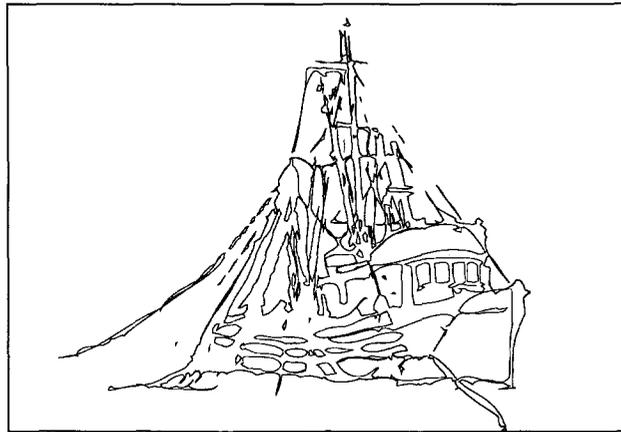

REPORTING POLICIES AND PROCEDURES FOR THE DIVISION OF COMMERCIAL FISHERIES

Interim Copy of the
Third Edition



SPECIAL PUBLICATION NO. 3

Alaska Department of Fish and Game
Division of Commercial Fisheries
Juneau, Alaska

October 1992

State of Alaska
Walter J. Hickel, Governor

Editor's Note

Reports and publications reflect the agency producing them, archive advancements in management practices, and establish the historical database so critical to effective management today and tomorrow. Equally important, publications are a yardstick of a biologist's professional achievements and a permanent record of his or her contributions to science.

It is surprising then that some biologists may spend years of arduous effort collecting data and subsequently sweat through a tedium of computerized analyses, only to hastily write up the findings with little organizational thought or planning, inadequate attention to detail, and general impatience in developing good prose. Even worse, some fail to publish their results at all or may totally abandon a reviewed manuscript.

Perhaps the rigors of our technical training and experience have left too little room to study the science of effective written communication, a shortcoming that may leave some authors feeling uncomfortable preparing a scientific paper. The preparation of a manuscript, however, provides an opportunity to expand education—a chance to practice and perfect writing dexterity.

In that regard, authors have from time to time suggested to me that the review process infringes upon the development of their personal writing style. This editor welcomes writing that is fresh, crisp, and original and that lightens reading tedium. But, if efforts to write uniquely or with flair compromise clarity or become wordy or pedantic, I will always edit towards succinctness, simplicity, and lucidity. More often, however, I have found manuscripts to be needlessly monotonous and laborious; here too, succinctness and simplicity will shorten and ease the pain of reading even the driest subjects.

An editor is primarily responsible to the readers and will attempt to detect problems that could cause reader confusion, provoke misunderstanding, or make the paper awkward or unpleasant to read. However, the editor also serves an advocacy role for the author and will work with the author to get the most mileage possible out of the publication. Therefore, authors who perceive the review process as a contest of wills may ultimately fall short of publication potentials, whereas those who exploit reviews rather than admonish them will benefit the most.

My experience, after refereeing hundreds of manuscripts, supports the truism that we are generally much better at detecting weaknesses in others' writing than in finding flaws in our own. True to its purpose, reviewer anonymity sponsors honest and forthright critiques. Sometimes these are expressed in a tone that may seem painfully blunt, righteous, or condescending; in addition, reviewers may err in their advice or offer inept revisions. Editors may similarly contribute to these problems or fail to detect, remove, or soften a reviewer's antagonistic hyperbole. Therefore, authors may occasionally be insulted or ill-served in a review, but this should not be construed to mean that the review process should be abandoned. Like our judicial system, the review process is not perfect but no better processes have been proposed.

—Robert Wilbur

**REPORTING POLICIES AND PROCEDURES FOR THE
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by

Robert L. Wilbur

Marwood D. Harris

Phillip R. Rigby

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FOREWORD

This manual represents our continuing efforts to maintain high reporting standards and timely and accurate reporting of resource information collected by the Division of Commercial Fisheries. The manual further reflects contemporary publication trends within the fishery profession.

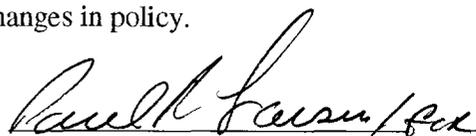
The first reporting manual for the Division of Commercial Fisheries was primarily a style guide for divisional reports. Authored by Michele Joubert and June Grant, it followed a similar manual prepared in 1980 for the Fisheries Rehabilitation, Enhancement and Development Division by Mark Kissel, J. S. Holland, and Janis Helton. Thanks to their initial efforts, reporting manuals have been developed by most of the department's divisions and report quality has improved tremendously.

The Division of Commercial Fisheries' second reporting manual was drafted in 1987 by Robert Wilbur and Phil Rigby, but staff throughout the division contributed significantly, especially Phil Mundy, Gary Gunstrom, Chuck Meacham, Larry Buklis, and Dana Schmidt. The manual was completely reorganized and, unlike the first manual, included reporting policies and procedures that explained the division's new peer review process, formally established and defined the division's new report series, and delineated reporting goals and expectations.

This third edition of the division's Reporting Policies and Procedures Manual updates the policies section and presents revised and expanded explanations in the conventions and formatting sections. In addition, the word-usage appendices were deleted; they became the basis for the *Department of Fish and Game Writing Standards*, a new manual oriented largely towards standardizing word usage among all the divisions in the department. These two manuals now form the current standards for the division's reports and publications.

The reporting policies and procedures in Part I of this manual formally establish reporting expectations and protocols for the Division of Commercial Fisheries. These, along with the various conventions and word processing instructions covered in Parts II through IV, should be used by all those involved in manuscript preparations. Authors are ultimately responsible for producing manuscripts that conform to all sections of the manual, whereas those responsible for word processing and page layout, conducting manuscript reviews, and coordinating the reporting process primarily serve to assist the authors.

This manual will be periodically updated to keep the division current with the reporting trends in the fisheries profession and with advances in publication technologies, or with necessary changes in policy.



Robert Clasby, Acting Director,
Division of Commercial Fisheries

10/1/92
Date

CONTENTS

PART I – REPORTING POLICIES

1. MISSION STATEMENT	1
2. REPORTING POLICIES	1
3. POLICY EXPLANATIONS	2
Publication Series	2
Review Process	3
Acceptability of Manuscripts	4
Distributing Draft Manuscripts	5
Associate Editors	7
Duplicative Publishing	7
Authorship	7
Catalogs and Files	8

PART II – SERIES DESCRIPTIONS AND REQUIREMENTS

4. REGIONAL INFORMATION REPORTS	9
Distinguishing Features	9
General Requirements	10
Other Information	11
5. TECHNICAL FISHERY REPORTS	13
Distinguishing Features	13
General Requirements	13
Other Information	14
6. FISHERY RESEARCH BULLETINS	14
Distinguishing Features	14
General Requirements	14
Other Information	15
7. PROFESSIONAL PAPERS	15
Distinguishing Features	15
General Requirements	16
Other Information	16
8. SPECIAL PUBLICATION SERIES	16

PART III – PREPARING A MANUSCRIPT

9. REPORT COMPONENTS	17
Title	17
The Acknowledgments And Foreword	17
The Abstract	17
The Introduction	18
The Methods Section	18
The Results Section	18
The Discussion Section	19
The Conclusions And Recommendations Sections	19
The Literature Cited Section	20
Nonstandard Report Organization	20
10. STYLE CONVENTIONS	20
Abbreviations	20
Age Reporting	21
Appendix	21
Copyright Permission	21
Dates, Time, Units Of Measurement	21
Figures	22
Footnotes	22
Italics	22
Literature Citations	22
Nomenclature	25
Numbers And Equations	25
Parentheses	26
Statistical Findings	26
Tables	26
Tense	27
Terms Developed By Others	27

PART IV – WORD PROCESSING GUIDELINES

11. DOCUMENT SETUP FOR TFR & FRB	29
12. SECTION FORMATTING	30

PART I – REPORTING POLICIES

1. MISSION STATEMENT

Scientific publications are the building blocks of science. Not only do they form the permanent scientific foundation upon which new research is constructed, but they are the tools enabling new findings to be authenticated by fellow scientists. The 1974 Federal Council of Science and Technology developed current government policy stating, “The publication of research results is an essential part of science.” Without publications, research findings would not be distributed to those who need them, and authentication of results would be greatly hampered. Staff within the department and other agencies would not have the information they need to manage the resource. Regulatory boards would be unable to make informed decisions. Our ability to communicate our research for others to scrutinize and understand is a critical element in establishing our credibility and developing the support of our sister agencies. Poorly presented publications would damage how the division is perceived by those agencies and diminish our ability, both individually and as an agency, to influence decisions that affect the resources we manage.

Consequently, as our mission, divisional publications and reports will achieve the highest possible quality and accuracy, and our findings will be made available in a timely manner to those who need them.

2. REPORTING POLICIES

To accomplish the mission stated above the following policy statements establish the division’s reporting and publication policy:

- (1) All information collected at state expense will be reported in a coherent manner within a reasonable period following its collection, and all reports prepared by division staff shall be submitted as a contribution to one of the division’s report series (see Section 3.1).
- (2) All manuscripts entering one of the division’s statewide publication series will undergo formal scientific review to enhance accuracy, lucidity, and completeness; all unpublished reports will be included in a regional series subjected to regional review (see Section 3.2).
- (3) The Editor is responsible for the form and structure of the division’s scientific publications and will select for publication only those manuscripts that achieve high scientific standards (see Sections 3.2– 3.8).

- (4) All divisional manuscripts prepared using state resources, including external publications co-authored with nondepartmental staff, must be approved by the director, or his designee, prior to general distribution or submittal to an external publishing source (see Sections 3.2 and 3.7).
- (5) To protect the integrity of the scientific review process, all draft manuscripts and scientific reviews will be confidential unless otherwise allowed by the Director (see Section 3.4); the Editor will work with the authors to correct review problems.
- (6) Manuscripts submitted for divisional review that are suitable for external publication will be recommended for publication in journals or other appropriate sources, and the author will be given divisional support.
- (7) The Regional Research Biologists/Supervisors (or equivalent position) and the Scientific Program Manager will serve as Associate Editors to assist the Editor resolve problems, develop needed policy, and maintain high standards for the division's reports and publications (see Section 3.5).
- (8) Authors will be responsible for original through final manuscript preparations according to guidelines established in this manual. All manuscripts must be submitted in *WordPerfect*.
- (9) Manuscripts will be published in only one series (see Section 3.6); the Editor will determine the appropriate series for a manuscript based on its compatibility with the series definitions and criteria established in Section 3.2.
- (10) To promote professionalism and ensure proper credit for project work performed, guidelines in this manual for authorship and acknowledgments will be closely followed (see Section 3.7).
- (11) All reports or publications subjected to desktop publishing will be prepared using Ventura (note: the publications technicians, not the authors, are responsible for desktop publishing).
- (12) Electronic catalogs will be maintained for each report series to facilitate timely and thorough information retrieval (see Section 3.8).

3. POLICY EXPLANATIONS

3.1 PUBLICATION SERIES

All reports prepared by division staff and supported by the division shall be submitted as a contribution to one of five series: Regional Information Reports (RIRs), Technical Fishery Reports (TFRs), Fishery Research Bulletins (FRBs), Special Publications (SPs), and Professional Papers (PPs). The identifying characteristics and manuscript preparation guidelines for each report series are described in Sections 4 to 8. A few publications (e.g., regulation books, special reprints of theses/dissertations, etc.) as well as general correspondence, meeting minutes, trip reports and other written materials identified by the Director may not be included in the above series.

3.2 REVIEW PROCESS

The mission for the scientific review process is to eliminate bad science and publish good science in a form that is accurate and well written. Errors and unsound scientific practices must be uncovered during review because even minor mistakes may discredit valid and important findings and conclusions. Eliminating errors before a manuscript is published not only saves the author potential embarrassment, but protects the department's stature and ability to influence important resource decisions (also, see Editor's Note on inside cover leaf).

3.2.1 Regional Information Reports:

RIRs will undergo regional reviews coordinated by the Regional Research Biologist/Supervisor(s), or Associate Editor (see Section 3.5). In cases where time is limited, only cursory review may be possible; reports to be widely distributed shall be more judiciously reviewed.

