcher vessel and mothership are at odds Profits may be shared, but more heavily weighted toward the harvester than in the case of a full linkage
Partial processor linkage	Reduces the probability that a catcher vessel will fish in the non-co-op fishery if they are at odds with a mothership because that catcher vessel can deliver some catch to someone else.

● Processor Ties and the Potential for Rationalization of the Processing Sector

The issuance of harvest privileges grants fishery participants, and their invested capital, the potential to reach the minimum point on the long run average cost (LRAC) curve. Long run average cost is defined as the total cost in the long run divided by output. As shown in the diagram below, a potential cost structure for capital in a fishery prior to rationalization is to the left of the lowest point on the long run average cost curve (depicted as point A). This is because of overcapitalization in the fishery. With the

implementation of rationalization, excess capital drops out of the fishery and remaining capital is able to increase production, tending toward the point of cost minimization (point B). Production beyond the minimum point is possible, but is in the realm of “diseconomies to scale” where increasing production begins to increase cost.



Generally speaking, the ability for participants in a rationalized fishery to move toward the minimum point on their long run average cost curve is one principal factor determining the reduction of capacity in an over capitalized fishery. Participants in a rationalized fishery can acquire shares of the allowable catch (either through IFQ transfers or through sharing of catch history), and match production volume to capital capacity. This is possible because those privileges are defensible from others and this eliminates the aspect of competition in the fishery that was originally responsible for build up of excess capital. The tendency is for the amount of capital in a fishery to decrease in order for capital to move toward a point of cost minimization, reflected as the minimum point on the long run average cost curve. This is done by reducing the amount of capital in the fishery so that the remaining capital experiences an increase in production. The amount of capital remaining in the fishery after it is rationalized is partially determined by the tendency toward the point where cost is minimized in the fishery.

The combination of processor ties, transferable mothership limited entry permits, and a mutual agreement exception allows cost efficiencies to be created in the processing portion of the fishery. The effect of these three elements works at reducing the amount of competition among processors for deliveries from catcher vessels and allows processing capital to vary appropriately with variations in the Pacific whiting OY. In a highly competitive structure with no linkages, processing entities would have incentives to participate in the fishery up to a point where economic profits for processing entities approach zero (processors would continue to enter as long as profits can be generated from doing so). The result would be more processing capital than necessary for the fishery. This is cost inefficient. The establishment of a linkage provision with mothership limited entry and a mutual agreement exception makes it possible for processing capital to vary according to conditions in the fishery and tend toward a more cost efficient level. This occurs for a handful of reasons:

- Due to processor limited entry, processors are not concerned that a new processor may enter into the fishery and compete with them for deliveries,
- Processors have more certainty over delivered catch levels through the linkage provision,

- Processors can stack more than one mothership permit, and associated linkages, onto a single mothership, thus allowing consolidation to occur while retaining some certainty over the volume of catcher vessel deliveries
- Processors can agree to allow catcher vessels to deliver to other processors through the mutual agreement thereby allowing processor B to take deliveries from processor A's linked catcher vessels without processor A permanently losing those linked catcher vessels and their future deliveries.

This structure starts to resemble the conditions often necessary to confer a defensible and transferable limited access privilege, though it does not meet these requirements fully because the processor linkage can be broken by the catcher vessel. Nevertheless, these similarities facilitate the development of a more cost efficient level of participation among processors in a fishery because it reduces competition among processors for catcher vessel deliveries. This makes it possible for motherships to reduce costs through consolidation (if necessary) and better business planning. Implied in this concept is that linkages exist between the mothership permit and the catcher vessel permit, rather than the physical mothership vessel and catcher vessel.

● Switching Motherships

Different ways exist for allowing catcher vessels to switch motherships. One option would be to require that catcher vessels participate in the non-cooperative portion of the fishery for one year. Another option is related to the unlinked portion of a catcher vessels catch history. This second option would give catcher vessels the ability to switch processors without participating in the non-cooperative fishery. Catcher vessels could fish the unlinked catch history of other vessels in a cooperative. If that unlinked catch history resembles the majority of catch of that vessel, and it is delivered to another processor, that catcher vessel is linked to that new processor in the following year, effectively switching processors without participating in the non-cooperative portion of the fishery. The effect of this provision is that less participation in the non-cooperative portion of the fishery may occur. This can have an impact on the success of bycatch management since the non-cooperative fishery is a derby fishery and harvesters in such a mode may be less likely to fish cleanly. However, the logistics of a mothership sector operation may mean that the potential for a catcher vessel in a non-cooperative fishery to race for fish (and therefore not fish cleanly) is minimized if that catcher vessel is attempting to establish a new linkage with a mothership. This concept was discussed in the above sub section. A catcher vessel in the non-cooperative fishery attempting to establish a new linkage with a mothership would still need to operate alongside other catcher vessels that may be in a cooperative fishery but delivering to that mothership. In doing so, that non-cooperative fishery catcher vessel would be subject to delivery rotations and would need to travel with that mothership and the cooperative fishery catcher vessels as that mothership operation moves. Furthermore, a catcher vessel attempting to establish a new linkage with a mothership will undoubtedly take into account the needs of the mothership even while that catcher vessel is in a non-cooperative fishery mode where they are competing with other catcher vessels for catch. These conditions would tend to pace the fishing effort of the catcher vessel to some degree and result in less "irrational" behavior than may be theoretically expected.

Switching Motherships and the Requirement to Have Multiple Cooperatives are Substantially Related

If catcher vessels can switch processors by delivering the majority of their catch to another processor rather than fishing in the non-cooperative fishery, then the decision of whether to require multiple cooperatives around motherships can have a substantial effect. If a cooperatives can be formed around multiple processors, and catcher vessels can switch processors by simply delivering the majority of their catch to another processor in a year, then the effect of a processor tie may be substantially reduced. Under this scenario, a catcher vessel could enter into a lease agreement with another catcher vessel that is

linked to another mothership. If deliveries from that catcher vessel to that other mothership constitute the majority of that vessel's catch, then the catcher vessel (and associated catch history) would be linked to that new mothership in the following year. This provides little disincentive to a catcher vessel considering the possibility of switching motherships and substantially reduces the effect of a processor tie. The outcome is one where catcher vessels have substantially more leverage in negotiations over prices and other matters. Some processor leverage could be established if cooperatives are required to form around the mothership to which they are tied and even more processor leverage could be established if catcher vessels must fish in a non-cooperative fishery to switch processors.

● Summarization of the Effect of Processor Ties on Mothership and Catcher Vessel Relations and Profit Sharing

In summary, a cooperative system with processor ties should theoretically result in two powerful entities negotiating over profits in the fishery. The outcome is likely to be one where the operation of the mothership and the catcher vessel resemble the operation of a vertically integrated firm, and profits are shared between the harvester and processor. Furthermore, when combined with processor limited entry and a mutual agreement exception, linkages decrease the amount of competition among processors and make it possible for the processing sector to rationalize itself and to match the amount of processing capital in the fishery to the whiting OY.

If processor tie provisions are less than 100 percent, harvesters are likely to experience greater negotiation power over mothership processors when negotiating over profits. As the tie provisions decrease from 100 percent, negotiation power on the part of harvesters is likely to increase.

If harvesters are able to switch processors without participating in the non-cooperative portion of the fishery, processor switching may be more likely, reducing the certainty that processors have over future deliveries, increasing the negotiation power that catcher vessels have over profit sharing arrangements, and therefore skewing profits more toward the harvesters favor. However, not requiring that catcher vessels participate in the non-cooperative fishery in order to switch processors is likely to lead to fewer occurrences of vessels in the non-co-op fishery. While theory would suggest that minimal participation in the non-cooperative fishery will improve the performance of the fishery, the effect of processor linkages may carry into the non-cooperative fishery and influence catcher vessel behavior in that fishery. The likely result is a more measured pace of fishing among non-cooperative fishery participants than theory would suggest. However, it is still likely that the non-cooperative fishery will have a lower degree of economic, bycatch, and general fishery management performance compared to the cooperative fishery.

If catcher vessels catch switch processors without participating in the non-cooperative fishery as described above, and single cooperatives can span multiple motherships, then the effect of the processor tie may be minimal. Through simple leasing of catch histories, catcher vessels can move processors by "delivering the majority of their catch" to another processor in a year through that lease agreement. The result is one where the processor tie may be largely ineffective in helping processors benefit from rationalization, but on the other hand, is likely to result in greater economic benefits and flexibility to harvesters.

Method of switching motherships	Effect on Catcher Vessel	Effect on Mothership
Requirement to fish in non-co-op fishery	Results in less negotiation power over prices and other aspects of mothership/CV relationship	Provides motherships relative certainty over future deliveries and some leverage over negotiations with CVs
Can switch motherships by fishing unlinked catch history of other co-op participants	Increases CV negotiation power over prices and other aspects of mothership/CV relationship	Reduces certainty over deliveries and minimizes leverage over negotiations with CVs
Can switch motherships by leasing a catcher vessel's catch history that is linked to another mothership	Increases CV negotiation power over prices and other aspects of mothership/CV relationship to a greater degree than above method	Minimizes the potentially beneficial outcome processors may realize from processor ties

● Formation and Modification of Processor Ties

Each option for tie formation creates a relationship between a catcher-vessel and a mothership based on patterns that exist prior to the implementation of a rationalization program. Implementing a system that maintains past relationships between harvesters and motherships may ease the transition from status quo management to a rationalized fishery. However each of these options may result in some implications that, although short term, may have mixed effects.

