

Agenda Item I-2  
February 1980

MEMORANDUM

DATE: February 4, 1980

TO: Council Members, Scientific & Statistical Committee and  
Advisory Panel

FROM: Jim H. Branson, Executive Director *JMB*

SUBJECT: A Proposal for the Expansion and Enhancement of the  
Alaska Commercial Fishery Catch Data Reporting System

ACTION REQUIRED

*Approval of Contract for funding, \$145,300.*

BACKGROUND

The Council has spent \$197,000 for Contract 78-4, to assist the State in their fisheries data collection and dissemination problem. This contract (\$145,300) proposes to finish what the first contract started, i.e., the development of the catch data reporting system.

A Contract Monitoring Committee recently met in Seattle (January 30, 1980) to review the new proposed contract. Additionally, a consultant was hired to review the report and meet with the Committee. Both the Committee and the consultant recommend funding the contract with the following modifications.

1. That the first task be modified to expand the detail of the PERT Chart, i.e., more clearly identify actual tasks and projects and their important time elements.
2. That the Contract Monitoring Committee schedule reviews with the contractor at at least two critical places:
  - (a) After the A.D.A.B.A.S. subcontract is complete; and
  - (b) before the subsystem report series is initiated.
3. That monthly reports be required.
4. That the contract run through 12/1/81 (instead of 6/1/81).

5. That the contract include a contingency and reevaluation clause for the funding, delivery and work for options 6, 7, 8 and 9 to either:

- (a) Modify the number of options that can be accomplished for the money and time remaining; or
- (b) request an amendment to the plan if more money were needed to complete the subsystem report series in total.

6. That the budget include the contribution of funding by the State; i.e., in-kind contributions or matching.

TO SUMMARIZE

*\$ 109K*  
Our first computer contract with ADF&G (for \$197,000) assisted in the development of their minicomputer-based catch data collection and processing system (to be finished April, 1980). This new contract builds on the first project and is designed to assist ADF&G (for \$145,300) in the development of a system to provide users with standard reference reports covering the entire range of fisheries, locations, time periods, and gear, and will also have the capability to extract and summarize specific subsets of data spanning several years. The system will have multi-media output capabilities.

A limited number of the proposals are available for those interested. The Finance Committee and the SSC have copies.

MIH

A PROPOSAL

for

THE EXPANSION AND ENHANCEMENT OF  
THE ALASKA COMMERCIAL FISHERIES  
CATCH DATA REPORTING SYSTEM

Submitted to

North Pacific Fishery Management Council

Prepared by: Don Wanie  
Alaska Department of Fish and Game  
Division of Commercial Fisheries  
Support Building  
Juneau, Alaska 99801

January 4, 1980

## INTRODUCTION

Before proposing a new fisheries information reporting system, a review of the current system, problems associated with its use, and alternative approaches to report system development is appropriate.

### Existing Report System

The present system generates a series of standard reports showing catch in numbers and pounds and effort in terms of the number of unique vessels and landings. Reports are available by virtually any combination of time, location, gear, and species. With one exception, these reports present information for a single year and are available for any year from 1969 to the present. The one exception is that reports which overlap a calendar year are available for shellfish.

Under the existing system, report requests submitted by Wednesday morning are generally satisfied by the following Monday. There are no computerized report files; for each unique report generated an annual master file must be read, data extracted, sorted, and the report printed. This procedure is consequently both time-consuming and costly, frequently requiring as much as an hour of computer time at a cost of about \$100.00 per hour. There are no other standard commercial fisheries catch reports available from the Department.

There are two special-purpose report subsystems. One creates annual report tables for the International North Pacific Fisheries Commission statistical yearbook and the other generates reports of Kodiak management area king crab catch by stock and zone. These subsystems are not production jobs and require manual modification and setup for each annual run.

### Problems and Limitations

The existing report system has many shortcomings. The more serious limitations are listed below.

Timeliness: Standard reports can be generated from completed historical files within, at most, eleven days of the date they are requested. Reports for current year data files can be provided in the same amount of time but have traditionally been of little value because of the several-month processing lag experienced in getting data into the file.