3.2.2 Statewide Publication Series:

The statewide publications (series other than RIRs) will undergo formal scientific review by peers and the division's Editor. Peer reviews will be coordinated, refereed, and, if necessary, streamlined on a case-by-case basis by the Editor.

Those questions of style and usage in a gray area where several or more options exist, or otherwise unresolved by this manual, will be decided by the Editor. The Editor will also determine when a manuscript is ready for peer review; if it is not, he will return it to the author(s) and note the problems to be corrected.

Any professional associates within or outside the department whom the author wishes to have review his manuscript should be requested directly by the author. Resulting changes, along with any resulting from the regional review, must be completed before the manuscript is submitted to the Editor for formal scientific review.

At the Editor's discretion some reports, especially annual iterations of the same report, may be exempted from peer review and undergo editorial review only; otherwise all statewide publications will undergo formal scientific review, a process that includes the following chronology.

- (1) A review will be assigned to staff based on the need to balance the review burden between regions and headquarters according to the relative numbers of professional staff available. Most manuscripts will be assigned one reviewer, except that Fishery Research Bulletins will be assigned two reviewers. At the Editor's discretion, reviews outside the division or the department may be solicited, especially for highly technical or specialized manuscripts.
- (2) The Regional Research Biologist/Supervisor(s) will be asked by the Editor to select a reviewer from suitable candidates within the region, taking into account the candidates' past review assignments, relative qualifications, and current work load, and the need to balance assignments as equitably as possible between the staff.
- (3) The selected reviewer will receive written notice of the assignment and will be allowed a reasonable period to complete the review. If the assignment or deadline creates significant problems, the reviewer should immediately discuss the situation with the Regional Research Biologist/Supervisor(s) who will inform the Editor of

any resulting changes or adjustments. Reviewer identity will not be revealed to the author(s) unless requested by the reviewer. However, anonymity cannot be completely guaranteed because handwritten comments, word usage, and the reviewer's knowledge as expressed by his comments may sometimes reveal a reviewer's identity.

Each reviewer shall follow the review guidelines explained on the back side of the review request form and meet the review deadline stated in the cover memo. In addition, reviewers are expected to be thorough, constructive, and fair in their comments and avoid derogatory criticism.

- (4) Generally, an author(s) should allow 2-3 months between manuscript submission to headquarters and the receipt of the peer/editorial comments. The Editor will, before returning the comments to the author, review the manuscript, screen the comments for potential conflicts or misdirection, and note any necessary corrections or explanations to the reviewer's comments. If a recommendation not to publish a report is made, the Editor will solicit the opinion of the Associate Editor(s) or other staff before acting on the recommendation.
- (5) Authors receiving review comments should allow a day or two between reviewing the comments and reworking the manuscript because initial reactions to comments may be more subjective than objective. Although a reviewer's comments may sometimes be technically inappropriate or incorrect, they may indicate reader confusion requiring increased clarity or explanation.

Authors having significant problems with reviewer comments should discuss them with the Editor. Authors should submit, to the Editor, written rebuttals to significant or substantive comments not incorporated into their revisions. (This is consistent with the *CBE Style Manual*.)

- (6) The only significant changes made in a manuscript after it has entered the formal review process should be those resulting from the review comments. If other significant changes are made, the Editor should be informed of those changes; minor changes should simply be flagged in the final draft. If necessary, the Editor will instigate peer review of the new materials. If a recommendation not to publish a report is made, the Editor will solicit the opinion of the Associate Editor(s) or other staff before acting on the recommendation.

3.3 ACCEPTABILITY OF MANUSCRIPTS

Manuscripts submitted for inclusion in one of the statewide series will be accepted for publication if the Editor determines that the manuscript is generally compatible with department and division standards, contains information appropriate for the intended series, and is accurate, scientifically sound, and generally well written. Manuscripts that do not meet these criteria may be assigned to a lesser series or may be held in draft status (see Section 3.4) until the problems can be corrected.

3.4 DISTRIBUTING DRAFT MANUSCRIPTS

3.4.1 Draft Manuscripts Under Review

Any manuscript undergoing scientific review is considered to be in **draft status**; i.e., both the manuscript and the review materials will be confidential. This is necessary to protect the integrity of the scientific review process. Premature release of reviews or draft papers could lead to poorly informed judgments and opinions which could, in turn, create pressures on the author. Such external influences could potentially compromise or corrupt the outcome of the final publication.

The peer reviewer(s), editor, and author must have the opportunity to thoroughly air and fully resolve questions about manuscripts without external interference. Therefore, all manuscripts in draft status will be treated as follows:

- Neither the review nor the draft manuscript will be released to the public without the Director's approval.
- Reviews should be sent only to the Editor who will referee final resolution of the review with the author.
- Any public requests for reviews or draft-status manuscripts shall be referred to the Editor who will inform the author and Director.
- A review that is released to the public will be anonymous unless the individual preparing that review approves the release of his/her name.

If time constraints are a problem for a draft-status manuscript, the manuscript will be put on a fast-track review that will be completed in time to enable its target-date distribution in final form. If this is not feasible, the Director may allow distribution of a draft under one of two alternatives:

Option 1: The cover should include a draft note: e.g., "Fishery Research Bulletin Draft¹ No. ____." The Editor will assign the draft number. The footnote should indicate that the report should not be cited until it is available in final form. The draft number and footnote must appear on all distributed copies. This will satisfy information distribution for ad hoc groups that need it, but it will flag the fact that the reporting requirement has not yet been satisfied. Concurrently, it will thwart inappropriate citation of the report.

Option 2: Federal aid reports have tight production deadlines, as well as constraints against submitting "drafts" in satisfaction of contract requirements. Draft reports may be submitted to the federal aid contractor with a special cover page that appropriately indicates that the report is the final report for the contract. The report should not be distributed elsewhere. The draft will subsequently undergo the formal review process and be published in one of the division's series.

3.4.2 Post-Publication Critiques

This section is undergoing final review
and will be added in the final edition

This section is undergoing final review
and will be added in the final edition

3.5 ASSOCIATE EDITORS

The Regional Research Biologist/Supervisor(s) and the Scientific Program Manager will serve as Associate Editors; they will work with the Editor to coordinate the peer review process in their regions, to develop publication policies for implementation by the Director, and to identify and resolve reporting problems and procedures.

In addition, the Regional Research Biologist/Supervisor(s) and Editor have authority to (1) assign management, research, or biometric staff within their region to conduct peer reviews, (2) instigate regional reviews deemed necessary before a manuscript is submitted to the Editor for processing, (3) manage their regional report series, and (4) assist authors with reporting.

3.6 DUPLICATIVE PUBLISHING

A *manuscript* will be published in only one series; the Editor will determine the appropriate series based on its compatibility with the series definitions and criteria established in Sections 4–8.

Publishing the same *data* twice in different manuscripts will not be allowed, except (1) an FRB may synthesize and analyze data presented in several or more TFRs or RIRs, (2) large sets of raw or basic data may be presented in an RIR and then summarized in a TFR which cites the regional report for the source data (note: this method is recommended when the raw data is more than 100 pages), (3) previously published information may be republished when mixed with new unpublished results that increase the scope of the findings or lead to different conclusions, and (4) other special situations approved by the Editor.

3.7 AUTHORSHIP

The FRB series will be open to authors outside the division or the department; however, articles should be pertinent to Alaskan fisheries. Division staff who are junior authors of a Professional Publication (i.e., any publication source outside of the divisional series) having a senior author that is not a division employee, will still need to submit the manuscript for divisional review as required in Section 7.2.

In the past we have had a rather poorly defined and loosely followed authorship policy. In some cases authorship has been deserved, in other cases it has not. The Institute of Medicine and Council of Biological Editors criteria to determine authorship will be followed in determining those who qualify as authors of our divisional publications. Accordingly, at least two of the following criteria must be met for an individual to qualify as an author:

- Conception of the idea and/or design of the project
- Conducting the field or experimental work
- Analysis and interpretation of the data
- Actual writing of the report or major parts of the report

The Editor will consult with the senior author to ensure that these criteria are met. Coworkers who meet only one of the criteria should be credited in the acknowledgments; conversely, coworkers who meet at least two criteria should be included as coauthors. However, the primary author must have a coworker's approval before that individual is included as a coauthor or cited in the acknowledgments.

In some cases, a reviewer should be included as an author. His or her review, however, must substantially alter the content of the manuscript—not just revise the writing. Substantive content alterations might include revised or additional analyses or the inclusion of important new information or data. Changes must be more than just suggested: The reviewer should actually carry out or implement the suggestion(s) after consulting the editor and author.

When there are two or more authors it is important to resolve senior authorship at the onset of project planning. The primary or senior author (first name listed) should be the individual primarily responsible for conceiving, conceptualizing, and planning the project. The senior author is also primarily responsible for interpretation of the data. He or she **may** or **may not** write the manuscript, but if not, he or she usually directs the writing and plays a key role in revisions. Whether s/he actually collects the data is **not** particularly important, but the data is usually collected under the provisions s/he initially conceptualized.

Many of our projects involve research teams with individual members of the team heading up different aspects of the project. In these situations, supervisors must carefully consider whether their role actually meets the above test for senior authorship; i.e., supervisors do not have senior authorship rights to data collected by a subordinate if the subordinate actually qualifies as the senior author.

3.8 CATALOGS AND FILES

A computer database filing system for all series will be maintained by the Editor. The system will provide search capabilities based on region, area, author, year, or key words pertaining to content. Draft manuscripts will also be tracked until they are published using computer software. Summarial reports will be generated periodically and copies will be sent to interested headquarters and regional staff.

A copy of each RIR should be maintained in the area office where the report originated, at the regional office, and in the headquarters library. Hard copies of all statewide publications will be maintained in the Commercial Fisheries headquarters files and at the library.

PART II – SERIES DESCRIPTIONS AND REQUIREMENTS

4. REGIONAL INFORMATION REPORTS

The Regional Information Report (RIR) series was initiated in 1987. Although some RIRs may be widely distributed, they are not considered to be divisional publications because they do not receive formal editorial and peer review—rather only a limited regional review. The RIR series was initiated to ensure that all unpublished divisional reports are cataloged and recorded for future reference and to effect appropriate review. The series is divided into five sub-series: one for each of the four regions and one for headquarters. The Editor coordinates the overall reporting standards and format for this series so that consistency is achieved between sub-series.

4.1 DISTINGUISHING FEATURES

RIRs often serve short-term, interim needs for information and are frequently used to exchange recently collected information within the department or with other agencies, regulatory bodies, or the fishing industry. Reports in this series may contain raw data and preliminary results and may not fit the “scientific publication” stereotype of the other series. RIRs include, but are not limited to, the following:

- Board of Fisheries, North Pacific Fishery Management Council (NPFMC), and Legislative reports
- Season summaries, area management reports

The following annual management reports are to be published each year, generally in March or April, under the RIR series:

Southeast Alaska Region	
Regionwide	Salmon and Herring Shellfish and Groundfish
Central Region	
PWS/CR	Salmon and Herring
Upper Cook Inlet	Salmon and Herring
Lower Cook Inlet	Salmon and Herring
Bristol Bay	Salmon and Herring
Prince William Sound	Shellfish and Groundfish
Cook Inlet	Shellfish and Groundfish

Arctic-Yukon-Kuskokwim

Kuskokwim	Salmon and Herring
Yukon	Salmon and Herring
Norton Sound/Kotzebue	Salmon, Herring, Shellfish

Westward Region

Kodiak	Salmon and Herring
Chignik	Salmon and Herring
Ak. Peninsula/Aleutian Islands	Salmon and Herring
Kodiak/Chignik/Peninsula	Shellfish
Bering Sea/Aleutian Islands	Shellfish

- Management plans and documentation of management strategies
- Observer reports (Note: some observer reports may be published as other than RIRs when they clearly belong in other series and confidentiality is not a problem. Most, however, will be RIRs, especially those in which confidentiality prevents public release of the report—see *confidential reports* below.)
- Confidential reports (see Section 4.2)
- Forecasts (Note: forecasts primarily concerned with forecasting the fishery should be RIRs; manuscripts evaluating forecast accuracy and methods or developing more precise forecasting belong in other series.)
- Interim research reports (that is, those interim research reports that are just updates rather than presentations of annual baseline data sets)
- Issue papers, special meeting or minor workshop results, ad hoc and other miscellaneous reports

RIRs are distributed to (1) the originating area office, (2) the respective regional office, (3) the ADF&G Library, and (4) to other individuals or agencies by request. Many RIRs are distributed at meetings or made available at ADF&G offices.

