

Economic Implications of a Strategy to Purchase Alaska Halibut  
Fishery Commercial Fishing Sector Quota Shares to Create a  
Recreational Guided Angler Sector Harvest Common Pool

*Presentation Materials*

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The history of the Alaska halibut fishery illustrates the conflict between conservation, cultural and food values, commercial fisheries, and recreational fisheries. Controlling the mortality from directed fishery harvest and harvest bycatch are the critical factors for conserving the halibut resource. Extensive federal and state fishery management processes exist to manage this mortality, and the continuing harvest opportunities depend on the degree to which this management is successful. Specifying how much each fishery is allowed to kill is a social policy issue for which knowing economic effects helps management bodies decide allocation schemes.

The adoption and implementation of a Catch Sharing Plan (CSP) starting in 2014 will mean the NPFMC will be annually considering a suite of recreational guided angler sector management measures to keep the season's catch within the allocated commercial and charter recreational tier caps. The unknown management measures to be selected, and especially one set of measures being more restrictive than another for the same recreational market, are worrisome to charter fleet businesses whose demand for services has already been softened by the national economy downturn.

The charter fleet industry is seeking a "permanent solution" rather than use the "temporary solution" built into the CSP. The temporary solution is a special provision in the CSP will allow charter fleet operators to lease commercial fishing sector quota pounds (QP) (termed the Guided Angler Fish or GAF program) so that clients have the same management measures as the unguided angler.. A permanent solution would be to increase predictability of management specifications and being able to satisfy customer fishing preferences. To this end, charter fleet businesses have formed an organization to design methods and procedures to address unequal angler access by allowing purchase of commercial fishing sector quota share (QS) for deposit in a guided angler sector harvest common pool. The organization is called the Catch Accountability through Compensated Halibut (CATCH) Project.

A charter fleet operator participating in the GAF will have to pay at least the foregone net benefit of a fish to a commercial fishing sector operator. The charter fleet operator ostensibly would pass the cost on to angler trip fees. Anglers would have to decide if they are indifferent to the fee increase or decide displeasure about the increase. If the latter, then the charter operator would decline to utilize the GAF program. Such a decision would have to be made with knowledge about how overall demand for business type services is being affected by the management specification that is being attempted to overcome (size or bag limit limitation or both). It could be that the charter operation is one cost center in a business type that also offers lodge and other visitor services. Losing a customer because of one fishery's management specification might induce the operator to absorb the cost into overall business type financing. Another interpretation is that charter fleet businesses may find that the GAF program provides a service that allows for a differentiated product for a market segment with unmet demand.

The CATCH Project is designed to purchase quota shares owned by commercial fishing sector and the quota pounds they represent are annually deposited in a guided angler harvest common pool. If necessary to assist in augmenting available harvestable fish from stock abundance to attain the same management regulations for both guided and unguided anglers in both regulatory areas, then the inter-sector transfers through purchases would be used.

The NPFMC already considered plan alternatives for allowing commercial fishing sector QS purchases to be deposited into a common pool and/or for allowing commercial fishing sector QS

purchases to be held by individuals. There were discussions about gains in economic efficiency because of a wider market for QS sales and discussions about loss in social objectives for diluting the commercial fishing sector economic structure. A preferred alternative for a charter fleet individual fishing quota (IFQ) plan was adopted, but then rescinded in December 2005.

The CATCH Project was looking for mechanisms that would allow it to purchase quota shares using voluntary market approaches consistent with the fishery's privatized user rights and privileges. The quota share inter-sector transfer procedures will necessarily be complex for several reasons.

- The amount to purchase needs to be estimated within the bounds of possible future resource abundances and what new effort might be attracted into the guided angler sector.
- Guided angler trip demand forecasts must be developed to account for less restrictive regulations, possibly higher angler costs, and other guided angler motivations for trip making such as nationwide general economic conditions. The possible cost increases are because one quota share purchase fund raising option is to use proceeds from imposing a guided angler fishing license endorsement fee.
- The existing program's quota share sales rules are highly regulated in order to satisfy an objective to retain the pre-privatized fishery structure. Quota share sales in recent years are very small and amounts needed for the inter-sector transfer would greatly exceed amounts annually coming to market. The inter-sector ask price would have to be high enough to incentivize new holders to the market. It is suggested that program rules on restraining certain transfers may need to be relaxed for sufficient purchases to occur.
- The acquisition is for an asset that is primarily needed by the guided angler sector during periods of relative low fish resource abundances. If stock recovery is sufficient, then the asset could be leased or even divested back to the commercial fishing sector.

Diverting quota pounds from the seafood market for the quota share amounts to be purchased during years of lower exploitable stock abundance will not in itself appreciably influence harvest price.

Predicting the market transactions price for QS purchases is difficult given that it hinges on a host of economic variables including the own-quantity price effect. It is a reasonable supposition that QS price will increase significantly from present levels depending on the quantity of purchases, the strategy for conducting the purchases, the efficiency in managing the purchased QS, and the ability to engage long term in the larger QS market. But there are scenarios where QS price could decrease—for example, as a result of eliminating (at least temporarily) constraining transfer rules, and/or significant decreases in stock abundance and/or harvest rates.