Option 1 has potential benefits in that it maintains the most recent relationships between motherships and catcher-vessels, and therefore the transition from status quo management to a rationalized fishery may be made easier, at least theoretically, by option 1. However, option 1 may inadvertently result in a race for catch history among motherships in the year immediately prior to the implementation of the rationalization program. This could mean that harvesters receive higher prices for their fish in the year immediately prior to the rationalization program, but it also may end up stimulating race for fish conditions in the mothership sector above those which already exist. Furthermore, those vessels that are less active in the fishery but stand to gain catch history because of historic participation in the fishery will find it necessary to participate in the fishery prior to rationalization in order to establish a processor linkage. Such participation by participants relatively unfamiliar with the fishery may make bycatch management in the fishery in the year prior to rationalization problematic. However, a failure for these participants to make a delivery to a mothership prior to rationalization may mean that participation in the non-cooperative portion of the fishery is necessary for these vessels to establish a linkage with a mothership and participate in a cooperative. Option 4 is likely to result in the same outcome, except that the competitive behavior described above would tend to occur in 2009.

Potential ways of avoiding such a scenario are to allow vessels that do not fish in the year prior to rationalization, or in 1999, to establish a linkage with a mothership through a mutual agreement at the start of the program. A second method is to allow vessels that do not fish in the year prior to rationalization to join a cooperative and to deliver to a mothership of its choosing in the first year of the rationalization program. The processor linkage would be established in the second year of the program based on the mothership which that vessel delivered the majority of its catch in the first year of rationalization. This type of situation would avoid the race for fish potential in years prior to rationalization as well as avoid the relatively high rate of participation in the fishery by unfamiliar operators in years prior to implementation. The outcome may be more successful management of bycatch in years prior to implementation of a rationalization program.

Options 2 and 3 implement a program that maintains historic relations between motherships and catcher-vessels, however these historic delivery patterns will be several years removed by the time a rationalization program goes into effect. If the rationalization program goes into effect in 2011 for example, option 2 would be 7 years removed, while catch patterns under option 3 would be 8 years removed. These options may not result in the possibility of race for history conditions like under option 1, but the relationships established under options 2 and 3 may not be the same as those that exist immediately prior to the implementation of a rationalization program, potentially making the transition to rationalized fishery conditions somewhat difficult.

● Mothership Permit Transfers

Maintaining the mothership tie between catcher-vessels and motherships during the transfer of a mothership permit provides additional certainty to the purchaser of the mothership permit and increases the certainty a potential buyer has regarding the expected returns associated with that permit. This also provides a mechanism for mothership entities to trade linked catch history among one another, and if permits are stacked on more than one mothership, to allow for consolidation in the processing portion of the fishery.

As stated previously, constructing a cooperative-based system with processor ties implicitly makes mothership interests part of the harvesting activity. This implicit interest becomes evident because of the relationships that exist between the owner or operator of the catcher-vessel and the owner or operator of the mothership. When a new owner acquires a mothership permit, that owner's interests will influence the relations between the catcher-vessel and mothership. If interests and objectives are similar to the old owner of the mothership permit, then the transition from the old mothership permit owner to the new mothership permit owner - and the effect that transition has on linked catcher-vessels - may be relatively seamless. However, if the new owner of the mothership permit has substantially different interests and objectives than the old owner of the mothership permit, then the sale of a mothership permit may cause some adverse effects on catcher-vessels linked to that permit and make the transition to the new owner somewhat difficult. Since linkages make processing interests implicit in the behavior of cooperative members, a difficult transition could adversely affect the operation of a cooperative.

● Flexibility in Meeting Processor Tie Obligations

If CV(MS) permit owners transfer catch privileges to another participant in the same co-op, or one co-op establishes an inter-cooperative agreement with another cooperative to transfer catch, then the original processor tie obligation still remains. Requiring that the original tie be adhered to retains the mothership's expected deliveries and allows processors to realize other benefits from rationalization described previously, while also allowing harvesters the flexibility to share and transfer catch history in order to maximize harvest potential and net revenues.

◆ *Mutual Agreement Exception*

By mutual agreement the processor tie can be broken temporarily. If both the CV(MS) permit owner and the mothership agree, then the catcher-vessel may deliver its catch to another mothership. This mutual agreement exception is temporary and allows catcher-vessels to deliver to another mothership if a case arises where the original mothership does not elect to participate in the fishery. The fact that the mutual agreement exception is temporary means that the future expectation of catch being received by the first mothership can still be reasonably expected if that mothership returns to the fishery.

This mutual agreement exception allows capital in the processing portion of the fishery to be more in line with the available harvest in the fishery. This is due to the fact that processors with linkages to catcher vessels do not fear losing those catcher vessels if they can temporarily release them to another mothership through that mutual agreement. This means that the processor linkage is somewhat “defensible” even if the mothership does not participate in the fishery. The presence of this defensibility means the mothership is at a minimized risk of losing linked catcher vessels and can elect to not participate in the fishery during years where the available harvest of whiting is low. Instead, some motherships may allow another mothership to take the deliveries of their linked catcher vessels. In effect, this allows the amount of capital in the processing side of the fishery to become more aligned with the available harvest, and this results in the minimization of processing costs (relative to the available harvest) and enhanced efficiency. If such a mutual agreement does not exist, it would be more likely that all motherships would be engaged in the fishery in each year, at times leading to excess processing capacity and cost inefficiencies. Inversely, if motherships did not participate in the fishery and a mutual agreement provision does not exist, catcher vessels linked to that mothership may be required to fish in the non-cooperative fishery, though not necessarily (the reader is referred to the next section on processor withdrawal for further discussion of this topic).

In the event that a processor withdrawal would otherwise require catcher vessels to fish in the non-cooperative fishery to deliver to another mothership, then the mutual agreement exceptions allow catcher vessels to continue operating in cooperatives if a mothership does not wish to participate in the fishery. This would tend to maintain the benefits catcher vessels have from rationalization of the fishery.

● Mothership Processor Withdrawal

A mothership’s withdrawal from the fishery without a permit transfer or without a mutual agreement exception can affect catcher vessels with catch history that is linked with that mothership’s permit. Several options exist for catcher vessels that are linked with a mothership that withdraws from the fishery without transferring its permit or engaging in a mutual agreement exception. One option would require that the catcher vessel participate in the non-cooperative fishery. The second option would allow the catcher vessel to join another cooperative and deliver to another cooperative. Two sub-options to the second option exist in the event the original mothership returns. One option states that if the original mothership returns within two years, the original linkages would be re-established, while the other option states that the catcher vessel will be linked to a new mothership and will not be affected if the original mothership returns.

The effect of these provisions impact catcher vessel linked to the withdrawn mothership in several ways depending on the option. If the catcher vessel is forced to participate in the non-cooperative fishery, then the mothership withdrawal from the fishery effectively penalizes the catcher vessel because that vessel must fish in a competitive fishery. On the other end of the spectrum is the option which would allow the catcher vessel to stay within the cooperative fishery and deliver to a mothership of its choosing. This leaves the catcher vessel harmless, but it may mean that a catcher vessel is not as liable to engage in a mutual agreement if a mothership does not wish to participate in the fishery, but is seeking out a mutual agreement with a catcher vessel. If, for example, a mothership does not plan to participate in the whiting fishery and seeks out a mutual agreement with a catcher vessel, that catcher vessel may be more inclined to refuse any agreement. If that mothership then withdraws from the fishery anyway, that catcher vessel would then free to deliver to any mothership and be released from the linkages to the prior mothership. In the middle of the spectrum is one which would allow the catcher vessel to continue participating in the cooperative fishery if a mothership withdraws, but require that the original linkage be established if a mothership returns. This may make it more likely that both catcher vessels and motherships would seek out mutual agreements in good faith because they would both expect to be re-linked in the future if a

mothership withdraws from the fishery. However, this option would not penalize the catcher vessel if the mothership withdraws from the fishery. Therefore, option 2a for mothership withdrawal may help maintain good faith in relationships between catcher vessels and motherships (and good faith in dialog over mutual agreement exceptions) while avoiding any penalizing impacts on catcher vessels in the event a mothership withdraws from the fishery.

B-2.5 NMFS Role

B-2.5.1 Permit and Endorsement Issuance

NMFS will issue all necessary permits and endorsements under the rules specified under this program. Appeals processes will be provided as appropriate and necessary.

B-2.5.2 Fishery Registration and Co-op Approval

NMFS will announce a deadline before which all co-op agreements must be received for the coming year. NMFS will review and approve or reject co-op agreements based on standards provided here and other standards which it deems necessary to achieve the policy intent of the Council's actions.

B-2.5.3 Annual Allocation to Co-ops and the Non-co-op Fishery

a. Co-op Allocation.

Each year NMFS will determine the percent of the mothership sector's harvest allocation to be given to each co-op based on the catch history calculation of CV(MS) permits registered to participate in the co-op that year. NMFS does not allocate to the individual permit holder, rather, allocates an aggregate amount of harvest tonnage annually to the co-op, based on the catch histories associated with the members of the co-ops.

b. Non-co-op Allocation.

Each year NMFS will determine the distribution to be given to the non-co-op fishery based on the catch history calculation of permit holders registered to participate in that fishery.

c. Adaptive Management Allocation

In determining the amounts available for co-ops and the non-co-op fishery, subtractions will be made, as necessary for the adaptive management set aside described in Section B-1.6.

B-2.5.4 Fishery Management and Co-op Monitoring

a. NMFS will track all permit and endorsement transfers (if endorsement transfers are allowed) and the invocation of mutual agreement exceptions. Permit and endorsement transfers will not be valid until registered and acknowledged by NMFS.

b. NMFS will monitor catch and close segments of the fishery as necessary to ensure catch limits are not exceeded for:

1. the whiting mothership co-op fishery
2. the whiting mothership non-co-op fishery
3. the mothership whiting sector as a whole

c. NMFS will not necessarily monitor but will investigate and enforce as it deems necessary the permit and co-op obligations to processors

d. NMFS will not necessarily monitor or enforce (except as it deems necessary)

1. an individual permit's progress towards its catch allocations (permit level catch

control will be at the co-op level and enforced through execution of the private contract)

2. a co-op's progress toward its catch allocation¹⁴
3. actual performance on the co-op agreement (the parties to the contract will resolve through private contract and remedies any deviation from provisions such as that requiring that a vessel have the opportunity to harvest the catch allocated to the co-op based on that vessel's permit, Section B-2.3.3.c)
- e. NMFS will monitor other program provisions as needed. In some situations, there may need to be a declaration procedure for determination where a permit is delivering its obligated catch, for example, if a mothership withdraws without transferring its permit or reaching a mutual agreement for the transfer of obligated deliveries to a different mothership.
- f. NMFS will administer the adaptive management program, allocating the set aside for that program as needed based on the adaptive management goals, objectives and adjustment measures recommended by the Council.