4.2 GENERAL REQUIREMENTS

This series is not subjected to formal peer review; reports are reviewed at the regional level prior to their release and distribution. RIR formats may be highly individualized; however, the following requirements apply to all RIRs.

- The conventions explained in Section 10 and some of the word processing requirements explained in Section 12 of this manual should be followed.
- The title page should follow the example format shown in the Appendix and comply with the following:

The RIR identification number is composed of the following elements: the first digit identifies the region in which the senior author of the report is located; the following letter identifies the regional office (i.e., **J** for Juneau, **A** for Anchorage, and **K** for Kodiak); the next two digits preceding the hyphen are for the current year (e.g., 92); the last two digits identify the sequence number (e.g., 13 would be the 13th report from a given region in a given year).

The city listed on the report's address should be the **regional office city** (Anchorage, Juneau, Kodiak), **not** the area office city.

The date (year) on the report should be consistent with the year used in the identification number.

The RIR footnote may include an area office contribution statement/number.

- The department's writing manual, *Alaska Department of Fish and Game Writing Standards*, should be followed.
- RIRs should be prepared in WordPerfect and may be printed using any typeface and size. We discourage use of desktop publishing for reports of limited distribution, especially in-house reports; such reports do not need or benefit from the time required for fancy page layout.
- An EEO statement should be included on the inside or back cover page of each RIR (see the inside back cover of this manual for the EEO statement).
- Confidential reports should be RIRs. To ensure a complete archival record, reports containing confidential data should be included in the RIR series. However, the original copy must be stamped "CONFIDENTIAL" on the cover, as should a copy sent to the library which will be retained there in a special locked file not available to the public. The original copy and any other copies should be retained in a special confidential file in the regional office only.

4.3 OTHER INFORMATION

Authors will be responsible for correct formatting and style as described in Section 4.2 and for report production and distribution. When the author is satisfied with the manuscript, it must be submitted for regional review. Authors should indicate any time constraints affecting finalization and distribution. Regional Research Biologist/Supervisor(s) coordinate and manage the sub-series for their respective regions, and the Editor coordinates and manages the headquarters sub-series. They are designated by the Director to approve RIRs after they check the draft report to make sure the requirements in Section 4.2 have been followed and the report content is acceptable. Necessary changes or corrections should be made by the author before the report is issued an RIR number; it should be issued an RIR number when the report is accepted in final form.

The report should be quickly finalized and distributed after it is returned from review. Two final copies of the RIR must be sent promptly to the Regional Research Biologist/Supervisor(s) and one copy should be included in the area office RIR file.

After receiving two copies of the final RIR from the author, the Regional Research Biologist/Supervisor(s) will assign the key word and report type codes on a separate copy of the title page and **send this page and one copy of the RIR** to the Editor. [Note: this task may be assigned to one biologist acting under their immediate supervision.] They will file the second copy in the regional RIR file.

The Editor is responsible for entering the RIR information into the statewide reports database. When the coded RIR is received, the Editor will see that the data is promptly entered into the database. When data entry is complete, the RIR will be archived at the ADF&G library or elsewhere, if necessary.

5. TECHNICAL FISHERY REPORTS

Previously called the Technical Data Report Series, the Technical Fishery Report (TFR) Series was initiated in 1988. Unlike the preceding series, the division considers TFRs to be *publications* because they receive anonymous peer and editorial review and generally meet the publication criteria established by the Council of Biological Editors. The intent of the series is to present and archive data rather than analyze data. The series is intended for technical rather than general audiences.

5.1 DISTINGUISHING FEATURES

All annual or iterative surveillance or resource inventory reports that compile baseline data should be TFRs. Data are mostly final, although minor future adjustments are acceptable. Data may be presented in a basic, uninterpreted form, but raw data is not acceptable. TFRs include, but are not limited to the following:

- Annual catch and escapement (C&E) reports
- Annual shellfish survey reports
- Annual sonar reports (and other escapement reports not covered in a C&E report)
- Annual stock separation reports
- Annual test fishery reports
- Other annual stock assessment reports

Distribution is usually (1) within the department, (2) to about 100 agencies, libraries, and individuals in the Pacific Northwest, and (3) by request.

5.2 GENERAL REQUIREMENTS

Anonymous peer and editorial review are required for all first-time TFRs. Thereafter, those iterative versions that are fairly consistent from year to year may be exempted from peer review at the Editor's discretion. Such reports, however, will undergo annual editorial review and be subjected to peer review on a periodic basis. The following requirements apply to all TFRs:

- The conventions explained in Section 10 of this manual
- The word processing requirements explained in Part IV
- The department's writing manual, *Alaska Department of Fish and Game Writing Standards*

In addition, TFRs drafts received at headquarters may be returned unprocessed to the primary author if the manuscript fails to conform to all of the requirements in Table 1.

TABLE 1.—Checklist of requirements for TFRs and FRBs for first and final drafts.

First Draft Requirements

- (1) All manuscripts must first be submitted to the Regional Research Biologist/Supervisor(s) who will approve the manuscript for submission to headquarters.
- (2) All junior authors should initial their names on the title page or prepare a separate memo to the Editor. Either will indicate that they have read Section 3.7 (Authorship) and that their authorship role concurs with the policy.
- (3) Any author-requested reviews and related changes to the manuscript should be completed by the author before the manuscript is submitted to the Editor for formal review.
- (4) Two copies of your draft should be submitted to the Editor. Copies should be clean—i.e., have no handwritten comments or revisions. Include a cover memo explaining the intended series and identify all persons who have already reviewed the report. Send the Editor an Email message if you want confirmation that the manuscript was received.
- (5) Do **not** send originals or electronic copies with the first draft; save them for the final.
- (6) Must be on 8.5- by 11-inch paper. Text must be double-spaced.
- (7) Number all pages in pencil or in WordPerfect sequentially with Arabic numbers beginning with the title page, ending with the last page of the appendix, and including the tables and figures.
- (8) The manuscript must include the following sections in order: title page, author-acknowledgments page, table of contents, list of tables, list of figures, list of appendices, abstract/key words, introduction and remaining text, literature cited, tables, figures, and appendix (optional).
- (9) If the general requirements specified in Sections 5.2 or 6.2 have been poorly followed, the manuscript may be returned without editorial or peer review.

Final Draft Requirements

- (1) All substantive peer reviewer questions or suggested additions or revisions must be addressed by the author by either: (a) making the appropriate change in the text, or (b) providing a brief written rebuttal in a cover memo to the Editor that explains why the comments were not appropriate (without this, the Editor may not be able to judge the appropriateness of your decision).
- (2) Authors should avoid making any significant changes in a manuscript after it has entered the formal review process if the changes did not result from this process. If significant changes are made outside of formal peer review, the Editor should be informed of the changes made so that appropriate review can be made.
- (3) Submit **original** figures, a single-spaced copy of the text on 8.5- by 11-in paper, and an electronic copy through regional Publication Technicians (where appropriate) to the Editor.
- (4) Tables, figures, and appendices, in that order, should follow the text (do not integrate).
- (5) All word processing guidelines (see Part IV) should be satisfied.
- (6) Enclose reprint permission from other authors (not ADF&G) for any copyrighted tables or figures, etc., you have used in your report.

5.3 OTHER INFORMATION

The Regional Research Biologist/Supervisor(s) will determine when a draft TFR is ready to be sent to headquarters for formal peer review. They will be consulted when there has been a review recommendation not to publish a given manuscript.

Usually, the Editor will approve TFRs for the Director. The Editor will coordinate and referee the review process, assist authors with problems and questions, and oversee final copy preparations, printing, and distribution by the headquarters' Publication Technician.

6. FISHERY RESEARCH BULLETINS

Previously called the Informational Leaflet Series, the Fishery Research Bulletin (FRB) series was initiated in 1988. Unlike its predecessor, the division considers FRBs to be *publications* because they receive anonymous peer and editorial review and generally meet the publication criteria established by the Council of Biological Editors. Publications in this series present, analyze, and interpret results and may include conclusions and recommendations. The series is intended for technical audiences.

6.1 DISTINGUISHING FEATURES

The FRB series aggregates all the division's *completion reports*: i.e., completed projects for which no additional data or information gathering is planned, as well as multiple-year analyses of baseline data. FRB data are usually final. FRBs incorporate four general types of completion reports:

- Any completed research investigation that sought to answer a specific question(s) through data gathering, analysis, and interpretation
- Completed literature reviews
- Completed bibliographic papers
- Completed summarizations and analyses of several or more years of baseline data in ongoing resource surveillance projects that may have no planned endpoint

Most "one-time" reports will fall within one of the four above types because they are usually completion reports.

Distribution is (1) within the department, (2) internationally to about 300 agencies, libraries, and individuals, and (3) by request.

6.2 GENERAL REQUIREMENTS

All completion reports must be submitted to headquarters for consideration as FRBs, even if the completed project results are inconclusive or narrow in scope. If the divisional review indicates that the findings or methods are inappropriate for the FRB series, the manuscript may be reassigned to the RIR series. FRBs are reviewed anonymously by two peers refereed by the

division's editor. Peers are generally staff within the division, although staff outside the division or from other agencies may be asked to conduct reviews. The following requirements apply to all FRBs:

- The conventions explained in Section 10 of this manual
- The word processing and formatting requirements explained in Part IV
- The department's writing manual, *Alaska Department of Fish and Game Writing Standards*

In addition, FRB drafts received at headquarters may be returned unprocessed to the primary author if the manuscript fails to conform to all of the requirements in Table 1.

6.3 OTHER INFORMATION

FRBs may contain more information or data than would usually be found in most journals. In some cases, FRB objectives may be rather limited or the results might be regional or parochial in scope. Conversely, some completion reports may be more appropriately published in journals or symposium proceedings. Authors of FRB manuscripts that appear to be suitable for external publication will be encouraged to publish their work in journals or symposium proceedings.

The Regional Research Biologist/Supervisor(s) will determine when a draft FRB is ready to be sent to headquarters for formal peer review. They will be consulted when there has been a review recommendation not to publish a given report.

Usually, the Editor will approve FRBs for the Director. The Editor will coordinate and referee the review process, assist authors with problems and questions, and oversee final copy preparations, printing, and distribution by the headquarters Publication Technician. Publication Technicians will do the final page layout and design for printing.

7. PROFESSIONAL PAPERS

The Professional Paper (PP) Series was initiated in 1988. Its intent is to encourage staff to publish their findings in the formal literature, ensure full cataloging of all divisional publications, and provide divisional review prior to submittal to an external publishing source.

7.1 DISTINGUISHING FEATURES

This series includes all manuscripts prepared with divisional support which are submitted for publication outside the division. Professional Papers include, but are not limited to, publications in the following types of external sources:

- Journal publications
- Symposium proceedings
- Popular or general audience periodicals
- Books or portions of books

7.2 GENERAL REQUIREMENTS

Divisional peer and editorial review is required, but the Editor will work with the author(s) to meet any related deadlines for manuscript submission. Manuscripts prepared for this series should conform to the format and style requirements of the intended publication source, but where the publishing source guidelines do not conflict, this manual and the department's writing manual, *Alaska Department of Fish and Game Writing Standards*, should be followed.

Professional associates within or outside the department whom the author wishes to have review the manuscript should be requested directly by the author. However, resulting changes must be completed before the manuscript is submitted to the Editor for scientific review.

At the time of divisional acceptance, the manuscript will receive an identification number, per the example below. It should be part of the publication, preferably a title footnote, and must be included with the submitted manuscript.

¹Contribution PP-023 of the Alaska Department of Fish and Game, Division of Commercial Fisheries, Juneau.

