

Technical Report
" Number 77



Social and Economic
Studies Program

Sponsor:

Minerals Management
Service

Alaska Outer
Continental
Shelf Region

Social Indicators for OCS **Impact** Monitoring

The United States Department of the Interior was designated by the Outer Continental Shelf (OCS) Lands Act of 1953 to carry out the majority of the Act's provisions for administering the mineral leasing and "development of offshore areas of the United States under federal jurisdiction. Within the Department, the Minerals Management Service (MMS) has the responsibility to meet requirements of the National Environmental Policy Act of 1969 (NEPA) as well as other legislation and regulations dealing with the effects of offshore development. In Alaska, unique cultural differences and climatic conditions create a need for developing additional socioeconomic and environmental information to improve OCS decisionmaking at all governmental levels. In fulfillment of its federal responsibilities and with an awareness of these additional information needs, several investigative programs have been initiated, one of which is the Alaska OCS Social and Economic Studies Program (SESP).

The Alaska OCS Social and Economic Studies Program is a multi-year research effort which attempts to predict and evaluate the effects of Alaska OCS petroleum development upon the physical, social, and economic environments within the state. The overall methodology is divided into three broad research components. The first component identifies an alternative set of assumptions regarding the location, the nature, and the timing of future petroleum events and related activities. In this component, the program takes into account the particular needs of the petroleum industry and projects the human, technological, economic, and environmental offshore and onshore development requirements of the regional petroleum industry.

The second component focuses on data gathering that identifies those quantifiable and qualifiable facts by which OCS-induced changes can be assessed. The critical community and regional components are identified and evaluated. Current endogenous and exogenous sources of change and functional organization among different sectors of community and regional life are analyzed. Susceptible community relationships, values, activities, and processes also are included.

The third research component focuses on an evaluation of the changes that could occur due to the potential oil and gas development. Impact evaluation concentrates on an analysis of the impacts at the statewide, regional, and local level.

In general, program products are sequentially arranged in accordance with MMS's proposed OCS lease sale schedule, so that information is timely to decisionmaking. Reports are available through the National Technical Information Service, and the MMS has a limited number of copies available through the Leasing & Environment Office. Inquiries for information should be directed to: Social and Economic Studies Program Coordinator, Minerals Management Service, Leasing & Environment Office, Alaska OCS Region, P.O. Box 1159, Anchorage, Alaska 99510.

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SOCIAL INDICATORS FOR OCS IMPACT MONITORING

Prepared for

**Minerals Management Service
Alaska Outer Continental Shelf Region**

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VOLUME II

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SOCIAL INDICATORS FOR OCS IMPACT MONITORING

TABLE OF CONTENTS

<u>VOLUME I: TECHNICAL REPORT</u>	<u>Page</u>
ABSTRACT	1
1. INTRODUCTION	4
11. THEORY AND BACKGROUND	8
A. Introduction	8
B. Social Indicator Research	8
1. A General Review	8
2. Indicator Research in Alaska	18
c. Social and Institutional Trends in Alaska	24
1. Introduction	24
2. Generalized Sociocultural Trends	24
a) NANA Region	27
b) Aleutian-Pribilof Region	37
3. Mental Health, Mortality and Morbidity Indicators?	52
a) General Conditions.	52
b) Specific Regional Characteristics	71
1) NANA Region	71
2) Aleutian-Pribilof Islands	74
4. Economic and Social Welfare Indicators	82
a) NANA Region	82
b) Aleutian-Pribilof Islands	104
D. A Framework for the Analysis of Community Well-Being in Alaska	116
III. METHODS AND APPROACH	
A. Methodological Issues - The General Approach	119
1. Triangulation	119
a) Archival Data	120
b) Focused Responses	120
c) Structured Observations	121

