

MEMORANDUM

TO: Council and AP Members

FROM: Chris Oliver *Chris*  
Executive Director

DATE: September 25, 2006

SUBJECT: Comprehensive economic data collection

ESTIMATED TIME  
2 HOUR

**ACTION REQUIRED**

Review discussion paper on comprehensive economic data collection.

**BACKGROUND**

At its June 2006 meeting, the Council tasked staff to prepare a discussion paper (**Item C-6(a)**) concerning the development of a comprehensive program to collect economic data from all participants in the fisheries subject to Council management. The discussion paper overviews several issues the Council could consider in developing a comprehensive data collection program, including the rationale for the program, the scope of the data that could be collected, use of the data, process for collecting and handling the data, and proprietary nature of the data and the importance of confidentiality.

Throughout the development of the program, the Council should reasonably balance the benefits and costs of the data collection program. Some aspects of data collection (such as a system of audits) can be quite costly to both industry and administrators. If critical to ensuring the data's integrity, such a system could be necessary, however, if carefully designed, the audit costs could be reduced for both participants and administrators, while still ensuring data accuracy. Additionally, the program should be developed in a manner that avoids redundancy. Since fisheries revenue data are currently collected through other initiatives (such as fish ticket, weekly processing reports, and commercial operator annual reports) the Council could consider only minimal collection of revenue data, limiting the revenue data to that necessary to ensure accurate merging across data sources. The primary focus should be on the costs associated with fishery operations – of which we are largely ignorant. While economic data collection of this type is a costly undertaking for both administrators and fishery participants, the potential benefit of improved decision making in the management of these valuable resources should not be undervalued.

If the Council wishes to proceed with this action, it could take the following actions:

- a problem statement.
- identify the scope of its proposed data collection program including,
  - persons/fleets covered by the program, and
  - general types of data to be collected.
- direct staff to:
  - develop draft surveys for the proposed data collection
  - prepare a discussion paper providing greater detail concerning the refined purpose and scope of the proposed program (including discussion of proposed uses of the collected data).

## **Comprehensive Socioeconomic and Economic Data Collection**

### **North Pacific Fishery Management Council October 2006**

At its June 2006 meeting, the Council tasked staff to prepare this discussion paper concerning the development of a comprehensive program to collect economic data from all participants in the fisheries that are subject to Council management. The discussion paper overviews several issues the Council could consider in developing a comprehensive data collection program, including the rationale for the program, the scope of the data that could be collected, use of the data, process for collecting and handling the data, and proprietary nature of the data and the importance of confidentiality. Throughout the development of the program, the Council should reasonably balance the benefits and costs of the data collection program. Some aspects of data collection (such as a system of audits) can be quite costly to both industry and administrators. If critical to ensuring the data's integrity, such a system could be necessary. If carefully designed the audit costs could be reduced for both participants and administrators, while still ensuring data accuracy. Additionally, the program should be developed in a manner that avoids redundancy. Since fisheries revenue data are currently collected through other initiatives, such as fish ticket, weekly processing reports, and commercial operator annual reports, the Council should consider only minimal collection of revenue data, limiting the revenue data to that necessary to ensure accurate merging across data sources. Instead, the primary focus should be on the costs associated with fishery operations – of which we are largely ignorant. While economic data collection of this type is a costly undertaking for both administrators and fishery participants, the potential benefit of improved decision making in the management of these valuable resources should not be undervalued.

### **The rationale for developing a data collection program**

The first task in developing a data collection program is to clearly identify its purpose. In the absence of a clearly articulated rationale, the program cannot be fashioned to ensure that the data serve their intended purposes. Generally, data collected could be used to assess the magnitude and distribution of economic impacts, benefits, and costs arising from the fisheries under Council management. Several more specific purposes could be served by the collection of economic data, which should guide program development more specifically. For example, if the primary objective of the program is to determine the impacts of fisheries on local economies, the collection of data could focus on the geographic distribution of employment and spending of participants. Two primary (and related) purposes could be served by economic data collection:

- Enable the estimation of the magnitude of economic impacts and net benefits of fisheries
- Enable the estimation of the distribution of net benefits from fisheries
- Enable the estimation of changes in economic performance (efficiency and/or profitability) arising from changes in fishery management

These three simple purposes likely justify any economic data collection program that could be adopted by the Council. The Council, however, should refine any purpose statement to provide a

more precise statement of its purpose. This more refined definition of its purpose will guide the Council in defining its program.