With funding support from the North Pacific Fishery Management Council (NPFMC) under contract 78-4, the Department is significantly reducing the file-building time lag. By mid-1980 when the project is complete, tickets can be processed at the regional level on a near daily basis and will be relayed to the central facility once each month. Current-year reports should then be available during the first week of each month and will reflect catch from most tickets received at the regional level by the end of the previous month.

Adequacy: The existing report system is inflexible. It is frequently necessary to request a voluminous report to receive the one or two pages of information

really needed. For example, to get the annual statewide catch of Pacific cod requires a report by month for all non-salmon and shellfish species for each region. A report approximately 100 pages long will be printed. From it the annual Pacific cod catch for each region can be extracted, the region totals summed and the statewide annual catch derived. To get the 1976 sockeye catch for statistical week 26 in Cook Inlet district 222-30 another long report is required, although only one figure is wanted.

In summary, the present system frequently generates, at substantial expense, far more information than is actually needed.

Confidentiality of Certain Reports: The fact that the existing system generates many reports which are classified confidential by State statutes and not available to non-Department personnel is a problem. Additionally, reports which cover large geographic areas and long time spans still include occasional single landings. In the past the Department has been somewhat lax in restricting such reports, but technically their release is in violation of the State's confidentiality statutes. Reports are not now but should be self-censoring.

Computer-Readable Output: Frequently there is a need to supply report print images or segments of a given master file on computer-readable magnetic tape. Such files can be processed on another computer and, if required, subsequent analysis can be performed. The existing system makes no provision for creation of computer readable output. Direct programmer involvement is always required.

## Proposal

This proposal introduces the initial framework of a flexible reporting system for Alaska's commercial fisheries catch statistics; one which will begin to provide decision makers in the State, the National Marine Fisheries Service, and the North Pacific Fishery Management Council with the catch information essential to effective fisheries management.

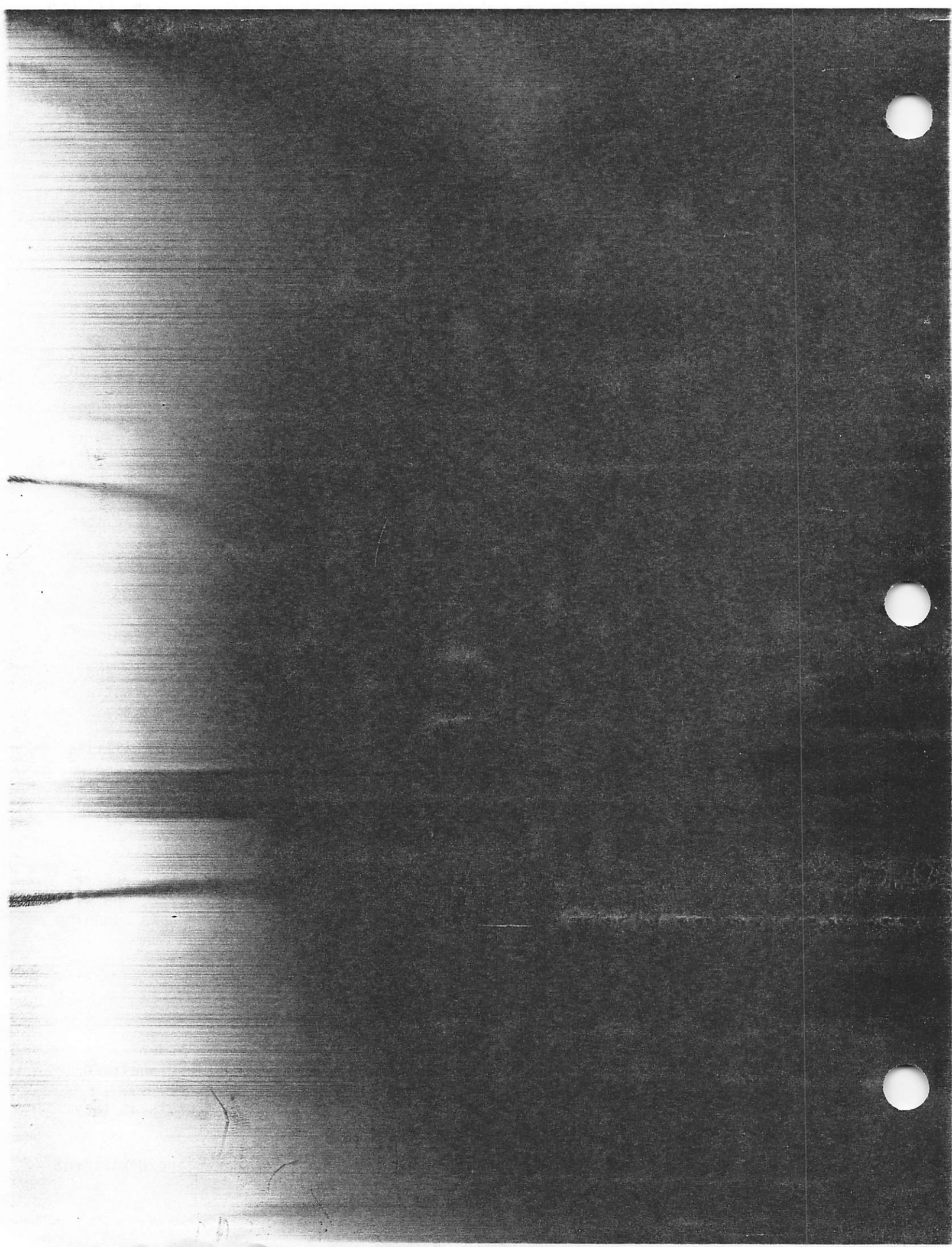
The reporting system proposed will provide greatly expanded reporting capabilities. The standard battery of reports will be expanded to cover virtually any meaningful combination of time period, location, gear, and species, and in addition the system will respond to very specific reporting requirements. Parameters supplied by the user will identify the time period, location, gear and species requirements of the report as well as the output medium and report format specifications.