	<u>Page</u>
2. Principles of Triangulation	122
a) External Validity	123
b) Focused Response Data	123
1) Scale Assumptions for Synchronic Data	123
2) Fitting Statistics to Synchronic	
Variables:	125
a) Bivariate	125
b) Multivariate Analysis: In Pursuit of Social Indicators	127
B. Research Design	128
1. Data Collection Methods	128
a) Objectives	128
b) Data Types	130
c) Archival Field Data	131
1) Collection Procedures	131
2) Data Characteristics	132
3) Analysis	132
d) Focused Responses	136
1) Worldview Protocol	136
2) Economic Protocol	137
3) Political Protocol	137
4) Education Protocol	137
5) Helping Services Protocol	137
6) Sodalities Protocol	137
7) Religion Protocol	138
8) Family and Kinship Protocol	138
e) Fieldwork Procedures	139
f) Sorting and Review Data Procedures: Coding and Rating of the Primary Field Data	143
g) Structured Observation	144
1) Procedure	144
2) Data Variables	146
a) Genesis of the Variables	146
b) The Variables	150
c) Scoring and Ranking Process	153
3) Formal Methods of Analysis	154
a) Primary Field Research Data	154
b) Bivariate Analysis	154
c) Multivariate, Multidimensional Analysis	161
d) Description of MINISSA Version of Smallest Space Analysis	162
2. Summary of Research Design	166

	<u>Page</u>
IV. COMMUNITY CONDITIONS IN THE NANA AND ALEUTIAN-PRIBILOF REGIONS	
A. Introduction	167
1) Institutional Evidence	168
2) Domestic Evidence	170
3) Reordering and Collapsing Results	174
5. Regional Level Social Conditions	184
1) Regional Analysis	185
c. Community Level Social Conditions	192
1) General Findings for Regions and Villages	198
D. Hypotheses Concerning Well-Being and Institutional Coping Mechanisms	208
v. FINDINGS AND CONCLUSIONS	
A. Introduction	216
B. Aggregate Data Analysis Results	216
1) Growth Patterns in the Eight Villages	217
2) School Enrollment in the Eight Villages	218
3) Regional Economics	219
a) Employment and Wages in Nikolski and Unalaska	222
4) Welfare Payments	223
5) Social Welfare Cases	224
6) Conclusion: An Aggregate Model	226
c. Primary Data Analysis Results	229
1) Introduction	229
2) Cluster I: Traditional Subsistence, Household and Social Organization. Some Modification to the Western Industrial Model.	232
3) Cluster II: Ideological Structure and Dependency The Mitigating Effects of Experience on Perceptions of the Western Industrial Model of Economic and Social Change.	238
4) Cluster III: Increased Income and Increased Skepticism	240

	<u>Page</u>
5) Cluster IV : The Tie That Binds. The Persistence of Traditional Subsistence Practices and the Organization of Economic Labor and Distribution.	241
6) Relations Among the Four Clusters: Public and Private Sector Economies and the Importance of Household Income	242
7) Ordinal Dichotomous Relations Among Individual Level Data.	250
8) Village Institutions: Ordinal Relations Among Village Level Data	253
9) Concluding Hypotheses	266
VI. IMPLICATIONS OF THE RESEARCH RESULTS FOR THE REGIONS	
A) Indicating Well-Being in Village Alaska	271
1) Changes in the NANA Region	271
2) Changes in the Aleutian-Pribilof Region	274
3) Household Incomes	275
4) ANCSA	276
B) The Congruence Between Indicators of Well-Being from Archival and Primary Data	276
VII. A VALIDATION AND MONITORING METHODOLOGY	
A. Limits of Inference	281
B. The Validation Procedure	288
C. Proposed Data Collection and Analysis for the Validation/Monitoring System	293
1) Longitudinal Sampling	293
2) Network Sampling the Villages	296
D. Summary of Proposed Validation/Monitoring Process	300
Bibliography	
A) Technical Bibliography	302
B) NANA Region	305
C) Aleutian-Pribilof Region	311
D) Alaska Statewide Bibliography	314

VOLUME II: TECHNICAL APPENDICES

ABSTRACT	II-1
INTRODUCTION	II-5
APPENDIX A: Field Research Protocols	II-A-1
APPENDIX B: Definition of Variables	II-B-1
APPENDIX C: Guide to Matrices	II-C-1
APPENDIX D: Aggregate Data Inventory	II-D-1