❖ **Rationale, Policy Issues, and Analysis**

The current Pacific whiting fisheries are managed at the sector and fleet level. Managers monitor fleet harvests attempting to time their closure announcement with either the full harvest of the sector allocation of OY, or the attainment of a common bycatch limit (beginning in 2009, bycatch limits will be managed at the sector level). The level of management specified in the mothership sector cooperative alternative would require that the agency monitor catches at a lower, cooperative level, and take action when a cooperative, or inter-cooperative, is projected to reach its allocation. Furthermore, season timing is expected to change under rationalization and agencies will need to modify resources to monitor the fisheries over different time periods than what occurs under status quo.

The implementation of a cooperative system for the mothership sector will require that agencies develop resources necessary for reviewing cooperative agreements, developing infrastructure and programming necessary for estimating the collective catch history of various cooperatives, estimating the amount of catch each cooperative is available to catch each year, and debiting the appropriate amount of catch from the various cooperative pools as the fishery progresses.

The role of the NMFS as specified in the options assures that the agency remains in a relatively strong position over the management of fishery resources and assures that the objectives of the Council are being met by participants in a cooperative-based fishery.

In order to administer the program effectively, it is necessary to establish a date by which cooperative agreements must be submitted and participants must state their intention to fish in a cooperative or in the non-cooperative portion of the fishery. Establishing a date by which such filings must be made allows the agency the time necessary to review and approve/disapprove cooperative agreements prior to the start of the fishery and set up the appropriate systems for tracking catch and managing the fishery.

B-3 Whiting Shoreside Sector Co-Op Program

The cooperative alternative for the shoreside whiting fishery is identical, in many respects, to the mothership sector alternative which was analyzed in the previous section. Therefore, analyses of many elements of the shoreside whiting alternative are not repeated here. However, some differences do exist

¹⁴ This assumes that there is an inter-co-op agreement in place that covers the entire co-op fishery. If such an agreement is not in place covering both catch and bycatch, NMFS may need to monitor catch by each individual co-op (but not by the individual vessels in the co-op).

between the shoreside whiting alternative and the mothership whiting alternative, most notably in the processor licensing and linkage provisions. The principal differences between the shoreside whiting cooperative proposal and the mothership proposal include:

- Shoreside processor licenses expire after two years
- Shoreside processor linkages may link a catcher vessel to more than one processor
- Any shoreside processor may receive deliveries from vessels in the non-cooperative fishery during the first two years of the program
- The number of years a catcher vessel must participate in the non-cooperative fishery in order to break a processor linkage may be one to five years.

The effects of a shoreside whiting cooperative alternative may differ from the effects of a mothership whiting cooperative alternative, particularly when considering the behavior of catcher vessels in a non-cooperative fishery. This is due, in large part, to the characteristics and logistical differences that exist in the shoreside and mothership sectors of the whiting fishery. Much of this difference was illustrated in previous sections at the start of this document, so these effects are mentioned only briefly here:

- Participation in a non-cooperative portion of the fishery may be more frequent in a shoreside cooperative program than a mothership cooperative program. This appears to be the case because of the apparent frequency at which shoreside catcher vessels tend to switch processors under status quo conditions. If this frequency underlies motivation for switching processors under a cooperative fishery, the result may mean more frequent participation of shoreside catcher vessels in a non-cooperative fishery. This can have implications for economic performance of the sector as a whole and for management concerns if behavior in such a fishery is less “rational” and leads to higher bycatch than in the cooperative side of the fishery.
- The relations that exist between mothership catcher vessels and mothership processors may temper the behavior that catcher vessels in the non-cooperative portion of the fishery have in that sector. This may mean greater economic and bycatch performance in the mothership non-cooperative fishery than pure theory would indicate. It is possible that such a tempering effect exists in the shoreside fishery as well, but information indicates that it may not exist to the same degree in the shoreside whiting sector, if at all.
- When the above factors are combined with a requirement that a shoreside catcher vessel may need to participate in the non-cooperative fishery for more than one year in order to switch processors, the economic and bycatch performance of the shoreside fishery as a whole is likely to be less than the performance of the mothership fishery operating under a similar cooperative structure.

Before considering the particular elements of the shoreside whiting cooperative program that differ from the mothership cooperative program, it is important to point out several factors that are related to the decision of whether to manage the shoreside sector with cooperatives. These include:

- Shoreside processor licensing and linkages do not appear to be authorized under Magnuson-Stevens Act. This differs from the mothership sector because a legal opinion has identified mothership operations as fishing whereas shoreside processing is not defined as fishing.
- The selection of harvest cooperatives as a tool for rationalizing the shoreside whiting fishery necessitates the selection of four distinct trawl sectors as opposed to three trawl sectors (which would be possible if the shoreside whiting and non-whiting sectors were both managed with IFQs).

B-3.1 Participation in the Shoreside Whiting Sector

a. Catcher Vessels

Vessels with CV(SS)-endorsed permits may participate in either the co-op or non-co-op portion of the shoreside fishery. They will choose annually which portion of the fishery they will participate in for the coming year. Additionally, any groundfish LE trawl permitted vessels may participate in the co-op portion of the fishery if they join a co-op (as described in Section B-3.3.3).¹⁵ No other catcher vessels may participate in the shoreside whiting sector.

b. Processors

Any processor may receive fish from vessels participating in the shoreside non-co-op fishery. In the first 2 years, only co-op qualified shoreside processors¹⁶ that have declared their intent to participate may receive deliveries from catcher vessels in a shoreside co-op (Section B-3.3). Thereafter, any shoreside processor may receive deliveries from co-ops.

c. Catcher Vessels and Processors in the Nonwhiting Fishery

This program does not affect vessels or processors receiving whiting taken incidentally in the nonwhiting fishery.

B-3.2 Permits/Endorsement Qualification and Characteristics

B-3.2.1 Catcher Vessel Shoreside Whiting Endorsement (CV(SS) Endorsement)

a. Endorsement Qualification and History Assignment

Permits with a qualifying history will be designated as CV(SS) permits through the addition of a CV(SS) endorsement to their LE groundfish permit. At the time of endorsement qualification, each permit will also be assigned a catch history that will determine the share of the shoreside whiting allocation associated with that permit.

Qualifying for a CV(SS) Endorsement. A LE permit will qualify for a CV(SS) endorsement if it has a total of more than 500 mt of whiting deliveries to shoreside processors from 1997 through 2003.

¹⁵ When such permits participate in a co-op the co-op will not be allocated any additional fish based on participation by such a vessel.

¹⁶ A **shoreside processor** is an operation, working on U.S. soil, that takes landings of trawl-caught groundfish that has not been processed at-sea or previously processed shoreside, and that thereafter subjects those groundfish to shoreside processing. Entities that received fish that have not undergone at-sea processing or shoreside processing (as defined in this paragraph) and sell that fish directly to consumers shall not be considered a processor for purposes of the shoreside co-op program.

“**Shoreside processing**” is defined as any activity that takes place shoreside; and that involves:

- a) cutting groundfish into smaller portions; or
- b) freezing, cooking, smoking, drying groundfish; or
- c) packaging that groundfish for resale into 100 pound units or smaller for sale or distribution into a wholesale or retail market.

Catch History Assignment. An initial calculation will be used to determine NMFS’s distribution to co-op and non-co-op fishery pools. A CV(SS) permit calculated landings history will be based on whiting history during the related permit’s best 6 out of 7 years from 1997 through 2003. (Note: for vessels qualifying in both the shoreside and mothership co-op programs, the same year must be dropped.)

For the purpose of the endorsement and initial calculation, landing history associated with the permit includes that of permits that were combined to generate the current permit.

c. Accumulation Limits

CV(SS) Permit Ownership. No individual or entity may own CV(SS) permits for which the allocation totals greater than 15 percent of the total whiting shoreside allocation.

❖ Analysis

A total of 54 permits have reported deliveries of shoreside whiting during the 1997 – 2003 window period. Of these, 45 permits have made landings larger than the 500 metric ton minimum for qualification of a CV(SS) permit. When examined on a year to year basis, the number of permits in the fishery is much smaller. During this period a range of 38 to 29 permits participated in the fishery in any given year. Of the 54 permits that reported deliveries between 1997 and 2003, only 15 reported deliveries of shoreside whiting in each of the 7 years. On average, the 54 permits reporting deliveries were active 4 out of the 7 years.

Table B-8. Summary statistics on shoreside whiting permit participation from 1997-2003.

Total number of permits reporting SS whiting deliveries (1997 – 2003)	Total number of permits delivering at least 500 metric tons (1997 – 2003)	Number of permits active in the fishery in any given year (1997 – 2003)	Number of permits active in all 7 years	Average number of years each permit was active in the fishery
54	45	29 to 38	15	4

The number of active permits in the fishery over the time period appears to be affected by the variations that existed in the Pacific whiting OY and the Pacific whiting market during that time period. During 2002 and 2003 the fewest number of permits were active in the fishery compared to the previous years and this was a time of relatively low whiting OYs and poor market conditions.