In general, the Council must make tradeoffs in defining any data collection program. Greater detail can provide a greater understanding of both the magnitude and distribution of impacts and benefits. To benefit from this increased detail, however, requires increased administrative and analytical costs and is often viewed as more intrusive by industry. Limitations on the use and release of data can be implemented to protect confidentiality and increase the acceptability of the program to industry. The Council could consider including some of the following statements in a problem statement for this action:

*In two recent rationalization actions (the crab rationalization program and Amendment 80), the Council has incorporated systems for the collection of economic data. These data collection programs are viewed as critical to aiding the Council in understanding the economic impacts and distribution of benefits and costs of management decisions in these fisheries (including the rationalization programs). Improved data will ensure that decisions of the Council fairly and equitably assign fishing privileges and prevent the acquisition of excessive shares, improve efficiency in the utilization of fishing resources, minimize costs and avoid unnecessary duplication, and provide for sustained participation by fishing communities and minimize adverse impacts (modify as appropriate).*

*An economic and socioeconomic data collection program that collects ownership, cost, revenue, and employment data on a periodic basis will allow a more complete understanding of the social and economic impacts of past and future Council actions to ensure that actions serve their intended purposes and meet the Council management goals. Data will be used by Council and agency staff, recognizing that confidentiality is of extreme importance.*

*Ownership data can be used both to monitor limits on holdings of licenses and fishing privileges and to assess the distribution of benefits from fisheries. Revenue and cost data by vessel and sector are essential to estimate fishery benefits and changes in efficiencies. Employment and crew data are needed to assess the distribution of benefits and impacts of actions. Some data, including ownership and employment data, may include demographic data, which will be used to assess distribution (including the geographic distribution) of impacts and benefits.*

Rationale, similar to that above, has been applied by the Council in the development of the two economic data collection programs it has authorized, both of which were prompted by major changes in regulatory structure. However, the need for data to support rigorous economic analysis is ongoing and pervasive in fisheries management, and is not limited to cases of major structural changes. Comprehensive data collection across all regulated fisheries, not restricted to individual fleets, is needed to address the economic effects of management and regulatory changes at all scales. In addition, the most difficult and costly element of economic data collection has been historical reporting, which has required participants to recover and report cost and earnings data from prior years, oftentimes at considerable expense. Because regulatory and management changes must often be made in a relatively short time span, it is often impossible to implement economic monitoring in time to provide a record of baseline conditions. Thus, implementing data collection across all regulated fisheries is the only reliable method of providing a record of baseline economic conditions without requiring collection of historical data.

## Existing Economic Data Collection Programs

The Council has passed programs to collect economic data in the two fisheries that it manages, the Bering Sea and Aleutian Islands crab fisheries and the Bering Sea groundfish fisheries prosecuted by non-AFA trawl catcher processors (the Amendment 80 program). Both data programs were adopted as a part of a rationalization package, with a stated purpose of assessing whether the applicable rationalization program has its intended effects. The scope of the surveys and the data collection programs differ substantially. Copies of the surveys are attached as Appendices 1A (crab catcher vessel), 1B (crab catch processor survey) and 2 (Amendment 80).<sup>1</sup>

Both programs fully survey all participants in applicable fishery annually. The crab program includes all catcher vessels, catcher processors, floating processors, and shore-based processors active in the fisheries. The Amendment 80 program collects data from all vessels participating in those fisheries.

The more extensive of the two, the crab data collection program, included both the collection of historic data and annual data. The Amendment 80 program collects only annual data. The Council elected not to include the collection of historic data in that program, based on advice from NOAA General Counsel suggesting that the authority to collect historic data is limited. The authority for the collection of this data under the crab program is clear, given the specific legislative authority for that program.

Both programs attempt to collect comprehensive cost data. The focuses of the two programs, however, differ slightly. The crab program distinguishes crab specific costs from more general costs. For all vessels (including floating processors), that program distinguishes crab specific vessel costs (such as insurance, fuel, bait, and other costs specifically related to crab activity) and general vessel costs (such as capital expenditures and repairs and maintenance) that are not specifically related to crab activity. Shore-based processors are required to submit only crab specific costs. Costs unrelated to crab are not submitted by any participants. The Amendment 80 program collects annual costs for a participating vessel without distinguishing costs related to fisheries governed by the Amendment 80 cooperative program. In general, aggregation of data (including collecting annual data, as opposed to trip level data) complicates and limits the analytical uses that can be made of the data. The failure to distinguish costs related to the Amendment 80 fisheries will complicate analysis of the effects of that program. The data will be useful for examining overall activities of this fleet, which are greatly influenced by the Amendment 80 allocations and cooperative program. Submissions of more specific data, however, are more costly for both the submitter and the collector. In any program a tradeoff must be made between the analytical benefits of more specific data and the costs of submission, collection, and management of those data.<sup>2</sup>