**VOLUME III: BASELINE ETHNOGRAPHIC DESCRIPTION OF NANA
AND ALEUTIAN PRIBILOF REGIONS**

ABSTRACT	III-1
INTRODUCTION	III-5
APPENDIX E: Baseline Ethnographic Description	III-E-1

ABSTRACT

The final report of the OCS Social Indicators research project reports the findings of **sociocultural** research conducted in the Northwest Alaska Native Association (NANA) and **Aleutian-Pribilof** Islands regions. The objective of this research was to conduct primary ethnographic and secondary quantitative data research in two dissimilar Alaskan regions that are represented by very different corpora of baseline data, both in quality and quantity, to ascertain how and in what ways a systematic monitoring of community well-being and stress can be conducted.

The focus of the research was broad and generalized. The research team sought to determine the general types of changes and measurements of these changes that occur along a number of socioeconomic dimensions, consequent to broadly defined social and economic adjustments and variations. Our emphasis was on the definition of social indicators that, based upon the empirical data we collected, could be used to index the varieties of **social** change and re-adjustment that are typical of both study regions. In short, we were concerned with the discovery and documentation of social variables that, as indicators, represent a broad range of social facts, and that might be used as scientific tools evaluate ongoing change in these and other regions, that can be traced to development impacts.

The study team conducted research and analysis on primary ethnographic data as well as secondary aggregate quantitative data. The contextual background for the research and analysis was established through a review of available existing data and literature in which generalizations concerning **sociocultural** trends in the study regions were developed; the result of this review is Volume III of this report: "Baseline Ethnographic Description of NANA and **Aleutian-Pribilof** Regions". Volume III is designed to provide a brief description of the populations of the **Aleutian-Pribilof** Islands (including the Alaska Peninsula villages northeast as far as **Egegik**) and the NANA regions.

Volume II which follows represents supporting documentation in the form of technical appendices to the OCS Social Indicators Study. These appendices consist of the field research protocols (Appendix A), a definition of the variables (Appendix B), a

guide to the analytic matrices that represent a consolidated statistical comparison of research variables (Appendix C), and an aggregate data inventory, titled the Present State of Community Well-Being in Two Selected Regions of Alaska (Appendix D).

The villages selected for primary field research study were Kotzebue, **Selawik**, Noatak and Kiana in the NANA region, and Unalaska, King Cove, **Nikolski** and St. George in the **Aleutian-Pribilof** region. Long time series of aggregate secondary data were also collected at both the regional and village levels. The primary field research was conducted for a period of two weeks in each village. This research was guided by data collection protocols corresponding to key domestic and institutional topics.

The aggregate and primary field data were collected independently and one **goal** was the comparison of these independent data sets to determine if aggregate time series were sensitive to impacts we could document in the field, such that selected time series might be used as monitoring indicators. Several series of data manipulations were performed on both primary field and aggregate data, creating multiple ordinal and **bivariate** matrices of comparisons after the data were sorted, coded and ranked. Finally, a smallest space analysis was conducted to identify the most conspicuous clusters of variables, and distinguish the variables that best serve as indicators of the larger clusters of variables. Concluding hypotheses were prepared that seek to account for these clustering patterns, contingent on further tests of the hypotheses at other points in time.

None of the indicators identified in this analysis are linked statistically to all variables, but rather tend to be tightly linked to variables in the clusters in which they reside*. The variables corresponding to non-governmental source of income, domestic functions and child-rearing, and household dynamics seem to indicate many other variables relating to income, subsistence and family organization (nine variables in all). In a second cluster, seven variables are indicated by our variables of earned governmental-source income, and village size;

*Nonetheless, there are many dimensions along which one or several variables may indicate other variables in other clusters.

these seven variables relate primarily to attitudes and expectations concerning political, social, and economic issues, and economic dependency. A third cluster of variables (related to income pooling and distribution, service use, economic strategies and attitudes) is best represented, or indicated by our household income variable, and a variable characterizing income source, predictability, and stability. A fourth cluster consisting of many critical variables concerning subsistence and wage practices, Westernization, and traditional patterns is strongly indicated by the variables of household size, resource pooling and sharing, and subsistence expenses. A fifth cluster of institutional variables related to institutional structure and organization in the study communities is indicated by the variables of Native institutional representation, **sodality** memberships, and perceptions of institutional control.