When the publication's senior author is not a divisional employee but the junior author(s) is, the manuscript must still be reviewed but the contribution number will be assigned only as a catalog reference number for divisional cataloging—i.e., the footnote above will not be included.

A copy of the manuscript, as submitted to the professional society or symposium editors, should be sent to the Editor. Prior to publication, this manuscript may be copied and distributed. After publication, reprints of the actual publication should be used.

7.3 OTHER INFORMATION

Some completion reports may be more appropriately published in journals or symposium proceedings than as FRBs. Authors of such manuscripts will be encouraged to publish their work in journals or symposium proceedings.

The Editor will coordinate and referee the divisional review process, and assist authors with problems and questions. The Director will approve all Professional Publications.

8. SPECIAL PUBLICATION SERIES

This series was initiated in 1989 for all manuals and keys, long-range plans and strategies, proceedings of workshops and conferences, and other similar publications of the division. Format and content for this series may be highly individualized and will be determined on a case by case basis by the Editor.

PART III – PREPARING A MANUSCRIPT

9. REPORT COMPONENTS

The *CBE Style Manual* offers excellent description of the components of biological reports. Some of the basic considerations are included here.

9.1 TITLE

Titles should be informative but short. They should provide an expectation of the paper's content.

Do not start the title with a year (e.g., *1987 Catch and...*) unless you are willing to spell it out. Avoid inclusion of scientific names of common species in the title; it makes the title needlessly cumbersome and the scientific name will be included in the text anyway. Use the scientific name when a common name does not exist for a species.

9.2 THE ACKNOWLEDGMENTS AND FOREWORD

The *Acknowledgments* used to assail readers with grandiloquence about the dedicated efforts of the supporting staff and crew, a custom supported by a decreasing number of authors today. While projects usually owe much to participants other than authors, most readers will suspect that lavish compliments and praise for acknowledged contributors are more gratuitous than truly deserved, and readers often become impatient with flowery prose and needless words. Therefore, save the plaudits and superlatives for performance evaluations and letters of recommendation; let the Acknowledgments just state the contributors' roles, plainly and simply.

A *Foreword* or *Preface* is used in special situations: e.g., (1) when several or more reports by different authors are combined under one cover, the overall editor or someone else may write a foreword that sets the stage for those papers, or (2) very long monographs or manuals may benefit from explanation in a foreword or preface.

9.3 THE ABSTRACT

A good *Abstract* will immediately identify the purpose of the investigation and provide a short generic description of the methods used. The main mission of the Abstract, however, is to

summarize the findings. Abstracts can be too brief, containing little more information than the title and Table of Contents already provides. Others, by attempting to summarize every finding, are too long. As a rule of thumb, shoot for about 2-3% of the text length.

Avoid writing an Abstract as a prose version of the Table of Contents (e.g., “Catches and escapements for each fishing district are described in this report.”). Instead, summarize the actual data and findings choosing just the most significant (e.g., “Catches were highest in Districts 13 and 15, and escapement goals were achieved in all but a few streams.”).

9.4 THE INTRODUCTION

The *Introduction* should provide the reader with a clear understanding of the reason for the study, its objectives, the purpose or problem addressed, and how the results would be useful. It should orient the reader. Special circumstances that may have prompted or influenced your study should be discussed. Literature is also included to demonstrate your knowledge of related findings and to provide the reader with a background and overview of previous work related to your investigation. Note: specific findings from the literature that compliment, enhance, or contradict your findings are usually saved for the Discussion (see Section 9.5).

9.5 THE METHODS SECTION

The *Methods* (or *Materials and Methods*) should clearly and thoroughly explain how you conducted your investigation. Descriptions must be sufficiently thorough to allow others to duplicate your efforts or scrutinize every detail of procedure. Poorly written methods will only raise doubt and weaken the credibility of your findings. Worse, it could prevent a reviewer from discovering errors in your work: It is far better to have a reviewer find errors than to have them emerge after the manuscript is published and distributed.

A good rule-of-thumb is to be overly explicit rather than leave methods or procedures up to reader assumption. To keep the Methods section from becoming too long, be precise and concise. Write short simple sentences: Save eloquence for the Discussion. To conserve space, cite previously published methods, but try to provide the readers with enough summarial information to preclude their having to go to that source to understand your study.

Familiarity with the project often results in gaps that leave the reader guessing. Have someone proofread the section and identify where gaps and omissions occur.

9.6 THE RESULTS SECTION

The *Results* should present the results of your work without interpretation and analysis. It should present the findings through a combination of text, tables, figures, and appendices. Avoid the presentation of data that is not directly applicable to the purpose and objectives of your investigation, but do include pertinent negative results.

Other author’s findings should not be presented in your Results section. In addition, do not *discuss* the results, just state the results. Save discussion for the Discussion, and do not combine the results and discussion.

Tables and figures are primarily a visual aid. Do not force the reader to study them to understand the results. The text should introduce the graphical and tabular materials and highlight their major findings as well as document other findings that are inappropriate for table or figure presentation.

Obviously, all numbers in the tables should not be repeated in the text, just those of importance. Likewise, figures should not be redrawn with text prose, but the relationships they show should be summarized in the text. When numbers in the tables or figures are repeated in the text, be sure the numbers match exactly, i.e., do not round one and not the other. Also, it is not good practice to present the same data as both a figure and a table.

Tables should be used to document exact numeric values, whereas figures may be useful in depicting general trends or relationships in the data. All tables, figures, and appendices are normally introduced by the end of the Results section. Normally, the tables and figures are introduced in the Results, but some are occasionally introduced in the Methods or Introduction, in which case they should be related to the methods or background information presented in those sections. (Note: table and figure formatting conventions are presented in Part IV.)

Data contained in appendices should not be central to the discussion or analysis of findings. Generally, the appendix contains background data from which tables and figures were produced; in some cases derivations are appendicized. Appendices are appropriate for TFRs, but they are less acceptable for FRBs or PPs.

9.7 THE DISCUSSION SECTION

The *Discussion* should analyze and interpret the results and compare them with other supporting or conflicting findings in the literature. Judicious use of the literature often expands the scope and usefulness of a study's findings. In addition, the Discussion section may explain how the results fulfilled or fell short of the study objectives. It often includes conclusions and recommendations, but these are best located in a separate section(s) so that readers can easily segregate these important items from the rest of the Discussion (see Section 9.6). A good Discussion should not restate results and previously mentioned literature but should instead expand, explain, and tie the overall findings together.

9.8 THE CONCLUSIONS AND RECOMMENDATIONS SECTIONS

The *Conclusions* and *Recommendations* may be written separately or combined as one. Both sections are usually inappropriate for TFRs, but are highly recommended for FRBs. A Conclusions section is especially important for complicated FRBs with numerous findings. Conclusions need not be limited to your investigation but may represent a synthesis of your work and other cited publications. Individual conclusions should be succinctly stated without discussion. Conclusions are usually numbered if there are more than one.

Recommendations should describe how the results can be applied and used or may influence further investigations. Recommendations should be segregated into a separate section if they are numerous, complicated, or if they deserve special emphasis.

9.9 THE LITERATURE CITED SECTION

All references mentioned in the text (we use the Harvard system: author and year) must be listed in the Literature Cited section. Literature cited rules and examples, as well as conventions related to citing literature in the text, are provided in Section 10.9.

9.10 NONSTANDARD REPORT ORGANIZATION

Occasionally some reports (e.g., theoretical subjects or reviews of literature, etc.) may not require a Methods or Results section because the work is not conducive to that presentation format. They do, however, usually require an Abstract, Introduction, and Discussion.

Investigations that consist of two or more discrete parts may best be split into two or more methods-results-discussion groupings, provided there is little overlap between the parts. For example, descriptions of a feasibility study might precede a section describing the wide-scale field application. Generally, this organization should not be used unless each separate part is lengthy and complex and the objectives for each part are quite discrete and different.

Sometimes studies conducted by different investigators under a common project or program share a related purpose. Findings from these discrete studies may be combined as a single paper with shared authorship. This procedure offers several advantages over separate papers: (1) combining the studies in one paper may benefit the reader who receives all the information, synthesized and interpreted, in one cohesive package, and (2) a combined paper may provide greater recognition than the authors would have received with separate reports.

Separate, but less related studies conducted by different investigators may be reported under a common cover, similar to a symposium proceedings, provided they share a common element or theme. There should be an overall editor and several or more separate papers by different authors. In this case, each paper must stand alone as a self-contained publication. Generally, a Foreword is used to explain why the papers were brought together and to help orient the reader.

10. STYLE CONVENTIONS

The following conventions are listed alphabetically to simplify locating them. References used in developing these conventions are the "standard references" listed in Section B of *Alaska Department of Fish and Game Writing Standards*. That manual also includes conventions not included here that are to be followed in developing all divisional reports and publications.

10.1 ABBREVIATIONS

Use the abbreviations and symbols listed in *Alaska Department of Fish and Game Writing Standards*. Note that some abbreviations must first be introduced whereas others do not. Also some abbreviations should only be used in conjunction with numbers or in table headings (e.g., "...averaged 124 mm..."); otherwise spell out (e.g., "...were measured to the nearest millimeter).

Agency abbreviations may be used in the text but must be defined upon the first usage. However, use the abbreviation without prior definition for a text citation of literature: e.g., ...(NMFS 1978); the abbreviation must be introduced in the Literature Cited section.

10.2 AGE REPORTING

Salmon ages should be reported in European notation (e.g., an age-1.3 sockeye). The first digit is the freshwater age not including the year spent in the gravel; the second digit is the ocean age.

Smolt ages should be reported in Arabic numbers or with the European system: e.g., age-2 sockeye smolts or age-1. sockeye salmon, but use only one form in a given report.

Use Arabic numbers for all finfish and shellfish age reporting (e.g., age-4 herring); you may use Arabic or Roman numerals for prerecruit crab ages, however. Avoid adding the *plus-sign* (+) to fish ages (e.g., age-0+ herring).

10.3 APPENDIX

See the word processing guidelines in Part IV, and refer to the guidelines for figures in Section 10.6 and for tables in Section 10.14.

10.4 COPYRIGHT PERMISSION

Permission of authors other than U.S. Government and ADF&G staff is necessary before reprinting copyrighted tables or figures in your report. Most reports, other than U.S. Government publications, are copyrighted to authors, the agency they work for, or the publishing source. Letters of permission should be sent to the Editor with the final copy of your report.

10.5 DATES, TIME, UNITS OF MEASUREMENT

Use military (25 June 1983) or nonmilitary (June 25, 1983) dates, but use only one form consistently throughout your report.

Use the 24-hour or military clock: e.g., 1730 hours, **not** 5:30 pm. Note that *hours* should be spelled out when used with military time—do **not** use 1730 h.

Use either metric or English consistently throughout your report; do not mix usage. You may, however, use metric with English in parentheses or vice versa, but this generally is unnecessary and needlessly encumbering. If you use metric, you may use English units for gear sizes, and other similar regulatory language, that are normally referred to in English; however, upon first use of the number, include the metric in parentheses beside it, e.g., 6-in (15.2 cm) gillnet. If your report is one of an ongoing report series, use the measurement system that was previously used in that series.

10.6 FIGURES

Identify in legends or captions the axes, the elements of the data and any nonstandard abbreviations so that the figure is easily interpreted. More than one sentence in the caption is acceptable.

See Part IV for information on figure formatting.

10.7 FOOTNOTES

Text footnotes should be minimized; ancillary data sources and disclaimers of product endorsement may be footnoted. Do not footnote the report title, text headings or the abstract. Use parentheses to include supplementary information such as personal communications.

Text footnotes should be superscripted numbers, sequentially arranged throughout the text.

Table footnotes should be superscripted alpha identifiers and sequential within the table. Do not footnote table captions; instead, make a second sentence in the caption or find a location within the table for the footnote. For figures, legends usually take the place of footnotes; other information is identified in the figure caption.

10.8 ITALICS

Italicize only (1) scientific names, (2) text mention of books or other publications, (3) variables or lettered constants in mathematical or statistical expressions, (4) “in” and “In press” in the Literature Cited section as shown in Table 2, and (5) where occasional emphasis is appropriate.