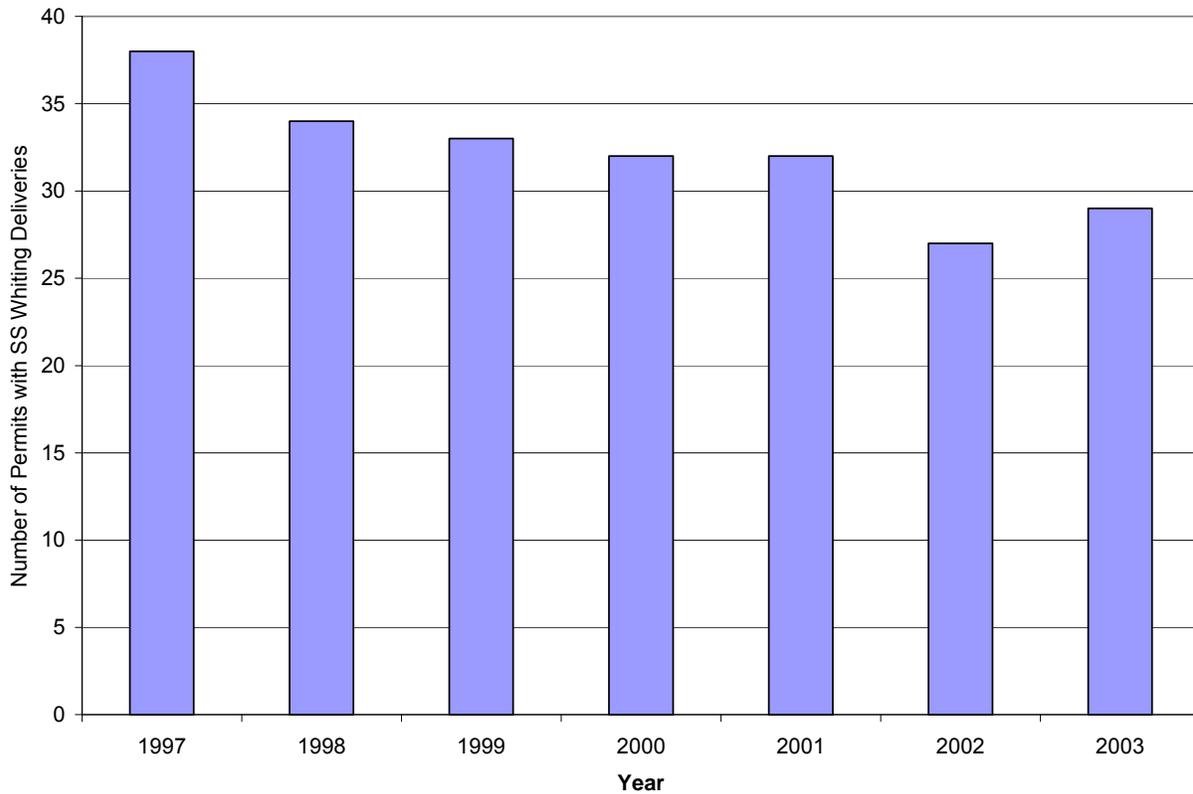


Figure B-5. Number of permits reporting shoreside whiting deliveries by year.

The following table is a more detailed set of information indicating the years particular permits have participated in the fishery and whether or not those permits qualify under the year and minimum metric tonnage criteria. This information includes data through the year 2006. From this data it is apparent that several permits recently entered the fishery (in 2006) that would not qualify and this is most likely due to the improvement in market conditions for Pacific whiting.

When examined next to the catch shares that have occurred over the 2004 to 2006 time period, the catch history assignments deviate substantially (in some cases) from the percent of catch generated by some permits during this period. This can be explained by the recent increase in interest in the whiting fishery, driven in large degree by improvements in market conditions, but also because several permits have not participated in the fishery in recent years.

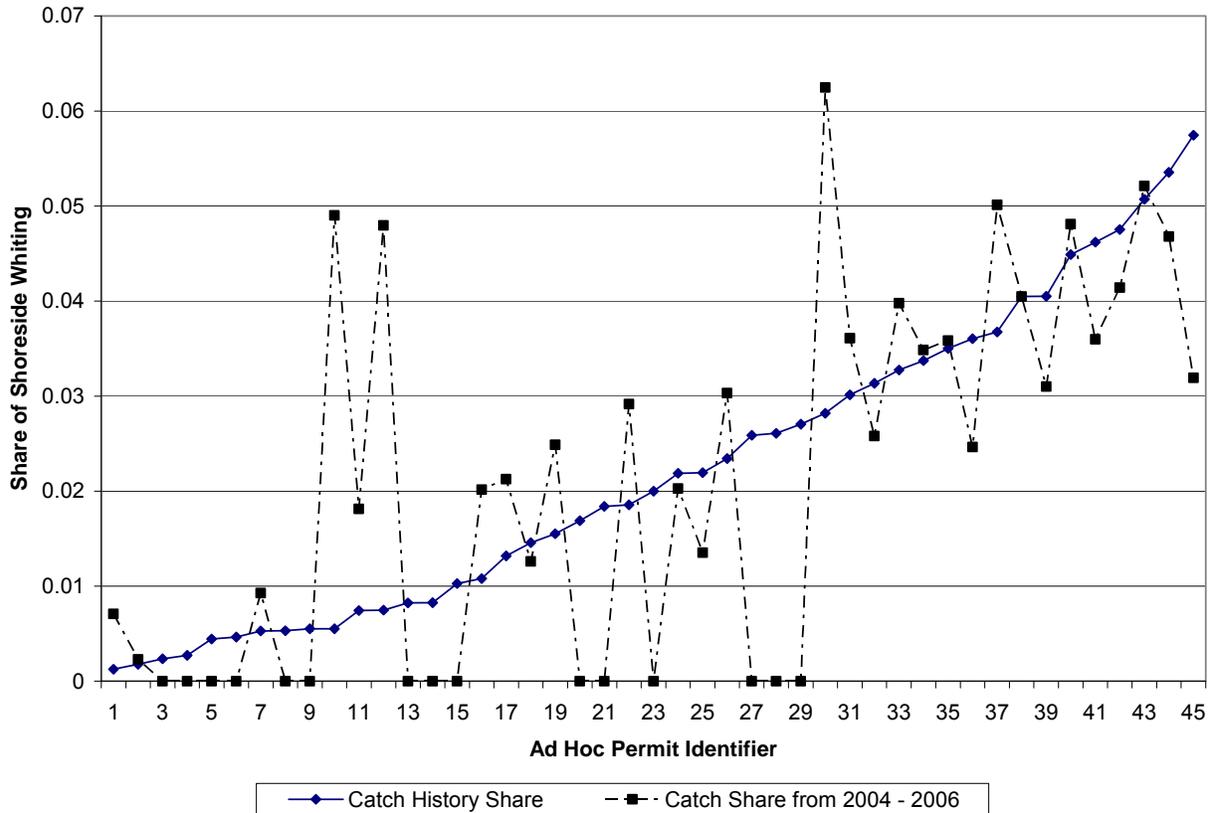


Figure B-6. Share of shoreside whiting allocated to permits.

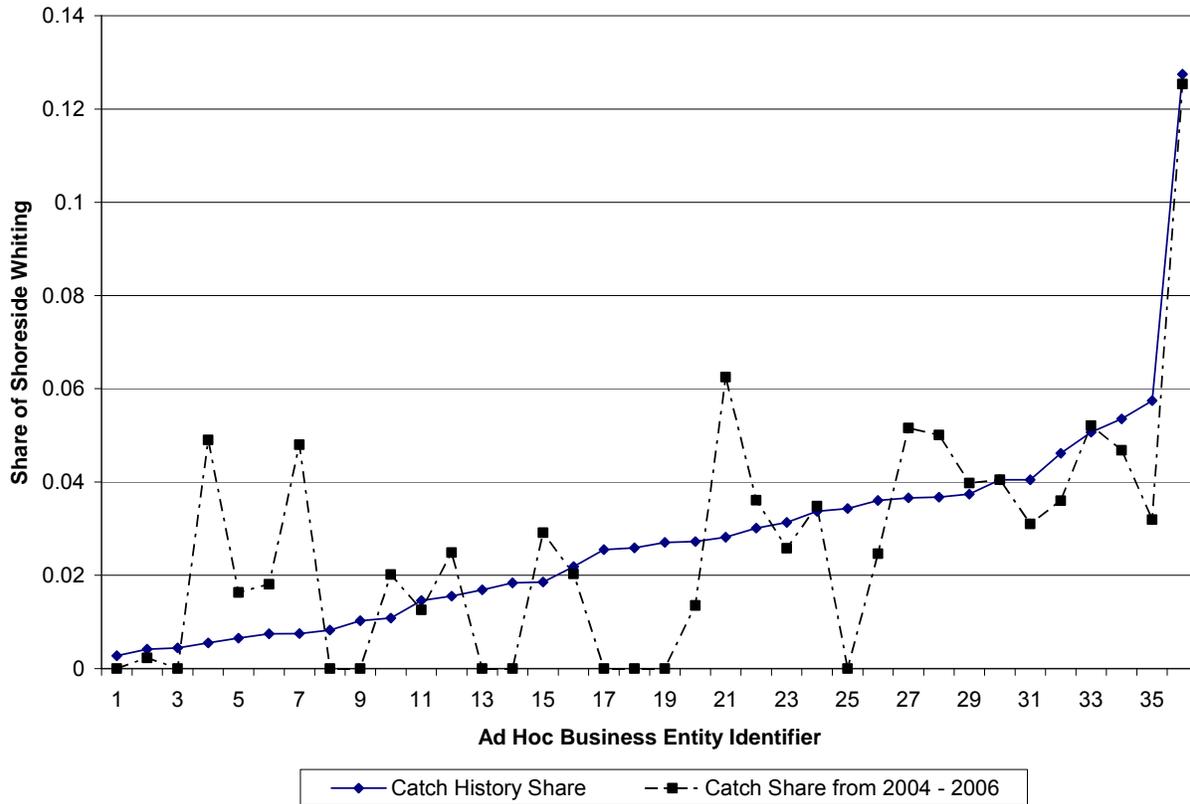


Figure B-7. Share of shoreside whiting allocated to business entities.