A system for ensuring compliance with data submission requirements and verification of data are necessary for any data collection program to provide reliable data for analyses. To ensure minimal compliance, both programs require submission of the data survey form and a signed certification for receipt of annual permits. Both programs will also use similar systems of audits for data verification. The audit systems will include both targeted audits and random audits. Targeted audits occur after identification of unexplainable outliers in data submissions. Data

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<sup>1</sup> The survey for Amendment 80 catcher processors is in the process of being finalized and may vary slightly from that attached.

<sup>2</sup> This trade off could also consider the intrusiveness of more detailed submissions. More aggregated data could be viewed as less intrusive and less likely to reveal data that could be considered confidential by some.

submissions will be reviewed annually to identify outliers. If outliers are discovered, the submitter will be contacted to confirm and explain the submission. If the submission is confirmed and cannot be explained, an audit may be conducted to verify the submission. Random audits will also be used to periodically verify data submissions. Throughout the audit processes submitters will be permitted to correct submission errors, if those errors are believed to be unintentional. The goal of these systems is to ensure data accuracy with minimal need for enforcement actions and without overburdening industry for unintentional errors.

A system for electronic data collection is under development for both the Amendment 80 and BSAI crab economic data programs. The system is being designed as a modular system to permit additional modules as economic data collection expands to other fisheries. Electronic data collection would further improve the efficiency of data verification, both by streamlining the data entry process and permitting the development of internal consistency checks within the database, which would provide error checks during the submission of the data report by participants.

It should be noted that the aforementioned programs focus extensively on costs, as opposed to revenues, because existing data collection sources (primarily fish tickets, COAR, and weekly production reports) neglect costs altogether. Similarly, future data collection initiatives should focus on the operating costs in order to avoid redundant reporting of sources of revenue. It is this lack of cost data that most directly limits the ability of analysts to calculate net benefits derived from fisheries and utilize many of the economic models available for quantitative analyses of fisheries management actions.

### **Persons included in data collection**

Among the first issues to be resolved once the Council considers development of a data collection program is defining the pool of persons required to submit data. As with other aspects of the program, the pool of persons required to submit data should be developed based on the Council's purpose.

The Council should consider whether to include all fisheries (i.e., all groundfish and scallop fisheries) in the program or only a subset of the fisheries under Council management. One rationale for undertaking this action was that currently only a few fisheries are subject to data collection. Participants in these fisheries believe that they have been unfairly singled out and burdened by the data collection programs. Aside from the equity considerations, inclusion of all fisheries in the program could provide improved information, simplify administration and

If the Council intends to improve its understanding of fisheries economic impacts and benefits through primary processing, data should be required of both harvesters and processors. Inclusion of the processing sector in the program should also facilitate some comparison of the offshore and shore-based sectors of the fisheries. Including shore-based processing in the program will provide improved understanding of impacts on remote Alaska communities in which fishing is one of the only industries. Currently, the Magnuson Stevens Act prohibits the collection of economic data from shore-based processors. Some drafts of the reauthorization would allow collection of data from processors. The inclusion of processors in the program could be considered pending passage of the reauthorization, realizing that permission for their inclusion would be required.

Assuming the Council intends to collect data from harvesters and processors, the Council will need to determine the specific sector members required to submit data. The Council could elect to require vessel and facility operators to submit data or persons holding permits (such as license and permit holders, and IFQ holders). Generally, the person with the best access to the data of interest should make the submission. Persons actively participating in the fisheries (i.e., vessel owners and plant owners) are most likely best situated to provide most of the data of interest.

Operators will have most of the expenditure information of interest, including employment and crew payment data, and equipment expenditures.

The Council could also include permit holders (such as IFQ holders or AFA vessel owners) that did not operate a vessel in the survey. Inclusion of these persons could be redundant, but could be useful to verify information submitted by vessel operators who leased shares. Similarly, persons who do not actively engage in processing, but employ the services of others for custom processing, could be included in surveys to verify information from plants that custom process on their behalf.