10.9 LITERATURE CITATIONS

Citations included in your manuscript you should have read first-hand; they should not be cited through a citation occurring in another paper you read. However, if the publication is really rare and cannot be obtained, the *CBE Style Manual* covers citing unavailable published material. Otherwise, the conventions for citing literature in the text and constructing the Literature Cited section are discussed below.

10.9.1 Citing Literature In The Text

All literature listed in the literature cited section must be mentioned at least once in the text using the Harvard system as demonstrated below.

- Use agency abbreviation without introducing the full agency name; you will do that in the Literature Cited section:

“According to NMFS (1979)...”

- Use a semicolon to separate a parenthetical citation from other parenthetical material that immediately follows:

“...remained depressed through 1964 (Smith 1967; Figure 5).”

- Italicize but do not upper case *in press* in text citations. (Note: but use *In press* in the Literature Cited section):

“... reported by Jones and Bones (*in press*) and...”

- Use “et al.” (no italics) when there are more than two authors:

“According to Larson et al. (1987)...”

- When two or more citations appear together, arrange from earliest year to the latest year, separating authors with semicolons and different papers by the same author with commas:

“...indicating a dynamic interrelationship (McLane 1959; White 1969, 1970, 1975; Bones et al. 1973, 1975; Jones 1986).”

- Personal communications should be included parenthetically within the text—do not include in the Literature Cited section (note: an author should not cite himself or herself as a personal communication):

“...demonstrated no support for this hypothesis (R.W. Smith, Alaska Department of Fish and Game, Anchorage, personal communication).”

10.9.2 Literature Cited Section

All citations in the text should be included in the Literature Cited section according to the structure for different citation types shown in Table 2.

- Include state or appropriate country at the end of an agency or university citation address only when needed to locate the city.
- Do not list inclusive pages for dissertations and theses, government reports, and books (except chapters by separate authors).
- Use agency name for authorless reports; use *Anonymous* only when the agency is unknown. Usually use the agency abbreviation and include the full name beside it in parentheses.
- Use *In press* in place of the year for manuscripts accepted but not yet published. To cite a dateless document, use *Undated* in place of the date. Do not use *In prep* for unapproved manuscripts being prepared; instead cite as a personal communication in the text.
- Personal communications are parenthetically included in the text; do not list in the Literature Cited. Correspondence should be a personal communication.
- When confronted with four or more coauthors, use the following forms: “Jones, D.V., and three coauthors. 1981.” Or, you may list all the authors’ names.
- When there is an editor, use the following forms: “Jones, D.V., editor. 1981.” Include volume or edition information at the end of the title and separate from the title with a comma.

TABLE 2.—Examples of Literature Cited entries

Example Group 1 - Journals, Periodicals (any routine publications)

- de Vlaming, V.L., A. Kuris, and F.R. Parker, Jr. 1978. Seasonal variation of reproduction and lipid reserves in some subtropical cyprinodontids. *Transactions of the American Fisheries Society* 107:464-472.
- GMFMC (Gulf of Mexico Fishery Management Council). 1980. Fishery management plan for the shrimp fishery of the Gulf of Mexico. *Federal Register* 45(218):74190-74308.
- Lime, D.W. Jr., R.C. Knopf, and G.L. Peterson. 1981. The national river recreation study: growing new data base with exacting potential. U.S. Forest Service General Technical Report NC-63:1-8.

Example Group 2 - Books

- Mayr, E. 1963. *Animal species and evolution*. The Belknap Press of Harvard University Press, Cambridge, Massachusetts.
- Pass, F., and R. Harris, editors. 1979. *Texas almanac and state industrial guide 1980-81*. Dallas Morning News, Dallas.

Example Group 3 - Articles within Books or Symposium Proceedings

- Bockstael, N.E. 1980. Commercial fisheries management: the New England ground fish experience. Pages 27 to 30 in J.H. Grover, editor. *Allocation of fishery resources*. Food and Agriculture Organization of the United Nations, Rome, and the American Fisheries Society, Bethesda, Maryland.
- Harvey, E.N. 1957. The luminous organs of fishes. Pages 345-366 in M.E. Brown, editor. *The physiology of fishes, volume II*. Academia Press, Inc. Publishers, New York.
- Matlock, G.C. 1980. History and management of the red drum fishery. Pages 37-53 in *Proceedings colloquium on biology and management of red drum and seatrout*. Gulf States Marine Fisheries Commission 5, Ocean Springs, Mississippi.

Example Group 4 - Government Reports

- ADF&G (Alaska Department of Fish and Game). *In press*. Commercial shellfish regulations, 1987 edition. Division of Commercial Fisheries, Juneau.
- Anonymous. 1979. Saltwater finfish research and management in Texas. Report to the Governor and the 66th Legislature. PWD Report 3000-59, Austin.
- Contas, J.C., and six coauthors. *Undated*. The socio-economic response of coastal communities to the Fisheries Conservation and Management Act of 1976 - Public Law 94-265, April 13, 1976. University of New Hampshire, Sea Grant Publication UNH-SG-AB-117, Durham.
- Fried, S.M., editor. 1985. 1983 Bristol Bay Pacific salmon test fishing projects. Alaska Department of Fish and Game, Division of Commercial Fisheries, Technical Data Report 153, Juneau.
- Hammarstrom, L.F., and M.F. Merritt. 1985. A survey of Pacific weathervane scallops (*Pecten caurinus*) in Kamishak Bay, Alaska. Alaska Department of Fish and Game, Division of Commercial Fisheries, Informational Leaflet 252, Juneau.
- Kimker, A. 1985. March 1985 shellfish report to the Alaska Board of Fisheries. Alaska Department of Fish and Game, Division of Commercial Fisheries, Region 2 Report LCI-D-85-4, Anchorage.
- Nealy, D.E. 1985. Harvest of scallops in Alaska, 1983. Alaska Department of Fish and Game, Division of Commercial Fisheries, (Region 1 unpublished report), Douglas.
- Note:** If the report's title page includes reference to Region I (or Southeast Region), then modify this portion of the report to: Region I (unpublished report) or Southeast Region (unpublished report).
- NMFS (National Marine Fisheries Service). 1982a. Fisheries statistics of the United States, 1956-1981. Washington, D.C. (**Note:** 1982b by same author would follow.)

Example Group 5 - Theses, Dissertation and Consultant's Reports

- Jones and Stockes Associates, Inc. 1987. Southcentral Alaska sport fishing economic study. Report to the Alaska Department of Fish and Game, Juneau.
- Matlock, G.C. 1984. A Texas red drum management plan. Doctoral dissertation, Texas A&M University, College Station. (**Note:** or...Masters thesis)

10.10 NOMENCLATURE

See the *Alaska Department of Fish and Game Writing Standards* for standard references on finfish and shellfish nomenclature.

Use common names but include scientific names without parentheses or commas after the first usage in both the text and the abstract. If you choose to include the describer's name and year, make sure you check to see if they should appear in parentheses: They are only enclosed in parentheses if the genus is no longer the genus the describer placed it in.

Following a genus do *not* use "sp." or "spp." unless you are referring to an **unknown** species (sp.) or several unknown species (spp.). If you know the species include the species nomenclature, or if you are referring to the entire genus, just use the genus name alone (e.g., "...Pacific salmon *Oncorhynchus* in Alaska are found..."). Note, the fact that the genus is italicized and lacks the endings associated with families, orders, etc., identifies it as a genus.

Include "salmon" and "rockfish" in the common name when used as a noun (e.g., coho salmon were caught), but you may drop "salmon" or "rockfish" when used as an adjective (e.g., coho catches), except in the title and first uses in the Abstract and text. This applies to other finfish and shellfish as well where it is natural to use the shortened form.

Pacific herring and *Atlantic herring* are now two distinct species rather than subspecies. Therefore, use the full common name when writing about either species.

10.11 NUMBERS AND EQUATIONS

See *Alaska Department of Fish and Game Writing Standards* for information on when to spell out numbers and when to use numerals.

Original derivations you derived and formulas used in your work should be included in your manuscript, but statistical formulas commonly encountered and not ambiguous in form (e.g., chi-square, Student's-t, standard deviation, variance) should not be included. Citations can be used instead of a formula or derivation. Number sequentially formulas that express a sequence in mathematical logic or process; place such numbers in parentheses and place to the right of the formulas. Use italics for all variables and lettered constants in your equations. See Section 12 for information on equation formatting.

Use only significant numbers. For example:

- 65.4 has 3 significant numbers
- 4.5300 has 5 significant numbers
- 0.0018 has 2 significant numbers (1.8×10^{-3})
- 0.001800 has 4 significant numbers (1.8×10^{-3})

In both the text and tables/figures use commas to subdivide whole numbers greater than three digits. Avoid using text strings of individual numbers that are separated by commas or semicolon—it can create confusion.

Place a zero (0) in front of all fractions less than one used in text or tables/figures.

10.12 PARENTHESES

Except for citations, figure and table references, and metric-to-English conversions, use parentheses as sparingly as possible. By interrupting the flow of sentences, parenthetical explanations often confuse rather than clarify and make reading more laborious than necessary. In many cases such interruptions can be set off with commas or dashes.

10.13 STATISTICAL FINDING

If your results include relationships explained and validated through a statistical process include reference to the statistical method used, significance level, and degrees of freedom; e.g., “later in the season fish were significantly larger statistically (Student’s $t = 2.05$, $P \approx 0.03$, $df = 10$).” Note that we prefer to have authors approximate the significance probability, or P value, because simply reporting *greater than* or *less than* the magical significance level (α) of 0.05 withholds valuable information from the reader. The approximate P value is much more useful.

Biological research includes two different kinds of significance: *biological* and *statistical*. Biological significance is often ignored because it requires that investigators have thorough knowledge and understanding of the subject, apply scientific judgment to the results, and evaluate the results in light of the methods used. Conversely, statistical significance is easy to compute and communicate to others, but because it tends to be mechanical, it may have little value in revealing the actual importance or relevance of numerical findings.

Unfortunately, authors tend to confuse statistical significance with biological relevance. This is unfortunate: a test result may be statistically significant, but the difference reflected between the means tested may be so small that it is biologically trivial or even irrelevant. In our publications we would like authors to consider these important questions: What is the P value and are the differences (or associations) of any practical relevance?

When explaining comparisons or relationships not validated by statistical methods, especially when there are other comparisons in the results/discussion that were statistically validated, use the term *nonstatistical comparison* or abbreviation *NSC*. For example, “...fish were generally larger later in the season (nonstatistical comparison = NSC).” If none of the comparisons in your report were statistically validated, make a single qualifying statement in the results section that covers all such comparisons.

Be cautious when using the term *random sample*. We often inappropriately label sampling schemes, such as grab samples, as random samples. Be sure your sample was random before you use the term.

10.14 TABLES

Do not put units of measurement in the caption if they can be included with column or line headings.

Use blanks for nonexistent data and “0” for data with a measured value of zero. Present only significant figures/digits (see Section 10.11).

Use alpha superscript, not numeric, to identify table footnotes (^a through ^z). Start with ^a for each new table. Do not footnote the table caption.

Unless absolutely necessary, avoid continuing tables on multiple pages (see Appendix). Most large tables can be better presented if subdivided into separate tables.

10.15 TENSE

Reports should be written in the past tense. The present tense should be used only for statements that would definitely sound funny if they were past tense; e.g., “The Stikine River headwaters *were* located in Canada,” or “Five species of Pacific salmon *lived* in Alaska.” In other words, use present tense only when the statement will be patently true, as far as we know, well into the future. Some latitude in using present tense is also allowed for manuscripts that are largely theoretical rather than investigative and results oriented.

10.16 TERMS DEVELOPED BY OTHERS

If you use special terms or names for special mathematical expressions as used or coined by another author, cite the paper; also, the term you used should be the same as the term originally used by the author, unless you clearly define and explain your terminology variation. For example, “We estimated potential fish production using Ryder’s (1965) morphoedaphic index of yield where...”

PART IV – WORD PROCESSING GUIDELINES

The following guidelines are for authors of RIRs, TFRs, and FRBs. It is the author's responsibility to ensure that their reports conform. These standards have been revised and, where possible, simplified. Thus, pre-1992 Commercial Fisheries publications should **not** be used as examples.