B-3.2.2 Shoreside Co-op Eligible Processor Permit

a. Activities Requiring this Permit

Only processing entities with a shoreside co-op processor permit (SSP) are eligible to receive whiting fish from whiting cooperatives in the first 2 years of the program. Thereafter, any processing corporation could be eligible to receive whiting from participants in a whiting cooperative, subject to the other provisions of this plan. Processors without SSPs may receive whiting from participants in the non-co-op fishery and whiting harvested incidentally in the nonwhiting fishery at any time, including within the first 2 years of the program.

b. Qualification Requirements

An initial co-op-qualified shoreside processing entity is one that processed at least 1,000 mt of whiting in each of any two years from 1998 through 2003.

d. Duration of this Section

Since SSP permits are only in effect for the first 2 years of the program, this section is also in effect only for the first 2 years of the program.

❖ Rationale and Policy Issues

The justification for processor licensing is so that the interests of processors are protected when the fishery moves to rationalization. Such licensing would restrict the ability for new processor participants to come into the fishery and compete with existing processors which may tend to result in excess processing capacity. Limiting this competition would tend to protect the interests of existing processors for several reasons including; A) volume per processor would not risk being diminished due to new processors entering the fishery, and B) fewer numbers of processors would tend to enhance processor leverage during negotiations over exvessel prices and other matters.

The licensing restrictions described here, which are only in effect for two years, were originally meant to serve the role of a transition period for processors with the idea that processors would have ample time to adapt and change business plans to work with the newly rationalized fishery. The original intention of the two year time limit established as part of the licensing program was based on the notion that such a provision may be able to be implemented under the authority of the Magnuson-Stevens Act; however it appears that is not the case.

❖ Analysis

The effect of processor licensing would be relatively inclusive of those processors that have participated in the fishery on a relatively steady basis, but would exclude many processors that have not participated in more recent years, or have recently entered into the fishery. In total, 18 companies have participated in whiting activity, with 3 non qualifying companies participating in 2006. Under the qualification criteria, 8 processing companies would receive licenses to process shoreside whiting. This information is illustrated in the table below.

Table B-10. Shoreside whiting processing company participation by year and qualification criteria.

Qualification Filter	Ad Hoc Processor ID	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Qualifies	A	x	x	x	x	x	x	x	x	x	x	x	x	x
	B	x	x		x	x	x	x	x	x	x	x		
	C	x	x	x	x	x	x	x	x	x	x	x	x	x
	D	x	x	x	x	x		x	x		x	x	x	x
	E	x	x	x	x	x		x	x	x	x	x	x	x
	F				x	x	x	x	x	x	x	x	x	x
	G					x	x	x						
	H	x	x	x	x	x	x		x					
Does not qualify	I													x
	J													x
	K			x										
	L		x	x	x									
	M										x			x
	N							x						
	O	x	x	x	x	x	x	x	x					
	P	x	x	x										
	Q								x					
	R					x								

In general, instituting processor licensing and linkages allows the processing sector to rationalize itself to some degree and generate higher levels of revenue than would be the case without such provisions. This topic was discussed in more detail in previous sections describing the effect of this provision on mothership processors. When processor licensing requirements are only in effect for two years, the ability for processors to realize some gains as a result of rationalization will begin to erode at the end of that two year window, and that erosion should occur gradually over time. After those licensing provisions expire, processor engagement in the fishery will almost certainly change. Competition among processors should be expected to increase over time as new companies enter the fishery, the amount of capital processing Pacific whiting may increase if new processors enter into the processing sector, and catcher vessels may assume greater leverage in negotiations with processors over prices and other matters as a result of that competition among processors. The result is likely to be one where processors assume less revenue from processing activity over time compared to a case where processor licenses are in effect over the long term. As a result, the expiration of processor licenses is likely to mean that processors will not benefit as greatly from rationalization of the fishery compared to a case where processor licenses exist over the long term.

B-3.4 Processor Ties

B-3.4.1 Initial Formation of Ties

During the first 2 years of co-op formation, permit owners that join a co-op shall be required to deliver their whiting catches to the co-op qualified processors that were the basis of their landing history during the period:

Years Option 1: 2001

Years Option 2: 2000

Years Option 3: 2000-2003

on a pro rata basis. Determination of the processor(s) to which a permit owner is obligated will take into account any of the processor's(s') successors in interest.

- *Note: Several permits would not be tied to processors under the above options. It is unclear how ties would be established for those permits*

Processor Successor In Interest. In determining the processor to whom a permit owner that participates in a co-op is required to deliver in the first 2 years of the program, a processor's successor in interest will be taken into account. If a processor's assets were purchased and the landing history expressly identified as an asset in the purchase agreement, then any permit owner obligation based on those landings will accrue to the processor making the purchase. For landings history associated with a defunct or non-qualifying processor, that portion of a permit's allocation will be linked to the permit's initially-assigned landing history on a pro rata basis.

B-3.4.2 Duration and Modification of Processor Ties (Options 1 and 2)

A permit's obligation to a processor will remain in place from one year to the next unless modified through the following process.

Option 1: Once a CV(SS) permit has participated in the non-co-op fishery for [*Options: 1 to 5 consecutive years*], it is released from its delivery obligations to the processor(s) that were the basis of its history, and may join any of the various co-ops, or join with other permit holders who have also been released from delivery obligations to form a new co-op, and deliver to any shoreside processor in the subsequent years after the SSPs have expired.

Option 2: Any CV(SS) permit participating in a co-op is linked indefinitely to the processor they are delivering to under the initial linkage requirements. The permit can sever that linkage by participating in the non-co-op fishery for a period of [*Options: 1 to 5 years*] years. After completing their non-co-op obligation, the permit is then free to re-enter the co-op system and deliver to a processor of their choosing. Once the permit re-enters the co-op system and elects to deliver their fish to a processor, a new linkage is then established with that processor. Should the permit later choose to break that new linkage, the non-co-op participation requirements again apply.

Should a permit elect to enter the non-co-op fishery within the first two years of this program, that permit must participate in the non-co-op fishery for a minimum of [*Options: 2 to 5 years*], regardless of other non-co-op participation requirements applying elsewhere in this document. Once the permit meets that obligation and later elects to enter a co-op, all provisions of co-op participation, including the processor linkage provisions, apply.

❖ **Interlinked Elements**

The possibility that a catcher vessel could be linked to more than one processor potentially creates complexities in bycatch management and in breaking and establishing new linkages with processors.

If a catcher vessel is linked to more than one processor and the fishery is closed upon attainment of a bycatch limit, there may be conflict over whether a permit's obligations to various processors have been met. At this time it is unclear whether a processor could seek compensation from a harvester if a harvester is tied to more than one processor, but fails to deliver the specified proportion of deliveries to all obligated processors. Even if a processor could not seek such compensation, being tied to multiple processors may still create unintended consequences. If processors believe there is likely to be a premature closure of the fishery because of the attainment of a bycatch limit, those processors may fight over the timing of deliveries from that catcher vessel, resulting in a variety of effects outlined in more detail in the analysis section of this element.

Modifying and breaking processor ties are related to the possibility of a catcher vessel being linked to more than one processor. If a catcher vessel desires to break a tie with one of its linked processors, that catcher vessel would need to undergo the same action as if it wanted to break ties with all linked processors by fishing in the non-cooperative fishery. Furthermore, when a new tie is established, that catcher vessel will only be tied to a single processor. This means that if a catcher vessel wants to break a tie with a single processor, it would need to fish in the non-cooperative fishery and the participation of that catcher vessel in the non-cooperative fishery would put all processor ties connected to that vessel at risk. Therefore, the relationships between one processor and that catcher vessel may indirectly affect the ties that exist between that catcher vessel and other processors.

❖ **Rationale and Policy Issues**

The rationale for establishing processor ties is largely the same as that rationale found in the parallel section on the mothership alternative. The years for establishing processor ties in the shoreside sector are different from those years used in the mothership sector. The rationale for shoreside sector ties are based on the idea that the processors and harvesters engaged during each of the possible time periods for establishing linkages are the processors that have been most engaged in the fishery and/or elected to knowingly participate during years when conditions were poor. During the possible time periods for establishing ties, the market for whiting was depressed and the whiting OY was low. Initial ties based on

patterns during this period recognize the participation of processors that have consistently participated in the fishery, especially during times of relatively little economic benefit from participating in the fishery.

- **Successor in Interest**

The rationale for recognizing a successor in interest is that the purchase of assets by a processing entity may have included in the purchase price the historical involvement of that original processing entity in the fishery. If the buyer and the seller believe such historic participation may lead to the receipt of quota, a license, or processor linkages, that historic participation is likely to influence the sales price of those assets. In order to get a return on the investment made in those assets, it is therefore necessary for the successor in interest to be the recipient of the processor tie. Furthermore, recognizing a successor in interest of the processing assets would result in the recognition of the current owner of those assets, and this is consistent with the concept of granting quota share or catch history to the current owner of a limited entry trawl permit.

- **Duration and Modification of Processor Ties**

The rationale behind the requirement to participate in the non-cooperative fishery in order to break processor ties is largely the same as that rationale provided in the analysis of the mothership cooperative alternative. However, the shoreside whiting alternative includes a possible range of years (one to five) in which a vessel would need to participate in the non-cooperative fishery in order to break the processor linkage. Furthermore, if the vessel elects to break processor ties in the first two years of the program, that vessel would need to participate in the non-cooperative fishery for a minimum of two years. These years are intended to provide a range of possible disincentives to vessels for breaking ties. Requiring that vessels participate in the non-cooperative fishery for one year has the lowest relative disincentive (although that disincentive may be relatively large), while requiring that vessels participate for five years provides the highest degree of disincentive to a vessel that is considering breaking a tie with a processor.

❖ **Analysis**

- **Initial Formation of Ties**

The options for processor linkages result in a varying degree of linked catch history percentages to each qualifying processing entity. This information is shown in the figure below. Using the years 2000 – 2003 assures that all of the qualifying processors receive some linked catch history. Using 2000 or 2001 results in one qualifying processor not having linked catch history.