The Council should also consider whether all people covered by the data collection program should be required to submit data for every period covered. Requiring only a sample of people to respond during each survey period can reduce costs and burden to the industry. Effective sampling, however, can be complicated to administer and may be viewed as unfair. It is important that a sample be representative of the population from which it is drawn. In the case of fisheries with few participants (such as small trawl fisheries and non-cod fixed gear fisheries), a representative sample may require most participants to submit annual surveys. In addition, changes in participation from year-to-year could complicate efforts to maintain a representative sample. Requiring all participants to submit surveys responses could simplify administration of the program and might be viewed as a more equitable approach. Lastly, requiring submissions from all participants could lead to more accurate data in the long run. Requiring frequent submissions will result in submitters being more familiar and practiced in compiling data and completing the surveys and will provide additional opportunity for the collector to identify and work to correct inaccuracies.

### **Period covered by and frequency of any survey**

A few issues should be considered concerning the frequency and period covered by data submissions.

The time period covered by data submissions (and whether the survey should require historic data) should be considered. The crab program required the submission of historic data. In development of the data collection for Amendment 80, however, NOAA General Counsel expressed concern that the collection of historic (or retrospective) data could be beyond the authority of the Council. The rationale for this concern is that prior notice would be lacking for assembling historic data. The absence of historic data is problematic when implementing a data collection program to assess impacts of a simultaneous action, since baseline data would be unavailable. In the case of the independent development of a general data program, the collection of historic data is less important. The data will generally be used to assess fishery and management action economic impacts and effects. Historic data could be desirable for assessing the effects of past actions and could provide an extended period of data sooner, making the data more useful in the near term.

Additionally, the Council will need to consider the period covered by data submissions. In both the crab program and Amendment 80, data submissions are annual. Annual submissions could be favored as a means of reducing the burden, while retaining a reasonable periodicity for submissions. In addition, most other data available concerning fisheries are available and usually categorized on an annual basis. The collection of this economic data on an annual basis would likely simplify consolidation of the data with other submissions.

Along with the time period for submission of data, the Council will need to consider the periodicity of the data itself. Even if the Council elects for annual submissions of data, it could use a different time basis for the data, such as quarterly, or even trip or transaction. One advantage to quarterly data is that seasonal differences could be considered in analyses. For

example, seasonal changes in the presence of roe and fish quality or catch rates likely explain differences in fishing effort. These differences could be explored more completely, if seasonal (rather than annual) data are submitted. In addition, many other monitoring programs collect data at a higher temporal resolution, such as the weekly and trip level landings and revenue data collected through fish tickets and weekly processor reports. Matching the resolution of economic data to other data sources with which they would be combined in analysis would allow most efficient use of existing data. Frequency of data, however, may substantially affect the burden of the data collection program to both industry and administrators.

## **Information included in the survey**

Fishing revenues. Currently, the agency and analysts have reasonable sources of data for most sources of revenues. Collection of revenue data from fishing as apart of this action could be in the aggregate and would be used primarily for verification purposes and to assist analysts in combining data from various sources.

Revenues from sale of fishing privileges. Data showing revenues from trade of fishing privileges and licenses could be collected to fill gaps in the current data. These data are not comprehensively collected and would substantially aid analysts in understanding the production value of fisheries and the value of fishing privileges.

Ownership. In most fisheries, only data showing direct ownership are available. Given the corporate structures used to hold many fishery assets, these data are inadequate for assessing the consolidation of interests and activity in the fisheries. The collection of detailed ownership information as a part of this action would facilitate a better understanding of the level of consolidation in the industry and the distribution of benefits among fisheries participants.

Employment. Little employment data are available for fishing vessels. The absence of crew data prevents any comprehensive understanding of fisheries employment and compensation and the distribution of benefits to crew. In additional, the geographic distribution of impacts are not well understood, to the extent those impacts are derived through crew.

Costs. Cost data are largely unavailable for analyzing fishery benefits and impacts. The absence of these data prevents any quantitative assessment of the net benefits of fisheries to producers or the understanding of changes in production efficiencies under different management measures. Additionally, the distribution of benefits between the two major sectors (harvesters and processors) under different management structures cannot be well understood in the absence of these data.

Expenditures by location. Currently, little direct information concerning spending by location are available for the different fishery participants. These data are useful for examining the geographic distribution of impacts of actions. Neither the crab program nor the Amendment 80 data collection program collect these data. The added costs and complexity of submission, collection, and analysis of these data likely deterred the Council from including their collection in other actions.

Variation across sectors. Since data are likely to be collected from several different types of operations, data provision will need to differ across operations. Catcher vessel data will relate only to vessel and fishing activity and harvesting crew information, including some gear specific information, which is expected to vary somewhat across gear types. Catcher processors data will relate to the vessel and harvesting and processing. Information could vary somewhat across both gear types and production types.