Judging by joint analyses of primary and aggregate data, the aggregate time series that are the most sensitive indicators of institutional and domestic changes are internal growth, school enrollments, government and private sector employment, and welfare payments; social welfare caseloads may represent another indicator.

The powerful aggregate and primary field data indicators are seen to be complementary because they overlap functionally in indicating numerous types of dependencies and the ramifications of these dependencies. Although the time series data may have less utility as indicators for a number of reasons, research showed that selected powerful events can be detected by the time series data record; specifically, the research showed that the Alaska Native Claims Settlement Act and recent 200 mile territorial limit legislation had measurable impacts evident in many time series. These findings are summarized in the concluding hypotheses along with a proposed methodology for testing the hypotheses at two additional points in time.

A research validation and monitoring methodology is proposed, based on the assumption that the social dynamics of Alaskan villages can be captured by a few key indicators and that impacts on social well-being from OCS as well as other development can be observed by measuring these indicators over time. This methodology requires that the indicator system be measured at two additional points in time in a wide variety of

villages, including a sample of villages where OCS development is unlikely and villages outside the two study regions. By analyzing the relationships among measurements in three time periods, the indicator system can be refined until it is optimally unbiased and reliable. Observation of villages unlikely to be affected by OCS activities and those outside the NANA and Aleutian Pribilof regions will ensure cross sectional control. A first round protocol is proposed to operationalize a set of preliminary indicators which can be utilized by MMS until the validation has been completed.

INTRODUCTION

Volume II (Technical Appendices) is a supporting document that provides fuller depth and detail in a technical sense that will serve the needs of audiences that require additional corroborative and supplementary materials beyond those incorporated into the main text in Volume I.

Volume II consists of Appendices chiefly devoted to analytic materials referenced but not exhaustively described in the text (e.g., Appendices A, B, and C), and a descriptive compendium or catalog of aggregate data collected and reviewed during the course of the research (Appendix D).

This Volume complements the coverage in Volume I and is designed to fill gaps that specialized audiences may identify on the basis of their specialized needs when reviewing Volume I; these gaps are intentional and are resolved through the inclusion of assorted Appendices for the sake of brevity in the main text. Volume II will in general address the needs of specialists who desire a fuller coverage of detailed technical issues. The reader is urged to consult the Volume and Volume III, as well, at any point during the review of **Volume I**.

APPENDIX A
PRIMARY FIELD RESEARCH PROTOCOLS

APPENDIX A

WORLDVIEW

This protocol should be used with five community members; one senior Native social services or health worker, two older adults identified in family discussions (age 40-50), and two youngsters (age ca. 10-16).

Work with the discussant in summoning up a **fictional exemplar** or caricature, a personal scenario, of a person who represents the "good life", proper upbringing, and the traits that are associated with respect, maturity, and balanced outlook. Record the fictional, idealized portrait. Make sure that the following themes are covered.

- (1) How does a person get to be that way?
- (2) What are the skills or resources that are necessary for achieving that state? Endurance, faith, determination, modesty, etc.
- (3) Is it easier or harder now for people to achieve this?
- (4) Why?
- (5) Whose responsibility is it for helping a person achieve this? Self alone, parents, friends, etc.
- (6) When the respondent was younger, or **even when the** respondent's parents were children, is it likely that such a portrait would have been different?
- (7) How and why?

INSTITUTIONAL PROTOCOL: ECONOMICS

To be used to elicit information from representatives of key economic institution networks in each village. A federal, a regional corporation, and a village official **should** be interviewed.