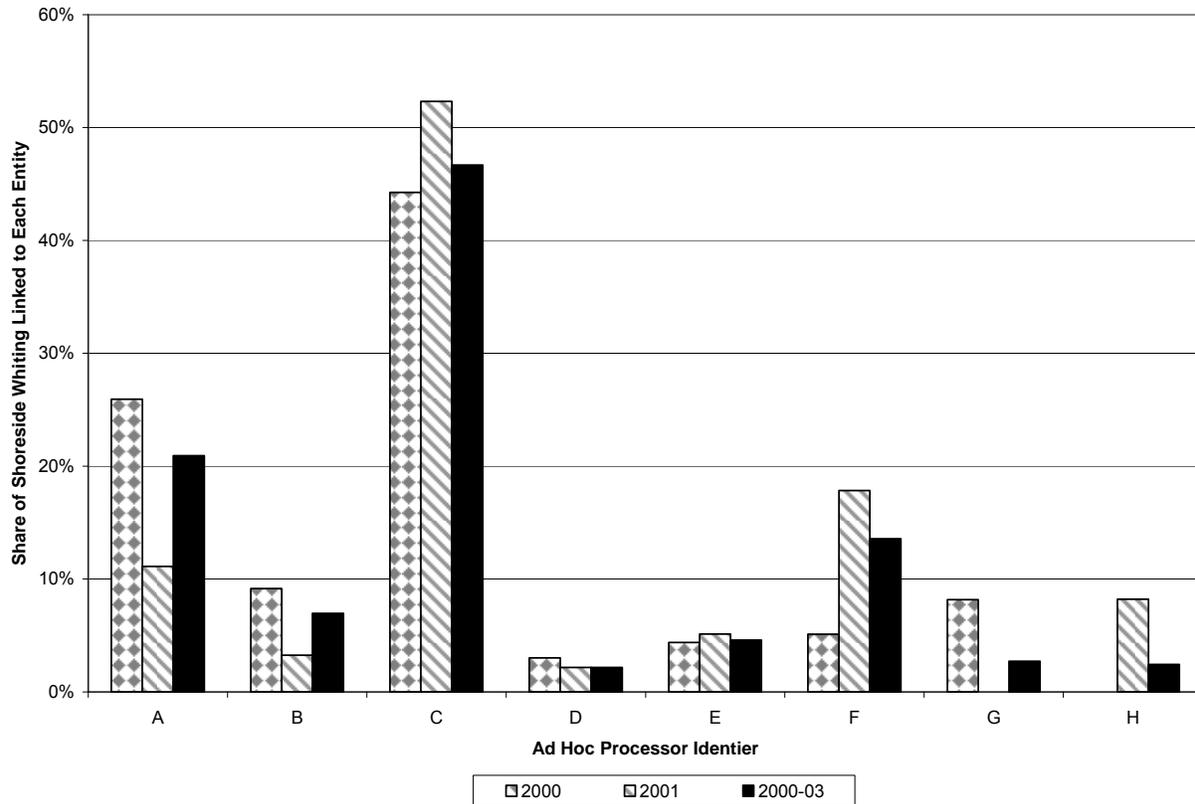


Figure B-8. Share of linked shoreside whiting catch history by processing entity and linkage formula.

The number of catcher vessels linked to each processing entity is shown in the following figure. Based on this information, the number of catcher vessels linked to each processing entity varies widely depending on the formula used for establishing initial linkages. In addition, catcher vessels can be linked to more than one processing entity if the 2000 – 2003 processor linkage formula is used. Using the other two linkage formulas means that those catcher vessels that have linkages established appear to only be linked to one processing entity. However, multiple permits that receive catch histories would not be linked to processors through application of the 2000 or 2001 processor tie formula. As illustrated previously, 45 permits would receive shoreside whiting catch histories, yet according to information shown below, 3 permits would not be linked through the 2000-2003 formula, 15 permits would not be linked through the 2000 formula, and 16 would not be linked through the 2001 formula.

The effect of choosing these years for establishing linkages means that linkages may be created for permits and processors that have had relationships prior to the implementation of a rationalization program. However, the years used for these linkage formulas may be more than 10 years old by the time rationalization is implemented, and if catcher vessels and processors have not had relations since that time, re-establishing them through a linkage provision may introduce disruption to the fishery. This can have important implications for a fishery managed with cooperatives as cooperatives rely heavily on relationships to operate successfully. Even though processors are not cooperative members (unless they own a permit which is part of a cooperative) the relationships between catcher vessels and processors may affect the way in which catcher vessels prosecute fishing activity.

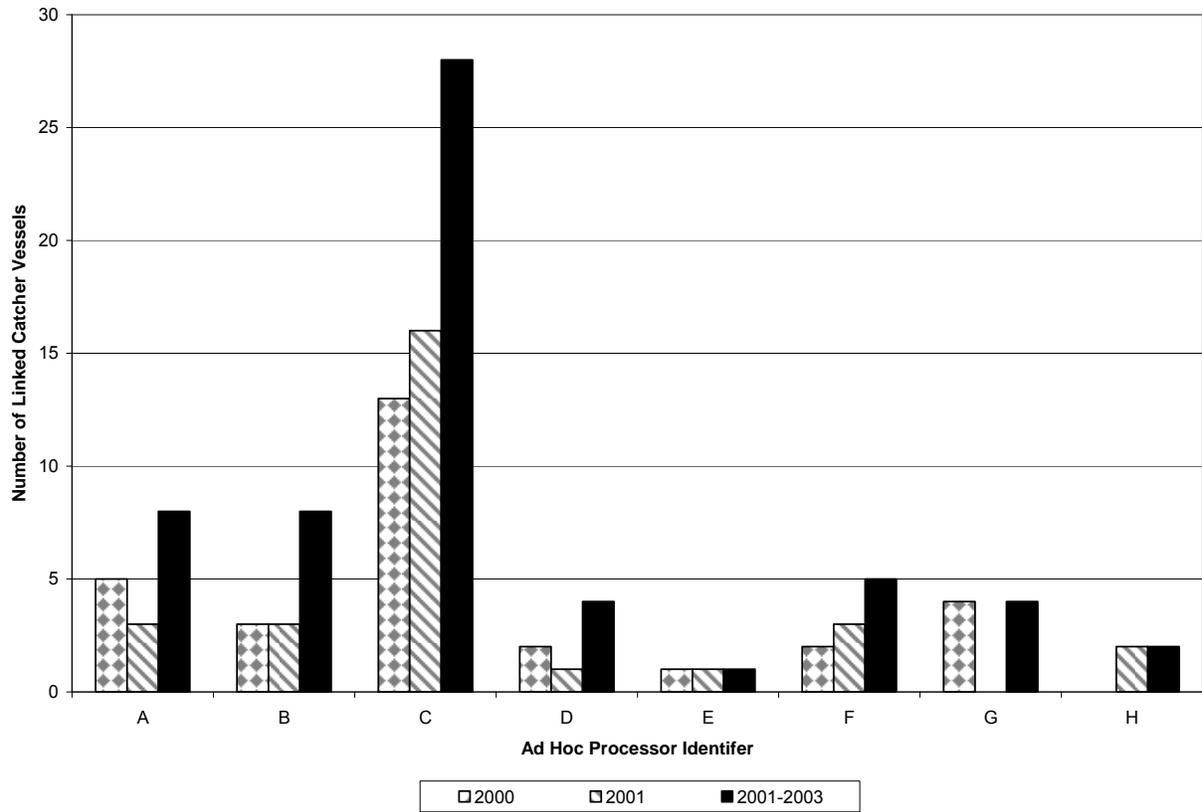


Figure B-9 Number of linked catcher vessels by processing entity and linkage formula

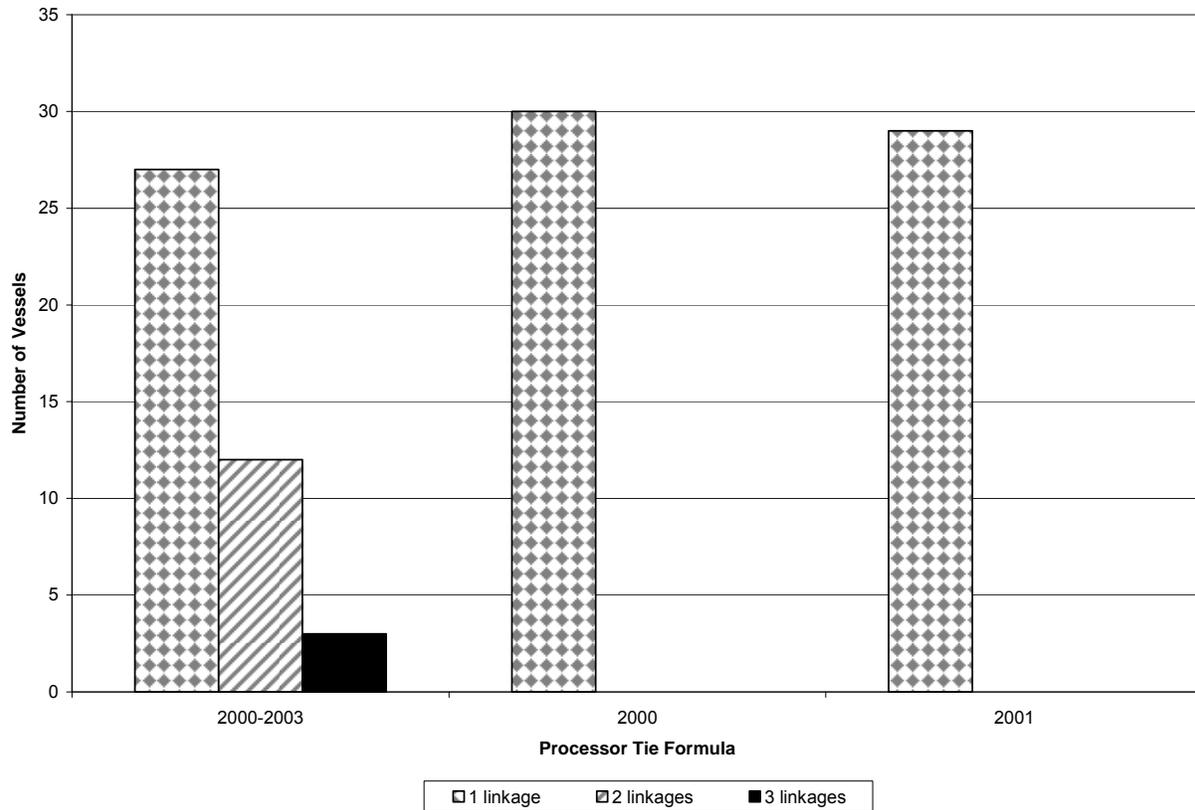


Figure B-10 Count of vessels by number of processing linkages and processor linkage establishment formula