## Uses of collected data

The introduction of a broad-based economic data collection program in the North Pacific fisheries has the potential to greatly expand the information available to the Council for understanding the economic impacts of its management decisions. Quantitative economic analyses are currently often limited to estimates of catch and revenue. While these are important contributors to the economic health of a fishery, a more fundamental concern is the economic efficiency of operations and whether a particular management decision or program threatens the economic viability of one or more sectors. In the absence of more detailed cost information, estimation of efficiency or economic health is not possible. Instead, analysts are left to rely on revenue data and inference for assessing the economic health of fishery participants. While these qualitative discussions can provide insight into the effects of actions, the more complete understanding of actions that could be derived using quantitative estimates is not possible.

In the current environment, the Council is faced not only with a limited understanding of economic conditions that could arise under proposed actions, but also a limited understanding of the existing economic conditions in its fisheries. A more in-depth understanding of the existing conditions is important to the Council's prioritization of actions and to assess the urgency with which it should operate. Existing conditions also are the foundation for understanding the potential impacts of an action.

Depending on the level of detail of data submitted, the Council could also use the data collection program to improve its understanding of the geographical distribution of impacts of its actions. Currently, geographic expenditure data from vessels in the various Council managed fisheries are unavailable. As with other aspects of analyses, these values cannot be quantified in current analyses. Analysts instead use other available data sources, such as municipal revenue data and tax data to surmise spending patterns. Improved expenditure data could substantially improve the Council's understanding of the impact of its fisheries on communities.

Perhaps most important, improved data are critical to the Council satisfying the regulatory requirement to analyze actions. Analyses are required to identify the likely attributable economic and welfare outcomes. Specifically, Executive Order 12866, under which the requirement to prepare a Regulatory Impact Review (RIR) arises, states:

In deciding whether and how to regulate, agencies should assess all costs and benefits of available regulatory alternatives, including the alternative of not regulating. Costs and benefits shall be understood to include both quantifiable measures (to the fullest extent that these can be usefully estimated) and qualitative measures of costs and benefits that are difficult to quantify, but nevertheless essential to consider. Further, in choosing among alternative regulatory approaches, agencies should select those approaches that maximize net benefits (including potential economic, environment, public health and safety, and other advantages; distributive impacts; and equity) unless a statute requires another regulatory approach.

The executive order shows a strong preference for the inclusion of any possible quantitative estimates over less precise qualitative estimates. Many of the analyses prepared for the Council cannot begin to quantify net benefits due to the unavailability of cost data. Distributive impacts are also important component of any RIR. An understanding of the distribution of impacts of actions is often limited by the availability of detailed cost data.

The Regulatory Flexibility Act requires analysts to quantify the effects of actions on 'small entities'. Current analyses suffer in two respects. First, ownership data are often limited for identifying small entities. Small fishing entities are defined using revenue thresholds. Often revenue data are available on a vessels basis, but determining whether entity level thresholds are



met requires combining data from commonly owned vessels. More complete ownership data could prove useful to these analyses. Second, without cost data analysts are unable to quantify the net benefits of actions to small entities. Not only are data unavailable for assessing net benefits in general, but specifically the any disproportionate impact of actions on small entities is unavailable. The lack of appreciation of the differences of effects across different size entities has frustrated analysts and some participants in the process.

Appendices 3 and 4 contain more technical descriptions of some of the uses that could be made of the various data proposed to be collected under this action.

## **Confidentiality**

Maintaining confidentiality of sensitive proprietary data is critical to the success of the data collection program. Since the data will be collected under the authority of the MSA, the substantial protections provided by the Act will be maintained for all data.

To protect the industry, before data are collected regulations must be established that protect the data from being released for reasons other than the purposes for which it was collected. Some members of the fishing industry have stated that in the past data have been provided to agencies on a voluntary basis. Those data were then forced to be released through court proceedings and used in lawsuits against the companies that provided the data. Because of such incidents, it is imperative that regulations preclude the data from being used by individuals that are not intended to have access to the data. Authorized agency staff from NMFS, ADF&G, and NPFMC are currently defined as the primary users of these data. Other users would include individuals that are contractors of the above agencies that are conducting research associated with the fisheries. AKFIN or PSMFC that are involved in maintaining and supplying data to other agencies. University faculty conducting research for one of the above agencies would also be envisioned as users that would be given access to these data. The release of these data outside of the primary users or for other purposes would be strictly regulated. Any third party contractor would be subject to the same confidentiality restrictions on the release and use of data as apply to primary users. Third party contractors are also typically required to return all data at the conclusion of the contract under which the data are released. NMFS has stated that protecting the confidentiality of the data will be one of its highest priorities.