In summary, the system proposed will provide users with standard reference reports covering the entire range of fisheries, locations, time periods, and gear, and will also have the capability to extract and summarize specific subsets of data spanning several years. The system will have multi-media output capabilities.

## Project Objectives

Using funds provided by the North Pacific Fishery Management Council under contract 78-4 and the State, the Department will have implemented a regionalized minicomputer-based catch data collection and processing system by April, 1980. With this new system, the Department will be able to process fish tickets as they are received, continuously maintaining an up-to-date catch file.

In order to realize the benefits of faster processing of catch data, the Department





proposes to develop and implement a flexible and responsive catch data reporting system to meet the information needs of fisheries managers for domestic catch summaries. This proposal requests funding for personal and contractual services to plan and implement this reporting system. The system proposed will retrieve and output specific catch data on computer-readable media, microfiche, and printed reports. It will not perform scientific or statistical analyses of information contained on the catch data base.

When implemented, the system will produce a library of historical catch reports, generate monthly groundfish catch summaries consistent with the reporting requirements of the National Marine Fisheries Service, and respond to ad hoc requests for comparative-year catch summaries and special-purpose requests for unique reports and computer-readable subsets of the data base. The increased accessibility of information will be an invaluable aid in the development and continued refinement of Council management plans.

The Department proposes to initiate this project on April 1, 1980. This date immediately follows the completion of contract 78-4 and the project is a logical continuation of that contract. This continuity will eliminate the need to redefine, establish and staff the positions which will be allocated to the project. The project will require fifteen calendar months and terminate on June 30, 1981.

Because the project is of substantial magnitude the Department recommends that a Contract Monitoring Committee be established to regularly review progress and provide assistance and direction in the event that unforeseen problems arise.

#### Statement of Work

Consistent with the provisions of contract 78-4, which dealt only with the preliminary processing of commercial catch data, the work described in this proposal is concerned only with the production of reports and the retrieval of current and historical catch data. The following is an outline of the proposed catch data reporting system:

1. Development of a library of highly flexible parameter-driven report programs designed to satisfy user information needs in three general categories.