Note: The division word processing standard is WordPerfect. Italicized commands in parentheses in Sections 11 and 12 refer to WordPerfect commands.

11. DOCUMENT SETUP FOR TFRS AND FRBS

Other than settings for line spacing and font, no other general formatting codes should be inserted; WordPerfect's default settings are sufficient. Margins, justification, or tab settings should **not** be altered.

- **Font:** *Times Roman 12 pt*; this should be set (*Control F8, Font*) at the beginning of the document and not changed. Tables may be printed in any font (see Section 12).
- **Margins:** WordPerfect's defaults are set at 1": This should not be altered.
- **Justification:** WordPerfect's default is *full justification*. This should not be altered.
- **Line Spacing:** WordPerfect's default is 1. This should be changed to 2 for rough drafts for the abstract and text body (but not the pages before the abstract). Line spacing should be restored to 1 for final drafts.
- **Page Numbering:** Pages should be numbered in pencil or in WordPerfect as explained in Table 1.
- **Tab settings:** WordPerfect automatically sets tabs every 1/2 in; this is sufficient for the entire text including the Table of Contents. Tab settings for the Tables and Appendices may be altered, as necessary.
- **Positioning:** Use tabs or indents but **not** spaces to position portions of text such as the Key Words in the abstract or equation explanations in the text.

12. SECTION FORMATTING: FRBs, TFRs, RIRs

TFRs and FRBs must conform to all the instructions below. RIRs need only conform to the Title Page, Literature Cited, and Tables/Figures instructions in Section 12; however, it is suggested that RIRs generally follow all of Section 12 to the extent practical.

Title Page: (see Appendix pages 35 and 36)

- Center align all lines.
- Arrange multiple authors' names vertically, one above the other.

Authors/Acknowledgments Page: (see Appendix page 37)

- List each author separately in individual paragraphs.
- A Project Sponsorship section is needed when there is a special funding source to be recognized.

Table of Contents: (see Appendix page 38)

- Section headings should be positioned as seen in the sample using **tabs**.
- Note that first and second order headings are separated by blank lines.
- Neither page numbers nor dots between headings and page numbers should be inserted; this applies to both rough and final drafts.

List of Tables, Figures, and Appendices: (see Appendix pages 40 and 41)

- The number of the table, figure, or appendix should appear on the left margin, and the table title should be indented (*F4*).
- As with the Table of Contents, no page numbers or dots between title and page number should be inserted.
- For List of Appendices, appendix group headings as shown in the example are optional; however, if used they should be printed all in capitals.

Abstract and Body Text: (see Appendix pages 41-43)

- Position the Key Words with an indent.
- Paragraphs should be separated by one blank line (i.e., a hard return).
- Please note the following conventions for section headings:

	CAPITALS	FONT FEATURES	PAGE ORIENTATION	LINE SPACES ABOVE/BELOW
1st Order	ALL letters	Bold	Center	4/3
2nd Order	First Letters	Bold & italics	Center	3/3
3rd Order	First Letters	Bold	Left Margin	3/2
4th Order	First Letters	Bold & italics	Start of ¶	3/none

- Equations: although not required, it is highly recommended that equations be formatted using WordPerfect's equations generator (*Alt F9, Equation*). This feature is easy to learn and will save the writer a great deal of time. All equations should be in italics (this is automatic in the equation generator). Equations should be center aligned and have reference numbers positioned on the right margin.
- All variables and lettered constants in the text should be italicized.

Literature Cited: (see Appendix page 45)

- Literature Cited entries are formatted by indenting (F4) the first line, and immediately after the indent, placing a "margin release" (holding the Shift key and typing a Tab). This results in all but the first line of the entry being indented.
- See Section 10.9 for literature citation conventions.

Tables and Figures: (see Appendix pages 46-49)

- Tables may be printed in any font and need not be printed in Times Roman as the rest of the text; however, they should all be printed in the same font.
- Figure captions should be printed in Times Roman 12 pt.
- The base of landscape figures should be on the right margin.

Appendix: (see Appendix page 50)

- The Appendices should be separated from the rest of the report by an Appendix title page.
- If the Appendix contains distinct groups of appendices, each group may be given a letter designation (e.g., "Appendix A, Appendix B," etc.); in this case each appendix within a group should be titled with the group letter and a number (e.g., "Appendix A.1."). If no group designations are used, label appendices with letters only (A through Z).
- Each group within the Appendix may also be given an optional group heading; if headings are used, they should appear at the top of the first appendix in that group as shown in the example.

Note: After finishing work on the final draft, submit the final copy and an electronic copy (see Table 1) to the regional Publication Technician; if there is none in your region, submit directly to the Editor at headquarters.

**OVERVIEW OF BERING SEA HERRING MIGRATION, STOCK STATUS,
AND COMMERCIAL FISHERIES**

by

Fritz Funk

**Footnote for series
explanation**

REGIONAL INFORMATION REPORT¹ NO. 5J91-13

Alaska Department of Fish and Game
Division of Commercial Fisheries
P.O. Box 25526
Juneau, Alaska 99802-5526

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October 1990

¹ The Regional Information Report Series was established in 1987 to provide an information access system for all unpublished divisional reports. These reports frequently serve diverse ad hoc informational purposes or archive basic uninterpreted data. To accommodate timely reporting of recently collected information, reports in this series undergo only limited internal review and may contain preliminary data; this information may be subsequently finalized and published in the formal literature. Consequently, these reports should not be cited without approval of the author or the Division of Commercial Fisheries.

ALASKA PENINSULA AND ALEUTIAN ISLANDS MANAGEMENT
AREAS SALMON CATCH, ESCAPEMENT, AND RUN STATISTICS, 1988

by

James N. McCullough

TECHNICAL FISHERY REPORT NO. 91-08

Alaska Department of Fish and Game
Division of Commercial Fisheries
P.O. Box 25526
Juneau, Alaska 99802-5526

June 1991

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PROJECT SPONSORSHIP

**Use when there
is a special
funding source;
otherwise omit.**

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TABLE OF CONTENTS

Page

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

ABSTRACT

INTRODUCTION

 Description of Study Area

 Major Salmon Interception Fisheries

METHODS

RESULTS

 South Peninsula

- Chinook Salmon
- Sockeye Salmon
- Pink Salmon
- Chum Salmon
- Coho Salmon

 Aleutian Islands Area

 North Peninsula

- Chinook Salmon
- Sockeye Salmon
- Pink Salmon
- Chum Salmon
- Coho Salmon

LITERATURE CITED

TABLES

FIGURES

APPENDIX

**Do not type in
periods or page
numbers.**

**Note: not
Appendices**

LIST OF TABLES

<u>Table</u>	<u>Page</u>
1. The commercial salmon catch in the Alaska Peninsula and Aleutian Islands Management Areas by species, 1968-88	
2. Alaska Peninsula and Aleutian Islands Management Areas listing of allowable gear by district and section, 1988	
3. Districts, sections, and statistical areas for the Alaska Peninsula and Aleutian Islands Management Areas, 1988	
4. Commercial set gillnet, driftgill net, and purse seine salmon harvest by area and species in the Alaska Peninsula and Aleutian Islands Management Areas, 1988	
5. Alaska Peninsula and Aleutian Islands Management Areas subsistence salmon catch by species estimated from returned permits, 1988	
6. Alaska Peninsula and Aleutian Islands Management Areas estimated salmon escapements by district, 1988	
7. Estimated escapement by species for major streams and areas in the Alaska Peninsula and Aleutian Islands Management Areas, 1988	
8. Southeastern District, Shumagin Islands Section commercial salmon catch, June and post-June, 1978-88	
9. South Unimak fishery commercial salmon catch by gear type, June and post-June, 1978-88	
10. South Unimak fishery commercial salmon catch by number of salmon, June and post-June, 1978-88	
11. The North Peninsula Harbor Point to Strogonof Point commercial sockeye salmon harvest, 1973-88	
12. Northern District, Inik Section (Alaska Peninsula-Bristol Bay overlap area) commercial salmon catch by Bristol Bay fishermen, August and September, 1986-88	
13. Southeastern District, Shumagin Islands Section commercial salmon catch by statistical week and species, June and post-June, 1988	
14. Southwestern and Unimak Districts, Ikaton Peninsula to Cape Lazaref area, commercial salmon catch by statistical week and species, June and post-June, 1988	

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or page
numbers.**

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headings can be
omitted.**

LIST OF APPENDICES

Page

**APPENDIX A: AGE AND SEX DATA: COMMERCIAL SALMON CATCHES,
COPPER AND BERING RIVERS**

- A.1. Temporally stratified age and sex composition of the commercial chinook salmon catch in the Copper River District drift gillnet fishery, 1988
- A.2. Temporally stratified age and sex composition of the commercial sockeye salmon catch in the Copper River District drift gillnet fishery, 1988
- A.3. Estimated age and sex composition of the commercial sockeye salmon catch in the Bering River District drift gillnet fishery, 1988

APPENDIX B: ADF&G STATISTICAL WEEK DEFINITIONS

- B.1. Statistical weeks and calendar dates for 1988.

**APPENDIX C: SUBSISTENCE, PERSONAL USE, AND SPORT FISH
SALMON CATCHES FROM THE UPPER COPPER RIVER.**

- C.1. Daily catches of sockeye, chinook, and coho salmon in the subsistence and personal use fisheries on the Upper Copper River, 1988
- C.2. Temporally stratified age and sex composition of the sockeye salmon catches in the subsistence and personal use fisheries on the Upper Copper River, 1988
- C.3. Age and sex composition of chinook salmon carcass samples from tributaries in the upper Copper River, 1988

ABSTRACT

In 1988 the Alaska Peninsula and Aleutian Islands Management Areas salmon catch was 13,368,662 salmon. The catch included 27,880 chinook *Oncorhynchus tshawytscha*, 3,006,067 sockeye *O. nerka*, 7,293,175 pink *O. gorbuscha*, 2,302,034 chum *O. keta*, and 739,506 coho *O. kisutch* salmon. The catch was 7% higher than the 1978-87 average of 12,440,426 salmon and 221% higher than the 1987 harvest. Pink, chum, and coho catches were above the 1978-87 average. A total of 382 Area M and 73 Area T permit holders operated in the Alaska Peninsula and Aleutian Islands Management Areas, and cumulatively they made 12,686 deliveries. The majority (81.9%) of the commercial salmon catch occurred in South Peninsula fisheries. North Peninsula fisheries accounted for most of the remainder of the harvest (16.7%); only 1.4% of the commercial catch occurred in the Aleutian Islands Area. The majority of the pink, chum, and coho harvest occurred in South Peninsula fisheries, and the majority of the chinook and sockeye catch was in North Peninsula fisheries.

The Alaska Peninsula and Aleutian Islands Management Areas escapement was estimated at 7,354,652 salmon composed of 17,436 chinook, 791,550 sockeye, 4,918,030 pink, 1,447,737 chum, and 179,899 coho salmon. The 1988 Alaska Peninsula Management Area escapement for all species combined was 7% above the 1978-87 average of 4,264,010 salmon. The chinook escapement was 21% lower, sockeye escapement was 32% lower, pink escapement was 28% higher, and the chum escapement was 3% higher than the 1978-87 average. The largest chinook escapements were on the North Peninsula at Meshik River, Nelson Lagoon, Steelhead Creek, and Black Hills Creek. The largest sockeye escapements were on the North Peninsula at Bear and Nelson Rivers. Pink escapements were largest (>100,000 salmon) on the South Peninsula at Suzy, Rough Beach, Swedania Point, Mino, Settlement Point, Middle, Fox Island Anchorage East, Southern, and Deadman's Cove Creeks. Chum escapements were largest (>100,000 salmon) at Canoe Bay River and Russel Creek on the South Peninsula and the Joshua Green River on the North Peninsula. Coho escapements were largest at Meshik River, Inlik Lagoon, and Nelson River.

KEY WORDS: Alaska Peninsula, Aleutian Islands, salmon, catch, escapement, age, length, sex

No period at end
and no "and."

No parentheses or commas
around scientific names.
Include scientific names in
Abstract and first usage in text.