There will be plan design problems associated with determining own industry needs; estimating angler response to fees and the changed quality of the angling experience; and, assessing commercial fishing industry quota share supply functions. There is probably sufficient flexibility for federal authorization of such a program, although establishing one is without precedent.

One alternative for financing the CATCH Project is to secure a purchase loan with debt service accomplished using revenues from new angler fees via guided angler fishing license

endorsement. The endorsement could be similar to the king salmon stamp except it would only be required for anglers using guided services to fish for halibut. It was shown that a \$20 stamp with a fee structure having similar discounts in time and residency status as the king salmon stamp would generate sufficient revenues to purchase the needed QS at recently reported QS market prices.

A perspective for a program that would impose mandatory fees on an angler stratum for the purpose of purchasing sufficient QS to be deposited into a harvest common pool is that of risk spreading. The possible perils (unfavorable management measures) to be suffered by any angler are being insured against through payments from all anglers in the strata.

Complexities associated with developing the best financial instrument, optimizing its use over time, and managing the purchase and sale of quota assets were discussed in the report.

- There will be significant challenges in conducting purchases for the benefit of a heterogeneous set of firms and the problems associated with determining own industry needs, angler response to fees and the quality of the angling experience, and commercial industry quota supply functions.
- The recreational guided angler sector must understand they are purchasing a valuable private asset. If the purchases are well designed and the asset efficiently managed, the program may generate higher asset values (for both QS holders and CHP holders) and result in an increase in the overall social welfare of the halibut fishery. Unless properly addressed, however, the latent recreational CHP's especially in Area 2C may decrease potential sector benefits from a quota purchase program.
- QS purchase for common pool deposit is the next best solution relative to allowing purchases by individual charter fleet businesses. A harvest common pool approach may be one of the better solutions given political realities and addressing other social objectives besides maximizing rents and social welfare.
- There is no long run solution for the optimal amount of quota to hold and manage. There needs to be flexibility in trading, purchasing, and leasing quota. Changes to the biological resource and the recreation and seafood markets will require constant adjustment in quota amounts. Optimal asset management will require the option to sell, lease, or trade quota to meet guided angler demand over time.
- Pilot projects and experiential learning should be considered in the CATCH Project design. Given the novelty of the CATCH Project approach and the considerable risks, the guided angler sector should consider undertaking pilot projects in order to develop the best approach in designing fee structures, making purchases, and managing the program.

We provided a demonstration level equilibrium model to show the marginal economic effects for tradeoffs from small changes in user allocation amounts. Available commercial and recreational sector user behavior data and existing model results were pulled together to show how economic effects measurements can be generated. The model results showed the difference in economic effects between harvests in the commercial and recreational guided angler sector within the envelope of needed QS purchase amounts being considered for the CATCH Project. The net economic value (NEV) to the nation and regional economic impacts (REI) within Alaskan economies was greater if harvests occurred in the recreational guided angler

sector The higher marginal economic value in the recreational sector means that the current allocation is not optimally efficient.

Economic analysis discussions need to look past any claims for maximizing the utility of halibut fishery resources. Instead, the economic analysis should be used for comparing and contrasting future management alternatives given that the allocation creating the private assets has already occurred. Management measures to be analyzed are not always whether the alternative meets a most optimal utilization standard, but how one alternative's calculated economic effects compare to another's. A quite accurate result that can be illuminating to decision makers is which alternative's net economic effects rank more negative than the other.

There is no single metric that can reveal all dimensions of economic effects, and the NPFMC needs to patiently absorb the meaning of descriptions when they are offered. It will ultimately be up to the decision makers to use the full array of conservation, social, and economic information in their decision making.

Both NEV and REI analysis, if properly supported with relevant and timely data, can provide useful and necessary information for understanding economic implications of decisions. Although economists will sometimes argue that while such information will help inform decision makers, sufficient scientific data and modeling techniques do not exist to perfect estimates. This should not always be a fall back excuse for informing the NPFMC about best available data and modeling results. It is hard work and takes competence to generate quantitative economic effects information knowing its presentation has to be accompanied with statements about uncertainty and risk that modeled outcomes may not be representative. The end result can be discouraging when decisions are made for other reasons than what is the most economically efficient. There has to be solace that one dimension of a policy change's impacts were revealed and considered despite other reasons being used to justify the decision.

There is probably sufficient flexibility for federal authorization of such a program, although establishing one is without precedent. The approval of a design will require state legislative approval and there are many administrative processes to be addressed. There is federal and international treaty implementing unknowns, judicial review avenues, etc.

We suggest the innovative process is deserving of consideration due to higher marginal economic benefits to local communities and the nation from reserving additional recreationally harvested fish, and concerns for a viable charter industry from customer demand response for the unequal fishery access.