A. A standard report series for a single year's data on printed, microfiche or computer-readable media, which meets user-specified requirements and is designed to be used as a catch data reference library;

B. Unique, single or multiple year special-purpose reports designed to meet specific needs and available on computer readable output or in standard printed format.

C. Current groundfish catch summaries designed to meet NMFS reporting requirements and available on printed output.

2. Standards

A. Catch to be output as numbers of fish, pounds, or both.

B. Counts of participating vessels or landings to be optional.

C. Catch numbers and pounds to be in thousands to one decimal place (i.e. nearest 100) on the reports.

*Why not  
Salmon*

D. A self-censoring capability to be available for all reports to insure the confidentiality of individual records.

E. Availability of any one of six standard report formats.

3. Maintenance of a magnetic tape file of final standard reports for each calendar year of historical data.

4. Establishment of a request processing schedule to satisfy written requests fitting one of the three reporting schemes within 24 hours after receipt.

### Project Control

The project PERT chart on page 6 shows the primary events and activities of this project. The following is a summarized list of those activities and events to take place during the course of the project:

#### Activities:

- A. Hire project staff
- B. Issue subcontract for file analysis and design
- C. Edit data files
- D. Establish data files
- E. Develop standard report series programs
- F. Develop multi-year summary report program
- G. Develop parameter-driven special report generator program
- H. Develop groundfish catch report program
- I. Compile user and technical documentation

#### Events

1. Project staff hired
2. File design complete
3. Files edited
4. Files established
5. Standard report series complete
6. Multi-year summary report program complete
7. Special purpose report program complete
8. Groundfish report program complete
9. User and technical documentation complete

### Project Schedule and Deliverables

Successful completion of the activities and occurrence of the events displayed on the generalized project PERT chart and summarized in the previous section are the deliverables of this project. The Department proposes that progress be measured relative to these deliverables and will submit monthly progress reports to the council.



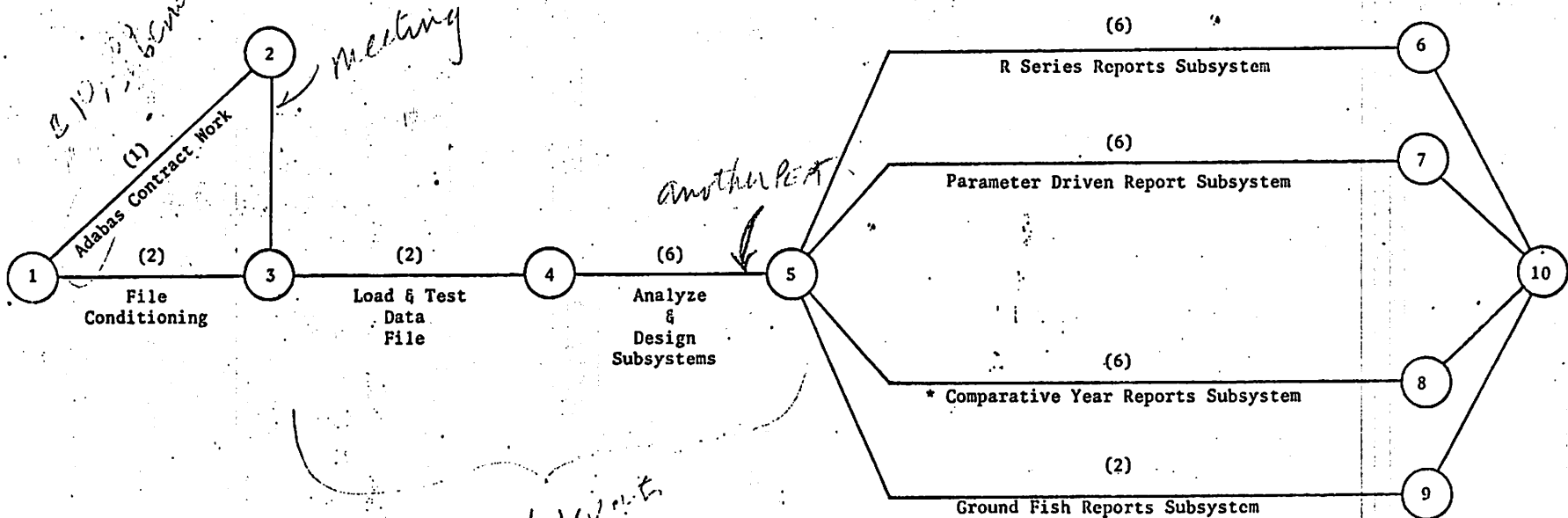
Budget (in \$1000's)