INTRODUCTION

The Alaska Peninsula and Aleutian Islands Management Areas (Figures 1-2) are divided into three sub-areas: (1) the South Peninsula, consisting of coastal Pacific Ocean coastal waters extending west of Kupreanof Point to Scotch Cap; (2) the Aleutian Islands, consisting of coastal Pacific Ocean and Bering Sea waters extending west from Scotch Cap and Cape Sarichef on Unimak Island to the international dateline; and (3) the North Peninsula, consisting of coastal Bering Sea waters extending west from Cape Menshikof to Cape Sarichef (Figures 3-6).

Major Salmon Interception Fisheries

In the Alaska Peninsula and Aleutian Islands Management Areas, most salmon fisheries are directed on local stocks, but five major interception fisheries do occur in the Alaska Peninsula Management Area.

June South Unimak and Shumagin Islands Section Fisheries

The June South Unimak and Shumagin Islands Section fisheries (ADF&G 1988; Shaul and Schwarz 1988a; Shaul and Schwarz 1989) target Bristol Bay sockeye salmon (Figure 8). The allocation for South Unimak is 6.8% of the most current projected Bristol Bay inshore sockeye harvest, while the allocation for the Shumagin Islands Section is 1.5% of the projected Bristol Bay sockeye harvest. Fishing time for both fisheries was based on sockeye and chum salmon catches; chum salmon are harvested incidentally to the sockeye salmon. In 1986, the Board of Fisheries limited the chum salmon catch to a maximum of 400,000 salmon. The chum salmon catch limit was increased to 500,000 salmon for the 1988 season after a 1987 tagging project (Eggers et al. 1988) indicated that Western Alaska chum salmon stocks were not adversely impacted by the South Peninsula June fisheries.

Sockeye Salmon. The 1988 South Peninsula sockeye catch was 1,473,636 salmon, 25% lower than the 1978-87 average, but 1% higher than the 1987 harvest (Table 1). The lower-than-average sockeye harvest was primarily a result of the termination of the June fisheries when the chum salmon catch limit was achieved (leaving 762,130 sockeye salmon from the allocation of 1,518,817 sockeye salmon unharvested).

The stock-specific escapement estimates used in this report were from Schroeder and Morrison (1990). Data for pink, sockeye, and chum salmon began in 1960, 1959, and 1964, respectively. The pink and chum salmon escapement estimates were probably total annual escapements, as opposed to an index of escapement such as peak aerial survey counts. These were derived from the area under the stream survey curve divided by a 17.5-d stream life factor (Davis and Valentine 1970). The following equation was used to convert periodic survey counts to estimates of fish gained or lost in the stream since the last survey. It considers the number of days elapsed since the last survey as well as stream life:

**Number all equations.
Use italics for constants
and variables in text.**

$$\hat{c}_i = \frac{(d_i - d_{i-1})x_i - \frac{(d_i - d_{i-1})(x_i - x_{i-1})}{2}}{s} \quad (1)$$

where:

- \hat{c}_i = estimated number of pink or chum salmon that entered the study stream between survey $i-1$ and survey i ;
- d_i = Julian calendar day of survey i ($1 < d < 365$);
- x_i = number of live pink or chum salmon observed in the study stream during survey i ; and
- s = stream life for pink or chum salmon (17.5 days).

Total annual escapement was then calculated as

$$\hat{E} = \hat{c}_a + \sum_{i=1}^n \hat{c}_i \quad (2)$$

where \hat{E} is the total estimated number of pink or chum salmon that entered the study stream to spawn during the season, n is the number of surveys made during the season, and \hat{c}_a is the estimated number of live pink or chum salmon that entered the study stream between the last (n^{th}) survey and 15 September (an arbitrarily selected date when stream survey count was expected to be zero):

**Indent with
margin
release (F4,
shift-tab).**

LITERATURE CITED

- ADF&G (Alaska Department of Fish and Game). 1962. Cordova area annual report, 1962. Alaska Department of Fish and Game, Commercial Fisheries Division, Region 2 Report (unpublished), Cordova.
- ADF&G (Alaska Department of Fish and Game). 1964. Cordova area annual report, 1964. Alaska Department of Fish and Game, Commercial Fisheries Division, Region 2 Report (unpublished), Cordova.
- Brady, J.A., K.C. Schultz, and Cordova Commercial Fisheries Staff. 1988. Review of the Prince William Sound area commercial salmon fisheries, 1988. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Information Report 2C88-11, Anchorage.
- Brady, J.A., K. Schultz, E. Simpson, E. Biggs, S. Sharr, and K. Roberson. 1990. Prince William Sound area annual finfish management report, 1988. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Information Report 2C90-02, Cordova.
- Clutter, R., and L. Whitesel. 1956. Collection and interpretation of sockeye salmon scales. Bulletin of the International Pacific Salmon Fisheries Commission 9, Vancouver, British Columbia.
- Cochran, W. 1977. Sampling Techniques, 3rd edition. John Wiley & Sons, Inc. New York.

**Note: see Table 2 and
Section 10.2 for
important rules on
preparing this section.**

Table 1. The commercial salmon catch in the Alaska Peninsula and Aleutian Islands Management Areas by species, 1968-88.

Year	Area	Number of Salmon					Total	Percent
		Chinook	Sockeye	Pink	Chum	Coho		
1968	South Peninsula	1,400	699,800	1,287,100	325,300	31,100	2,344,700	64.6
	Aleutians	0	2,000	902,800	800	100	905,700	25.0
	North Peninsula	<u>4,500</u>	<u>237,100</u>	<u>200</u>	<u>73,500</u>	<u>64,900</u>	<u>380,200</u>	<u>10.5</u>
	Total	5,900	938,900	2,190,100	399,600	96,100	3,630,600	100.0
1969	South Peninsula	1,900	912,800	1,219,400	389,200	10,900	2,534,200	79.6
	Aleutians	0	1,900	242,200	1,500	0	245,600	7.7
	North Peninsula	<u>4,800</u>	<u>321,000</u>	<u>100</u>	<u>28,100</u>	<u>49,100</u>	<u>403,400</u>	<u>12.7</u>
	Total	6,700	1,236,000	1,461,700	418,800	60,000	3,183,200	100.0
1970	South Peninsula	1,800	1,794,600	1,723,400	981,700	32,200	4,533,700	82.3
	Aleutians	0	200	672,500	3,300	100	676,100	12.3
	North Peninsula	<u>3,200</u>	<u>213,000</u>	<u>7,800</u>	<u>50,200</u>	<u>26,400</u>	<u>300,600</u>	<u>5.5</u>
	Total	5,000	2,007,800	2,403,700	1,035,200	58,700	5,510,400	100.0
1971	South Peninsula	2,200	715,500	1,450,100	1,366,600	16,800	3,551,200	88.2
	Aleutians	0	300	45,400	100	0	45,800	1.1
	North Peninsula	<u>2,200</u>	<u>354,200</u>	<u>300</u>	<u>64,200</u>	<u>8,200</u>	<u>429,100</u>	<u>10.7</u>
	Total	4,400	1,070,000	1,495,800	1,430,900	25,000	4,026,100	100.0
1972	South Peninsula	1,300	557,800	78,000	727,500	8,000	1,372,600	83.1
	Aleutians	0	100	2,800	0	0	2,900	0.2
	North Peninsula	<u>1,800</u>	<u>179,500</u>	<u>0</u>	<u>84,700</u>	<u>9,600</u>	<u>275,600</u>	<u>16.7</u>
	Total	3,100	737,400	80,800	812,200	17,600	1,651,100	100.0
1973	South Peninsula	400	330,200	58,000	293,000	6,600	688,200	65.3
	Aleutians	0	100	7,000	0	0	7,100	0.7
	North Peninsula	<u>4,400</u>	<u>171,800</u>	<u>300</u>	<u>155,700</u>	<u>26,900</u>	<u>359,100</u>	<u>34.1</u>
	Total	4,800	502,100	65,300	448,700	33,500	1,054,400	100.0
1974	South Peninsula	500	204,700	99,700	71,500	9,400	385,800	54.5
	Aleutians	0	0	0	0	0	0	0.0
	North Peninsula	<u>5,100</u>	<u>247,900</u>	<u>10,500</u>	<u>35,300</u>	<u>24,000</u>	<u>322,800</u>	<u>45.6</u>
	Total	5,600	452,600	110,200	106,800	33,400	708,600	100.0
1975	South Peninsula	100	268,400	61,700	132,900	0	463,100	62.9
	Aleutians	0	0	0	0	0	0	0.0
	North Peninsula	<u>2,100</u>	<u>233,500</u>	<u>300</u>	<u>8,700</u>	<u>28,200</u>	<u>272,800</u>	<u>37.1</u>
	Total	2,200	501,900	62,000	141,600	28,200	735,900	100.0
1976	South Peninsula	2,100	375,000	2,367,000	532,500	200	3,276,800	81.5
	Aleutians	0	0	0	0	0	0	0.0
	North Peninsula	<u>4,900</u>	<u>641,100</u>	<u>600</u>	<u>73,600</u>	<u>26,000</u>	<u>746,200</u>	<u>18.6</u>
	Total	7,000	1,016,100	2,367,600	606,100	26,200	4,023,000	100.0
1977	South Peninsula	500	311,700	1,448,600	243,200	2,100	2,006,100	75.8
	Aleutians	0	0	0	0	0	0	0.0
	North Peninsula	<u>5,500</u>	<u>471,100</u>	<u>900</u>	<u>129,100</u>	<u>34,100</u>	<u>640,700</u>	<u>24.2</u>
	Total	6,000	782,800	1,449,500	372,300	36,200	2,646,800	100.0
1978	South Peninsula	800	579,500	5,608,800	547,000	60,700	6,796,800	80.5
	Aleutians	0	1,800	38,100	0	0	39,900	0.5
	North Peninsula	<u>14,200</u>	<u>896,200</u>	<u>466,600</u>	<u>163,200</u>	<u>63,300</u>	<u>1,603,500</u>	<u>19.0</u>
	Total	15,000	1,477,500	6,113,500	710,200	124,000	8,440,200	100.0

-Continued-

Table 1. (page 2 of 2)