- (1) Is it profit or non-profit?
 - a. Is it profit or non-profit?
 - b. What does **it** own?
 - c. **Who** works for it and in what capacity?
- (2) Is the regional corporation represented in the village?
 - a. What are the current and past village relations to the regional corporation?
 - b. Have disputes occurred between village and regional corporation?
 - c. Do village members serve on the regional board?
 - d. What does the regional corporation own?
 - e. What does it control?
 - f. Who works for it?
- (3) **Is** there an **Indian** Reorganization Act tribal council?
 - a. Does it have a Charter to conduct business for the village?
 - b. Does it administer federal funds allocated to the village?
 - c. Does it seek grants, contracts and the like?
 - d. **What** are the **IRA** government's relations to the regional corporation and to other forms of Native government?
 - e. What are the relations to the state government? Does it seek aid from the State of Alaska?
 - f. Does the state exercise any economic (financial) authority over the IRA government?
- (4) Is there a city council?
 - a. **Is** the city council independent of an **IRA** government's authority even if an IRA government is established in the village?
 - b. What does the city council own?
 - c. What does it control?
 - d. Who is employed by the city council (# of whites, number of natives)?
 - e. **What** types of positions are **filled** by whites? by natives?
 - f. **Where** does the city council obtain its resources, finances, or income?

Economics
Continued

- (5) Do private corporations and businesses operate within or nearby the village?
- a. Are they native-owned or not native-owned?
 - b. **Who** controls them?
 - c. Who is employed by them, and in what capacity?
 - d. Where does ownership reside (locally or in absentia)?
 - e. Where do profits accumulate (locally or in absentia)?
 - f. Do jobs and profits provide a local multiplier? Of what magnitude?
 - g. Are such businesses or corporations either controlled or influenced by any form of native government (city council, IRA government) or native corporation (profit, non-profit, regional)?

For each above question, please ask:

- (1) What are sources of money?
- (2) What are the financial pooling and distribution practices?
- (3) What is the calendar of income and disbursement (within the various fiscal years)?
- (4) Where does it go? What does it pay for?

ECONOMIC INSTITUTION: OTHER DATA OF POTENTIAL VALUE

Minutes of shareholders' meetings (regional and village) may indicate community pleasure, displeasure, ambivalence, or naivete (lack of information) about economic programs. Minutes may provide clues, confirm, or contradict data culled from interviews with key personnel in the economic networks, and with people interviewed in the family-household networks.

Inventory for 3 year span:

- (1) What measures or proposals or resolutions were offered?
- (2) What was voted on and what were the results?
- (3) Election results?

INSTITUTIONAL PROTOCOL: POLITICAL

About three key representatives of political networks should be interviewed. These might include a member of the city council, the IRA government, someone from a key advisory board (Coastal Zone Management, Regional Corporation, Fish and Game, School Board).

(1) Is there a city council?

- a. How are council members sat (elected, appointed, other)?
- b. Are there disputes within communities about council actions?
- c. How are disputes resolved?
- d. Do elected or appointed officials resign?
- e. Are political or factional disputes the causes of resignations/acrimony and related problems?

(2) Develop a list of advisory boards that operate within the community?

- a. Rank order the boards in terms of their activities.
- b. Evaluate the boards in terms of their influence on the agencies and colorations they advise.
- c. Are there disputes within communities about the actions of their advisory boards?
- d. How do board members perceive and/or advocate community rights and interests?
- e. Which board elections are highly contested? Why?

(3) List all boards in the community.

Example: Fish and Game, Regional Corporation, Coastal Zone Management, School.

(4) Is there an Indian Reorganization Act government? (see the economic institutional protocol).

- a. How and why are **people** elected?
- b. Are there disputes or concerns over the concentration of power (factional disputes within the community) among some people in the IRA government?
- c. How are political disputes resolved?

- (5) Village officials should be asked how villagers use the helping services and whether they direct villagers, on request or in any other way, to use those services. An inventory should be collected from village officials. These data will provide important cross checks against data collected from family-household interviews, and data collected directly from helping services personnel .