◆ *Potential Implications of Having a Catcher Vessel Tied to Multiple Processors*

The possibility of having a catcher vessel tied to more than one processor means that the activities of one processor can put all processors tied to that catcher vessel at risk if that catcher vessel wants to abandon a tie with only one of those processors. In order to break a processor tie a catcher vessel would need to participate in the non-cooperative fishery, and when the catcher vessel rejoins the cooperative fishery, that catcher vessel will be tied to one processor. When that catcher vessel engages in the non-cooperative fishery, that catcher vessel could elect to permanently abandon ties with all of its tied processors and develop a tie with a completely different processor. In addition to this concept, establishing ties between a catcher vessel and more than one processor could mean that processors tied to that catcher vessel will try to influence delivery patterns in a way that benefits them. When there are more than one processors tied to that catcher vessel, this could result in processors competing over the timing of deliveries, especially if they are all interested in receiving deliveries during the same time window. In the worst case scenario, processors may desire to have their deliveries during a particular time window, and if the catcher vessel is pressured to a great enough degree by those processors, that catcher vessel may elect to engage in a type of race, or excessive effort, to accommodate and appease the multiple processors that are seeking deliveries during a specific time window. When compared to a case where a single processor is tied to a catcher vessel, the pressure that catcher vessel has to meet the desired timing of a single processor may be less than the pressure a catcher vessel has in meeting the desired timing of multiple processors.

In addition to the above examples, having catcher vessels tied to more than one processor raises several questions about what would happen in the event that a fishery is closed based on attainment of a bycatch limit before the sector allocation is reached. Closing on the attainment of a bycatch limit will mean that catcher vessels have not harvested their full quota for the year and this means that the deliveries various processors may have expected during the year would not be achieved. If a catcher vessel is linked to more than one processor, but delivers catch to only one processor prior to the closure of the fishery, other linked processors may not feel that their obligated deliveries have been received. This raises some questions about whether those processors would pursue some financial compensation from that catcher vessel since it will have delivered all of its catch to one processor even if it was scheduled to deliver to multiple processors later in the season. Even if this type of compensation cannot be sought, the fear of not catching quota or of receiving obligated deliveries may induce a race for fish spurred by the processors as well as the catcher vessel in order to catch their whiting quota before the fishery is closed. This is likely to have negative implications to the performance of the fishery.

● Duration and Modification of Processor Ties

The general rationale for allowing vessels to break processor ties by participating in the non-cooperative fishery is that it makes the processor ties voluntary to some degree while providing a strong incentive to keep processor ties in tact. It is acknowledged that participation in the non-cooperative fishery is less economically beneficial (and may indeed be costly) to those engaged in that mode. Furthermore, because of the structure of the fishery, participants in a non-cooperative mode may fish less carefully and this may result in higher rates of bycatch. Because of reasons explained in the introductory portions of this document, the potential for this type of behavior to occur may be higher for a non-cooperative fishery vessel in the shoreside sector than a non-cooperative fishery vessel in the mothership sector. This means that the requirement that vessels in the shoreside sector participate in a non-cooperative fishery to break a processor tie is likely to result in diminished economic and bycatch performance compared to a vessel in a cooperative fishery. When considering that a vessel may be required to participate in a non-cooperative fishery for several years in order to break a tie, the situation is exacerbated. The result of requiring that vessels participate in the non-cooperative fishery for several years in order to break a tie is likely to be one of much greater participation in that mode in any given year, resulting in lower economic benefits and diminished bycatch performance. This outcome would tend to be exacerbated as the required number of years of non-cooperative fishery participation in order to break a processor tie is increased.

● Implications of Multiple Years of Non-Cooperative Participation in Breaking a Processor Tie

In addition to the above factors, the ability for catcher vessels to realistically break a processor tie may be necessary for the successful operation of a fishery managed with cooperatives. As mentioned previously, harvest cooperatives are formed by harvesters and it is important to maintain this distinction in order for the fishery to operate successfully. It is ultimately the harvesters that eliminate the race for fish currently responsible for much overcapitalization and inefficiency, and it is ultimately the harvesters that achieve other benefits such as bycatch reduction.

Processor ties help ensure that processors benefit from rationalization, but the establishment of such ties implicitly make the processing entity an involved party in the fishing practices of the linked catcher vessel. This is because processor ties result in a type of mutual dependence on the part of the harvester and the processor, and the outcome is one where the activities of the harvester and processor take on the characteristics of a vertically integrated firm. Through these characteristics of vertical integration, the processor tie makes the processor an influential party in the harvesting activities of a catcher vessel. If a relationship between the catcher vessel and a processor become strained, this can have a negative effect

on the fishing practices of the catcher vessel, and this can mean less economic efficiency and less improvement in other management goals. It is because of this potential that the catcher vessel be able to break the tie. Being able to realistically break the tie and form a new tie with another processor allows catcher vessels and processors the ability to find other processors and catcher vessels with goals and similarities that make for the efficient operation of both the catcher vessel and the processor. Being able to establish ties between processors and catcher vessels that are similarly minded makes for a more efficient operation for both parties.

While processor ties provide a disincentive to vessels that are considering switching processors (and therefore help ensure that processors benefit from rationalization), switching processors must be a realistic possibility to those catcher vessels. This is necessary to ensure good faith and balanced relations between catcher vessels and processors and operating in good faith may be important to the overall economic health and performance of participants in the fishery. Good faith relations may be affected if a processor knows that a catcher vessel cannot realistically break the tie. This can result in increasing demands placed on a catcher vessel in the form of delivery timing, profit sharing, and other matters that may be at odds with other goals of that catcher vessel. If a catcher vessel is required to participate in the non-cooperative fishery for more than one year, it is likely that the ability to switch processors will become increasingly unrealistic, and at some point, switching processors may not be a realistic possibility at all, especially if participation in the non-cooperative fishery results in a loss of revenue.

B-3.6 Exclude Processor Ties and Processor Licensing (Option)

Option: Exclude from the above all references to processor ties and processor licensing.

This option includes the following changes to Section B-3:

Section B-3.1.b. Processors. Delete “non-co-op” from the first sentence and delete the remainder of the section. This section constrains processor participation in the first two years of the program.

Section B-3.2.2. Shoreside Co-op Eligible Processing Permit. Delete the entire section.

Section B-3.3.4 Annual Allocation transferability. Delete the last sentence (refers to the handling of permit obligations to processors when allocations are transferred).

Section B-3.4. Processor Ties. Delete the entire section.

Section B-3.5.2.b. Delete the entire paragraph (addresses preseason registration of processors with shoreside processing permits)

Section B-3.5.3.a. Delete the last sentence (refers to the NMFS need to make determinations on permit links to processors)

Section B-3.5.3.c. Delete “and co-op obligations to processors.”

❖ Rationale and Policy Issues

Dropping processor linkages from the cooperative program is intended to serve as an analysis of a cooperative based fishery that can be implemented under the authority of the Magnuson Stevens Act. Based on input from NOAA General Counsel, the processor licensing and linkage provisions specified in earlier portions of this alternative are outside the existing authority of the MSA.

❖ Analysis

Processor licensing and linkages are a tool intended to protect the interests of processors that exist in the fishery. The lack of processor licensing and linkages would therefore be expected to have an opposite effect where processor interests are not protected. The expected outcome would be one where new processors may enter the fishery and processors would compete with one another for catch from catcher vessels. Processors would theoretically enter into the fishery as long as profits can be generated from doing so. The result may be one where there is more processing capital in the fishery than is necessary to process the available harvest. However, establishing a cooperative-based management program without processor ties is expected to result in efficiencies at the catcher vessel level from slower paced harvest activity and fleet consolidation, among other factors described earlier in this section and in Chapter 4. Furthermore, the lack of processor ties would tend to result in more processor competition than a case with processor ties and harvesters can use that competition to their advantage when negotiating over exvessel prices and other matters. The result is one where harvesters see benefits from increased cost efficiency and also from enhanced negotiation power over exvessel prices.

One additional outcome of not having a processor linkage provision is that the non-cooperative fishery may not exist. While catcher vessels could still elect to participate in the non-cooperative portion of the fishery, it is highly unlikely they would do so because catcher vessels would not need to break any processor linkages and because participation in the non-cooperative fishery is expected to be relatively inefficient. The lack of participation in the non-cooperative fishery may improve some management goals of the fishery related to management performance, bycatch performance, and economic efficiency.

B-4 Co-ops for Catcher-Processors

Catch by the catcher-processor sector will be controlled primarily by closing the fishery when a constraining allocation is reached. As under status quo, vessels may form co-ops to achieve benefits that result from a slower paced more controlled harvest. The main change from status quo is the creation of a limited number of catcher-processor endorsements. A new entrant will have to acquire a permit with a catcher processor endorsement in order to enter the fishery.

B-4.1 Participation in the Catcher-Processor Sector and Endorsement Qualification.

Catcher-Processor (catcher processor) Endorsement. The class of catcher processor endorsed permits (catcher processor permits) will be limited by an endorsement placed on a limited entry permit. Limited entry permits registered to qualified catcher-processor vessels will be endorsed as catcher processor permits. A qualified permit is one that harvested and processed in the catcher-processor sector of the Pacific whiting fishery sometime from 1997 through 2003. Only catcher-processor vessels with a catcher processor endorsed limited entry permit will be allowed to catch and process whiting at-sea. Limited entry permits with catcher processor endorsements will continue to be transferable.