## **Data verification**

Any analysis is only as reliable as its underlying data. Analysis of data collected as a part of this program will be useful for assessing the management changes of the program, only if the data are accurate. Regulations will be developed to ensure the accuracy of data provided. In past programs two systems of verification have been considered: audit processes and submission of independently audited financial statements. The audit process has been favored over submission of financial statements because it is likely to be less burdensome and intrusive, and more focused on the data that are collected. Annual submissions of audited financial statements or tax returns are likely to involve company information beyond the scope of data submitted, complicating and reducing their utility for data verification. In addition, financial statements could be revealing of aspects of a company that are beyond the purpose of the data collection. An audit process would be more informative since it would be focused on the data submitted and could be accomplished in a manner that is less intrusive and burdensome.

The audit systems included in other programs involve a combination of random and non-random audits. Non-random audits are undertaken after examining data for unexplainable outliers. Random audits are undertaken periodically for some portion of the data submitters. Industry members are provided an opportunity to correct data submissions, if errors are deemed to be

unintentional. The goal is create an incentive to supply accurate data while minimizing the burden on industry and the need for enforcement actions. Providing an opportunity to correct unintentional erroneous submissions is considered important because of the complexities associated with generating these data and the potential for unintended errors.

## **Enforcement**

Enforcement could occur at a few different stages in a data collection program. Failure to submit completed forms must be addressed. In both of the existing data programs issuance of annual permits are contingent upon the applicant's submission of the required economic data survey. If an applicant has failed to submit an economic data survey to NMFS, the application for an annual permit would be considered incomplete by NMFS and the applicant would not receive an annual permit. Until all requirements of the annual permit application are satisfied, including the submission of a economic data survey, the person would not receive an annual permit. If a person is required to submit an economic data survey and does not apply or re-apply for an annual permit, or provides fraudulent information, then NMFS Enforcement would be asked to proceed with a standard enforcement action. Enforcement would then use their discretion regarding the best method to achieve compliance. Those methods could include fines, permit sanctions, or criminal prosecution.

It is important to distinguish between an economic data survey that is "complete" versus one that is "accurate." A complete economic data survey is one that has information in all required information fields. As long as the survey is complete, NMFS would issue an annual permit because the submitter would have complied with the regulatory requirement to submit a complete economic data survey. Once NMFS has determined that the economic data survey is complete, NMFS would then determine whether the submitted information appears to be accurate.

Under the existing data collection programs, completed surveys are subject to verification through non-random and random audit processes. Non-random audits may be initiated when potential errors in the data are detected and the submitter is unable to submit additional data that adequately responds to identified concerns. A random audit would be initiated by NMFS to spot check the accuracy of information provided by the economic data surveys. A sampling methodology would be developed by NMFS to select those economic data surveys to be audited in a random audit process. Enforcement actions could be initiated based on the failure to reconcile data during the audit process. The objective of the audit process is not to be punitive; the demands of the process and the enforcement sanctions would be the minimized, subject to the need to maintain data integrity and accuracy.

## **Development of the data collection program**

Committees and industry workshops have been used to develop the existing data collection programs. These less formal means of interaction can serve a useful role in the development of the program since they allow a thorough exchange of detailed information and ideas not possible in other fora. As the Council proceeds with the development of a data collection program, the use of both the formal Council process together with these less formal interactions between industry and agency and Council staff may be useful. The Council does not need to specifically define all aspects of the program, but will need to provide sufficient detail to express its intent and to ensure that its intent is carried out. Staff interaction with industry can be used to ensure that surveys ask appropriate questions and derive useful information.

## **Conclusion**

The data collection program considered under this action has the potential to fill a void in data that analysts and managers have struggled with for some time. The regulatory analyses required for fisheries actions typically lack quantitative net benefit analyses due to the unavailability of cost information. In addition, our understanding of distributional impacts of actions often suffers because of these data shortfalls. Although the collection of data is a costly enterprise, the development of a single comprehensive program, applicable to most (if not all fleets) has the potential to reduce costs for both participants and administrators. In addition, the benefit of improved management should not be overlooked in considering whether to undertake this effort. The collection of these data has the potential to improve the ability of the Council to manage its fisheries to achieve the greatest benefits and equitably distribute those benefits.