Personal Services	107.0
Travel	1.5
Contractual	
Computer Terminals (2)	13.6
File Design Subcontract	10.0
Overhead	<u>13.2</u>
TOTAL	145.3

These figures show only the costs for personnel hired with Council Funds. As its contribution, the Department intends to allocate two staff members on a part time basis. The computer services section head will direct the project. The section's systems analyst will participate in project systems design and will monitor programmer progress during implementation.

*Don Wamie*

COMMERCIAL FISHERIES  
CATCH DATA REPORTS  
PERT CHART



4/1/80

CR

Time Estimates Are In Man Months

\* Note: Comparative Year Subsystem Must be Overlapped With One of the Tasks Above In Order for the Project to Complete on Time

6/30/81

EVENTS	TIME ESTIMATES		
		EXPECTED	ACTUAL
1. Start (4/1/80)	A. Design Data Base	1. Elapsed month	
2. ADABAS Contract Work Complete	B. Condition History File	2. Man-Months	
3. History File Condition Complete	C. Load & Test Data Base File	2. "	
4. Load & Testing Data Base File Complete	D. Analyze & Design System	6 "	
5. Systems Analysis & Design	E. Code, Checkout R Series Prgm	6 "	
6. Standard R Series Reports Program Complete	F. Code, Checkout Comp YR Prgm	6 "	
7. Multi-year Program Complete	G. Code, Checkout Para Drive Prgm	6 "	
8. Groundfish Program Complete	H. Code, Checkout Groundfish Prgm	2 "	
10. Finish (6/30/81)			

5

MILESTONES

DATA BASE FILE DESIGNED

HISTORY FILE CONDITIONED

DATA BASE FILE LOADED &  
TESTED

SYSTEMS ANALYZED &  
DESIGNED

1  
8  
STANDARD R SERIES REPORTS  
CAPABILITY

MULTI-YEAR REPORTS  
CAPABILITY

PARAMETER-DRIVEN REPORTS  
CAPABILITY

GROUND FISH REPORTS  
CAPABILITY

4/1/80

5/1/80

6/1/80

9/1/80

4/1/81

7/1/81

Feb. 1980

# North Pacific Fishery Management Council

Clement V. Tillion, Chairman  
Jim H. Branson, Executive Director

Mailing Address: P.O. Box 3136DT  
Anchorage, Alaska 99510

Suite 32, 333 West 4th Avenue  
Post Office Mall Building



Telephone: (907) 274-4563  
FTS 265-5435

TO: Contract Monitoring Committee,  
 ✓ Dr. Murray Hayes *Called*  
 ✓ Dr. Donald Bevan *Called*  
 ✓ Dr. John Harville *Called*  
 ✓ Mr. Chuck Woelke  
 ✓ Mr. Jack Robinson/Larry Hreha *Called*  
 ✓ Mr. Guy Thornburgh *Called*  
 ✓ Mr. Clarence Pautzke *Called*  
 ✓ Mr. Don Wanie *Called*

FROM: *Mark* Mark Hutton, Assistant Executive Director

DATE: January 16, 1980

SUBJECT: A PROPOSAL FOR THE EXPANSION AND ENHANCEMENT OF THE  
ALASKA COMMERCIAL FISHERIES CATCH DATA REPORTING SYSTEM

I received on January 10, 1980 a proposal from Don Wanie, Alaska Department of Fish & Game entitled "The Expansion and Enhancement of the Alaska Commercial Fisheries Catch Data Reporting System." Subsequent to that I sent the proposal and all of the background reports to Robert Gillespie for his review and comment. Both my letter to Mr. Gillespie and the proposal are attached.