Catcher processor Permit Combination to Achieve a Larger Size Endorsement. A catcher processor permit that is combined with a limited entry trawl permit that is not catcher processor endorsed will result in a single catcher processor permit with a larger size endorsement (a CV(MS) or CV(SS) endorsement on one of the permits being combined will not be reissued on the resulting permit). The resulting size endorsement will be determined based on the existing permit combination formula.

B-4.2 Co-op Formation and Operation Rules

No annual registrations or declarations are required. As under status quo, co-op(s) will be formed among holders of permits for catcher-processors. Participation in the co-op will be at the discretion of those permit holders. If eligible participants choose to form a co-op, the catcher-processor sector will be managed as a private voluntary cooperative and governed by a private contract that specifies, inter alia, allocation of whiting among catcher processor permits, catch/bycatch management, and enforcement and compliance provisions. Since NMFS will not establish an allocation of catch or catch history among permits, if any permit holder decides not to participate, the potential co-op benefits will diminish and a race for fish is likely to ensue. Similarly, if more than one co-op forms, a race for fish could likely ensue, absent an inter co-op agreement.

Annual Reporting Requirements. The catcher processor cooperative will submit an annual report to the Pacific Fishery Management Council at their November meeting. The report will contain information about the current year's catcher processor fishery, including the catcher processor sector's annual allocation of Pacific whiting; the catcher processor cooperative's actual retained and discarded catch of Pacific whiting, salmon, rockfish, groundfish, and other species on a vessel-by-vessel basis; a description of the method used by the catcher processor cooperative to monitor performance of cooperative vessels that participated in the catcher processor sector of the fishery; and a description of any actions taken by the catcher processor cooperative in response to any vessels that exceed their allowed catch and bycatch. The report will also identify plans for the next year's catcher processor fishery, including the companies participating in the cooperative, the harvest agreement, and catch monitoring and reporting requirements.

B-4.3 NMFS Role

B-4.3.1 Permit and Endorsement Issuance

NMFS will issue all necessary endorsements under the rules specified under this program. Appeals processes will be provided as appropriate and necessary.

B-4.3.2 Annual Allocation

Option 1: There will be no government-directed subdivision of the catcher-processor sector quota among participants.

- ▶ **Option 2:** Harvest amounts for the co-op will be specified in regulation. If the co-op breaks up, harvest will be divided equally among the 10 permits.

However, up to 10 percent of the allocation to the catcher-processor may be set aside as necessary for the adaptive management set aside described in Section B-1.6.

The catcher-processor sector allocation may be divided among eligible catcher-processor vessels (i.e., those catcher-processor vessels for which a CP permit is held) according to an agreed catcher-processor cooperative harvest schedule as specified by private contract.

B-4.3.3 Fishery and Co-op Monitoring

- a. NMFS will track all permit transfers. Permit transfers will not be valid until registered and acknowledged by NMFS.
- b. NMFS will monitor catch and close the catcher-processor sector fishery as necessary to ensure catch limits are not exceeded.

- c. NMFS will administer the adaptive management program, allocating the set aside for that program as needed based on the adaptive management goals, objectives and adjustment measures recommended by the Council.

❖ **Rationale and Policy Issues**

The catcher processor sector currently operates as a rationalized fishery through the formation of the voluntary cooperative. This cooperative is managed by a governing contract which spells out such things as catch sharing arrangements among members of the cooperative. The result of this contract has meant that the benefits attributed to a rationalization program have already occurred in the catcher processor sector and therefore there is little reason to change the way that sector is managed.

In the event the catcher processor cooperative breaks apart, the issuance of quota shares to permits in the catcher processor fishery is intended to insure that the fishery continues to operate as a rationalized fishery. Granting each permit 10 percent of the quota share is intended to result in a distribution of fishing opportunity that is highly similar to the catch sharing agreement that exists in the existing cooperative contract.

❖ **Analysis**

The existing alternative for cooperative management in the catcher processor sector is essentially the continuation of the No Action alternative for this sector. Amendment 15 established sector specific limited entry for that sector and an allocation of whiting for the sector already exists. These two tools make it possible for a sector to establish and sustain a voluntary cooperative if they can agree to catch sharing arrangements. The one factor that may put the voluntary cooperative at risk is the management of bycatch in a common fashion across the three sectors. This can put the voluntary cooperative at risk because members of that cooperative do not have control over catch of vessels outside that cooperative and catch from those vessels outside the cooperative can affect opportunities in the catcher processor sector since all three sectors close when that limit is reached.

Beginning in 2009, bycatch limits for the whiting fishery will be applied to specific whiting sectors, which is a departure from the three sector common bycatch limit which has been used since 2004. This change is expected to protect the catcher processor sector from other sectors which could inadvertently pre-empt opportunities in the catcher processor sector. As a result, this change enhances the likelihood of the catcher processor sector maintaining the existing voluntary cooperative.

As indicated in earlier sections of this analysis, cooperatives may need to have resource sharing arrangements solved for them. In cases where participants in the fishery are relatively diverse and have different levels of historic participation and reliance on the fishery, requiring that those participants decide on catch sharing arrangements themselves may prove difficult and problematic. If catch sharing arrangements are reached, they may be unstable and lead to frequent revisions of the cooperative contract and instability in the cooperative. In cases where participants are relatively diverse, solving catch sharing arrangements by issuing catch history and implementing a golden rule provision may be necessary for cooperatives to form and/or help to ensure that cooperatives are sustained. However, this is not necessary in all cases. In instances where participants have similar characteristics and have similar historic participation and reliance on a fishery, solving catch sharing arrangements may be relatively easy. This appears to have been the case in the catcher-processor sector as that sector was able to form the voluntary cooperative and solve catch sharing arrangements without Council intervention. This cooperative has been maintained for 11 years, suggesting that the catch sharing arrangements that were agreed to have not

led to much disruption or instability across cooperative members. In spite of this, the break up of the voluntary cooperative is not outside the realm of possibility. Several events could lead to the break up of the cooperative including the transfer of an existing catcher-processor permit to another entity that is not currently part of the cooperative or disputes over catch sharing. In such an instance, one option would automatically grant IFQ to catcher processor participants in order to ensure that fishery remains “rationalized”.

The following sub-parts analyze each of the elements comprising the catcher processor cooperative alternative.

● Catcher Processor Endorsement

Endorsing permits for participation in the catcher-processor sector is an extension of measures established through Amendment 15. An endorsement establishes a barrier to entry to the catcher-processor sector and provides one of the necessary ingredients for a cooperative to form. The barrier to entry established by the sector endorsement prevents other potential participants from entering into the catcher-processor sector and competing with existing participants for catch. If competition for catch arises, a break down in “rational” fishing practices should be expected to occur. This is because it is the elimination of competition for catch that eliminates the race for fish. The elimination of the incentives that exist in a race for fish reduces effort in the fishery, reduces capital in the fishery, and slows down the pace of harvesting. These effects reduce cost and increase value, resulting in a net improvement in the economics of the fishery.

● Catcher processor Permit Combination to Achieve a Larger Size Endorsement

If the permit length endorsement is retained, a catcher-processor would need to acquire an additional permit in order to increase vessel size. The alternative for combining permits indicates that, in such an event, the catcher-processor endorsement would remain, but other endorsements would not. This effectively limits the relatively large catcher processor vessel to the catcher processor sector. If other sector endorsements remained on that permit, that relatively large catcher processor vessel could theoretically participate in other sectors. That possibility would not occur under the existing permit combination option.

● Annual Reporting Requirements

An annual reporting requirement enhances transparency of a cooperative-based fishery. Since many of the outcomes and events in a cooperative fishery occur through private agreements and negotiations, the annual reporting requirement provides information on those activities to the public and management agencies. This helps to ensure that those groups are relatively informed about the activities occurring within a cooperative and help the public and management agencies to understand cooperative management more thoroughly. This can be important if changes to required cooperative standards or regulations are deemed necessary by the Council in order to meet new challenges or management goals.

The requirement that the annual report submit a record of catch by each vessel may violate confidentiality provisions of the Magnuson-Stevens Act.

- **NMFS Role**

The role of the National Marine Fisheries Service in administering this cooperative program is effectively no change from status quo. The exception to this is in the event the voluntary cooperative breaks apart and IFQ is issued to catcher-processor permits. Furthermore, if an adaptive management provision is utilized in the catcher-processor sector, the role of NMFS in managing the catcher-processor portion of the fishery may change in order to implement that provision. Since the adaptive management provision and associated specifics on how that provision would work are necessarily general, it is not possible to determine the amount of workload or infrastructure that may be required of NMFS if that adaptive management provision is used.

- **Annual Allocation**

Two options exist in the existing catcher processor alternative that pertains to annual allocation. One option would continue to allocate Pacific whiting to the catcher processor sector with no subdivision of the allocation within that sector. The other allocation would allocate to the catcher processor cooperative instead of the sector. In practice, there does not appear to be any difference between the two options because the amount of fish allocated will be the same and the participants that have access to that fish will be the same. Therefore, there is not expected to be any difference in the effects of either option. However, the Council's preliminary preferred alternative specifies measures which would be taken if the voluntary cooperative breaks apart¹⁷.

Under the Council's preliminary preferred alternative, the break up of the voluntary cooperative would trigger an automatic issuance of quota shares to catcher processor participants. Each participant would receive 10 percent of the catcher processor quota and this amount is intended to be reflective of the catch sharing agreement that currently exists in the voluntary catcher processor cooperative. The reader is referred to Appendix A for a description of an IFQ program and outcomes from managing a sector using that tool.

¹⁷ The term "break apart" in this context is assumed to apply to cases where a single catcher processor permit leaves the cooperative but other permit owners agree to maintain a voluntary cooperative agreement.