Year	Area	Number of Salmon					Total	Percent
		Chinook	Sockeye	Pink	Chum	Coho		
1979	South Peninsula	2,100	1,149,700	6,570,500	483,000	356,500	8,561,800	75.8
	Aleutians	0	12,200	539,400	200	0	551,800	4.9
	North Peninsula	<u>17,100</u>	<u>1,979,500</u>	<u>5,000</u>	<u>65,700</u>	<u>112,800</u>	<u>2,180,100</u>	<u>19.3</u>
	Total	19,200	3,141,400	7,114,900	548,900	469,300	11,293,700	100.01980
1980	South Peninsula	4,800	3,613,000	7,961,500	1,351,200	274,200	13,204,700	71.9
	Aleutians	0	9,200	2,597,500	4,900	0	2,611,600	14.2
	North Peninsula	<u>16,800</u>	<u>1,397,100</u>	<u>301,700</u>	<u>700,200</u>	<u>127,900</u>	<u>2,543,700</u>	<u>13.9</u>
	Total	21,600	5,019,300	10,860,700	2,056,300	402,100	18,360,000	100.0
1981	South Peninsula	10,200	2,255,200	5,035,900	1,770,300	162,200	9,233,800	75.2
	Aleutians	0	5,400	302,800	6,600	200	315,000	2.6
	North Peninsula	<u>18,300</u>	<u>1,844,900</u>	<u>11,200</u>	<u>706,800</u>	<u>155,400</u>	<u>2,736,600</u>	<u>22.3</u>
	Total	28,500	4,105,500	5,349,900	2,483,700	317,800	12,285,400	100.0
1982	South Peninsula	9,800	2,346,000	6,734,900	2,272,500	256,000	11,619,200	76.8
	Aleutians	0	2,700	1,447,800	6,100	0	1,456,600	9.6
	North Peninsula	<u>30,100</u>	<u>1,435,300</u>	<u>12,300</u>	<u>331,100</u>	<u>238,000</u>	<u>2,046,800</u>	<u>13.5</u>
	Total	39,900	3,784,000	8,195,000	2,609,700	494,000	15,122,600	100.0
1983	South Peninsula	26,900	2,556,600	2,827,600	1,707,100	127,700	7,245,900	73.8
	Aleutians	0	4,400	2,000	11,400	0	17,800	0.2
	North Peninsula	<u>29,500</u>	<u>2,093,400</u>	<u>3,400</u>	<u>348,700</u>	<u>75,100</u>	<u>2,550,100</u>	<u>26.0</u>
	Total	56,400	4,654,400	2,833,000	2,067,200	202,800	9,813,800	100.0
1984	South Peninsula	9,200	2,318,000	11,589,300	1,656,500	309,100	15,882,100	75.4
	Aleutians	0	67,200	2,309,700	33,900	0	2,410,800	11.4
	North Peninsula	<u>23,000</u>	<u>1,734,900</u>	<u>27,400</u>	<u>796,700</u>	<u>198,600</u>	<u>2,780,600</u>	<u>13.2</u>
	Total	32,200	4,120,100	13,926,400	2,487,100	507,700	21,073,500	100.0
1985	South Peninsula	7,884	2,214,583	4,438,598	1,393,285	172,514	8,226,864	70.3
	Aleutians	40	2,750	90	14,175	0	17,055	0.2
	North Peninsula	<u>23,553</u>	<u>2,600,589</u>	<u>3,055</u>	<u>670,644</u>	<u>167,740</u>	<u>3,465,581</u>	<u>29.6</u>
	Total	31,477	4,817,922	4,441,743	2,078,104	340,254	11,709,500	100.0
1986	South Peninsula	5,589	1,223,089	4,031,487	1,749,651	235,854	7,245,670	70.6
	Aleutians	11	7,702	42,621	38,819	60	89,213	0.9
	North Peninsula	<u>11,740</u>	<u>2,463,735</u>	<u>22,630</u>	<u>271,216</u>	<u>165,201</u>	<u>2,934,522</u>	<u>28.6</u>
	Total	17,340	3,694,526	4,096,738	2,059,686	401,115	10,269,405	100.0
1987	South Peninsula	9,174	1,449,753	1,208,556	1,376,267	224,740	4,268,490	70.7
	Aleutians	0	75	0	0	0	75	0.0
	North Peninsula	<u>14,186</u>	<u>1,209,435</u>	<u>3,486</u>	<u>368,696</u>	<u>171,784</u>	<u>1,767,587</u>	<u>29.3</u>
	Total	23,360	2,659,263	1,212,042	1,744,963	396,524	6,036,152	100.0
1988	South Peninsula	11,075	1,473,636	7,044,824	1,908,507	505,533	10,943,575	81.9
	Aleutians	0	4,315	183,109	450	7	187,881	1.4
	North Peninsula	<u>16,805</u>	<u>1,528,116</u>	<u>65,242</u>	<u>393,077</u>	<u>233,966</u>	<u>2,237,206</u>	<u>16.7</u>
	Total	27,880	3,006,067	7,293,175	2,302,034	739,506	13,368,662	100.0

Note: If appendix group headings are used, they should appear on the first appendix in that group.

Appendix --- page 45
This is an example of an appendix.

APPENDIX B: ADF&G STATISTICAL WEEK DEFINITIONS

Appendix B.1. Statistical weeks and calendar dates for 1988.

STATISTICAL WEEK	CALENDAR DATES	STATISTICAL WEEK	CALENDAR DATES
1	01/01 to 01/02	28	07/03 to 07/09
2	01/03 to 01/09	29	07/10 to 07/16
3	01/10 to 01/16	30	07/17 to 07/23
4	01/17 to 01/23	31	07/24 to 07/30
5	01/24 to 01/30	32	07/31 to 08/06
6	01/31 to 02/06	33	08/07 to 08/13
7	02/07 to 02/13	34	08/14 to 08/20
8	02/14 to 02/20	35	08/21 to 08/27
9	02/21 to 02/27	36	08/28 to 09/03
10	02/28 to 03/05	37	09/04 to 09/10
11	03/06 to 03/12	38	09/11 to 09/17
12	03/13 to 03/19	39	09/18 to 09/21
13	03/20 to 03/26	40	09/25 to 10/01
14	03/27 to 04/02	41	10/02 to 10/08
15	04/03 to 04/09	42	10/09 to 10/15
16	04/10 to 04/16	43	10/16 to 10/22
17	04/17 to 04/23	44	10/23 to 10/29
18	04/24 to 04/30	45	10/30 to 11/05
19	05/01 to 05/07	46	11/06 to 11/12
20	05/08 to 05/14	47	11/13 to 11/19
21	05/15 to 05/21	48	11/20 to 11/26
22	05/22 to 05/28	49	11/27 to 12/03
23	05/29 to 06/04	50	12/04 to 12/10
24	06/05 to 06/11	51	12/11 to 12/17
25	06/12 to 06/18	52	12/18 to 12/24
26	06/19 to 06/25	53	12/25 to 12/31

*This is an example
of a map figure.*

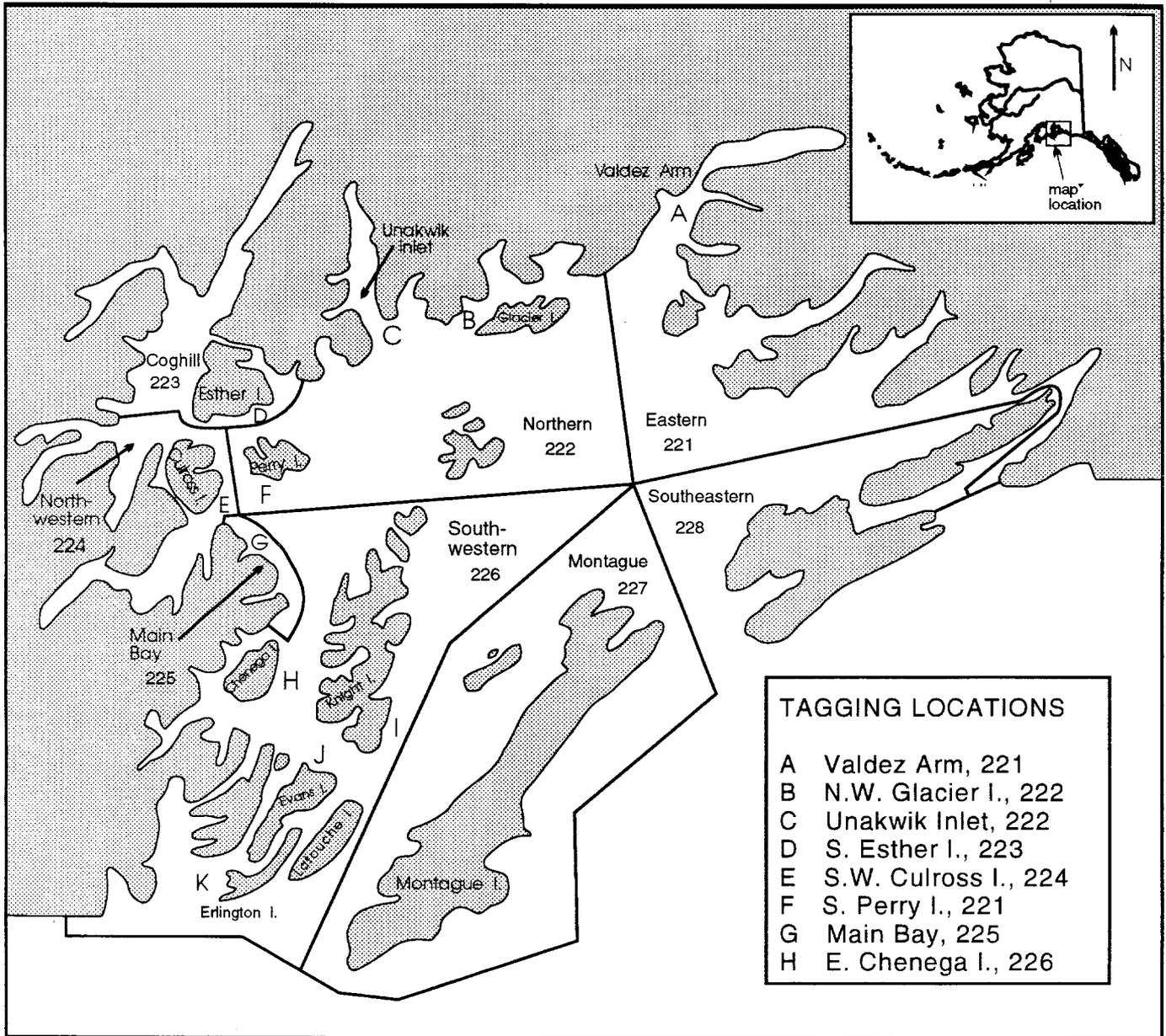


Figure 1. 1991 tagging locations in Prince William Sound.

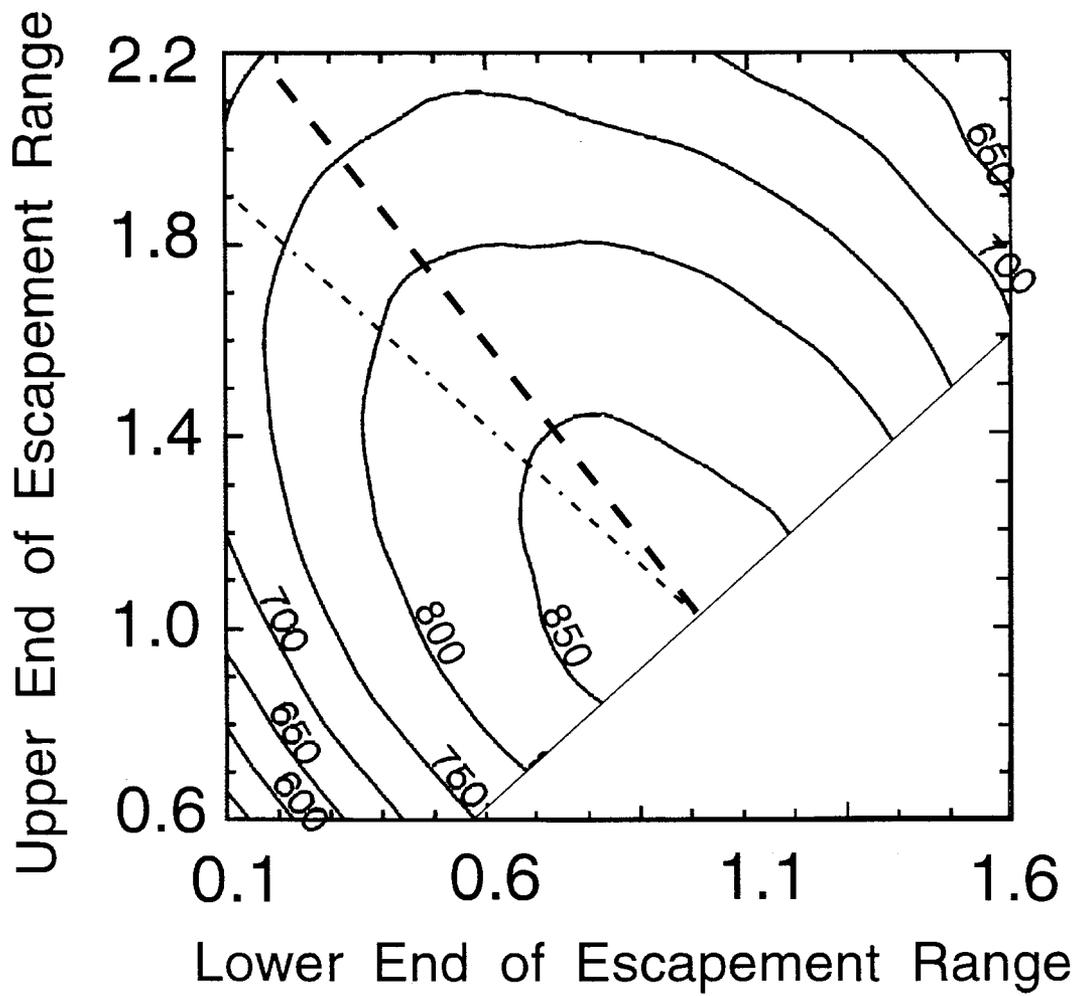


Figure 2. Yield contours for various escapement ranges for Bear Lake.

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