There is not much time to review the proposal, review Bob Gillespie's report and make necessary changes before the February 7 and 8 Council Meeting (our first deadline). I propose we meet in Seattle around January 29, 30, or 31 for one half day to discuss amongst ourselves, Bob Gillespie, and the principal investigator the proposal. If the results of that meeting are favorable we will propose the contract to the Scientific & Statistical Committee and the Finance Committee for approval the following week during the Council meeting.

I would appreciate hearing from you regarding the proposed meeting in Seattle and any comments you may have on the proposal.

Attachments

# STATE OF ALASKA

## DEPARTMENT OF FISH AND GAME

OFFICE OF THE COMMISSIONER

JAY S. HAMMOND, GOVERNOR

SUPPORT BUILDING  
JUNEAU 99801

January 4, 1980

Mr. Mark I. Hutton  
Assistant Executive Director  
North Pacific Fishery Management Council  
P.O. Box 3136 DT  
Anchorage, AK 99510

Dear Mark:

Enclosed is our proposal for a new catch data reporting system to be developed by the Alaska Department of Fish and Game. The proposal is essentially a refinement of the information provided in our preliminary proposal of September 14, 1979. The deliverables proposed are the same as discussed in the September proposal but have been presented in a more generalized and readily readable form. I have attempted to present the proposal in a format which closely resembles the amended Contract 78-4 in an effort to simplify your task of actually writing the contract.

The new proposal differs significantly from the original in one respect. We are now giving strong consideration to developing a report system which will access an on-line file rather than magnetic tape based files as we had originally suggested.

As evidenced by our continuing problems with establishing and staffing a systems analyst position, restaffing positions funded under a new contract and all the attendant bureaucratic and paperwork problems are of concern to us. These problems can be largely avoided if funding for a new contract is approved and available to us by the end of March when contract 78-4 terminates. With funding available, we could retain the same people and positions we are using on contract 78-4. I'm mentioning this only because I believe it is in the best interest of the Department as well as the Council to develop the proposed reporting system using employees who already have an intimate knowledge of the subject matter.

I am looking forward to hearing from you in the near future if you have any further questions regarding this proposal.

Thank you.

Sincerely,

*Don Wanie*

Don Wanie, Supervisor  
Computer Services  
Division of Commercial Fisheries.



# North Pacific Fishery Management Council

Clement V. Tillion, Chairman  
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January 14, 1980

Mr. Bob Gillespie  
280-A Administration Building  
AG-75  
University of Washington  
Seattle, WA 98115

Dear Bob,

We are currently reviewing a proposal from Mr. Don Wanie of the Alaska Department of Fish & Game to develop the second phase in our computer contract with the State for "The Development and Enhancement of a Computerized Fishery Information System."

If you are still interested--as you indicated on the phone-- we would like to retain you to review the proposal and provide answers for the following questions:

1. Can the contractor accomplish the goals and objectives of the contract for phase II for the time and money allotted in their proposal?
2. Are the statements of work sufficient to reach the goals and objectives of the new proposal?
3. Are the statements of work and the PERT Chart sufficient to systematically track the progress of the contractor?

We have little time to review this proposal. We must have your comments and those of the contract monitoring committee before February 7th and 8th, 1980. I believe Dr. Bevan has kept you abreast of the progress of the original contract. I am enclosing, therefore, only a copy of the new

proposal, as well as progress reports from the original contract since the time of your involvement. If you are interested, I would appreciate a telephone call at your earliest convenience to resolve the matter of money and time.

With best wishes for the New Year.

Sincerely,

Mark I. Hutton  
Assistant Executive Director

Enclosures

Progress Reports 1 through 6  
Phase II Proposal

MIH

cc: Contract Monitoring Committee  
Dr. Murray Hayes  
Dr. Donald Bevan  
Dr. John Harville  
Mr. Chuck Woelke  
Mr. Jack Robinson  
Mr. Guy Thornburgh  
Mr. Keith Specking  
Mr. Don Wanie