POLITICAL INSTITUTION: OTHER DATA OF POTENTIAL VALUE

Minutes of the IRA government, city council, or both, could be valuable in assessing policies, disputes, persons involved in disputes and disagreements, and the manner in which issues are resolved.

Inventory for the last 3 year span:

- (1) All issues resolutions offered.
- (2) Results of votes on above.
- (3) Elections - special detail on close elections and run-offs.

INSTITUTIONAL PROTOCOL: EDUCATION

About three key people should be interviewed among the following educational institutions and networks: Community Advisory School Committee, **School** Board, School District Administration and **local** school teachers.

- (1) **Who** determines curriculum? Prepare a description of the curriculum.
- (2) See economics and political protocols.
- (3) What educational resources and facilities are available in each village?
- (4) Do courses that are taught within the village prepare a person for a job or occupation in the village? outside the village?
- (5) Do courses prepare persons for ownership, management, labor?
- (6) See political protocol.
- (7) What are the goals of education in the village that are expressed by **key** personnel. **Do** the goals that are specified for the village differ from the personal **goals** of education as envisaged by the key personnel for themselves?
- (8) Do key persons in the educational institution recognize a disjunction between what parents say they want for their children in the way of an education **and** the direction and support that they provide the children in obtaining those educations? In what ways? Who senses disjunctions? Are the various perceived disjunctions the same for different observers? What causes the disjunctions? **Whose** job is it to do something about them? What have you done to address them?
- (9) Are there dissonances, or contradictions, among what adults say the goals of education are, **parental-**family practices, and the goals of the education system? (Related questions will be asked of parents).

Does the educational system recognize (admit) the contradictions? Do the adults notice the contradictions? What do they respectively attribute them to? Are goals persistent and durable, or do they change rapidly, year-to-year, etc? What contradictions are there **regarding** families vs. educational system and what contradictions are there

within/between families, or between spokespersons for the educational system?

- (10) (For ASC rep's in village). Do parents or students come to you with requests or ideas about education in your village? Describe.
- (11) For the last 3 year span, investigate results/minutes of regional school board meetings.
 - a. Inventory issues or resolutions offered to a vote, or for action.
 - b. Inventory results of above.
 - c. Inventory election results within number votes case for each candidate - detail the close elections and run-offs.

OTHER SOURCES OF DATA WITH POTENTIAL VALUE: EDUCATION

Minutes of school board meetings may focus on curriculum goals, opinions about teachers and administrators, expectations of parents and administrators, disputes and disagreements about policies and the like. (See #11 above).

INSTITUTIONAL PROTOCOL: HELPING SERVICES

Researchers should begin by compiling an inventory of each village's agencies, facilities, staff, programs, budgets, and utilization.

Subsequently, interviews should be conducted with key personnel from each of several agencies, at **least** one representing physical health or mental health, one representing social services-- including manpower and youth services--one representing police functions, and one representing housing or housing improvements, such as **winterization** or development programs.

- (1) What are the objectives of your agency?
- (2) Why does your agency collect the statistics that it collects, and how do those statistics reflect the problem with which your agency copes?
- (3) Tenure of staff members. Which ones leave, who stays, and why? Do they "burn out"? Why? (Maybe able to infer how key personnel perceive the communities that they serve).
- (4) How would you rate the success of the program for which you work? What are the reasons for your rating?
- (5) Who runs the agency, **i.e.**, where is control localized and who makes major decisions for the agency? Is control in Juneau, Anchorage, Washington, **D.C.** or the local village?
- (6) How does staff perceive the problems of clients? What are the causes and can they be solved?
- (7) What do you need to make the program more successful?
- (8) Do you direct clients to other agencies for services? What are your relations to those other agencies? What percentage of your clients are using other services in the community? What are referral procedures across agencies? How do you coordinate services among agencies? **Is** it done by a key person in community other than employees of any agency?
- (9) Using records and directed questions, develop a brief history of the service programs that you document.

How were they originally conceived? Who authorized and planned them? Did they assume older services or did they bring new services that had not been available? If the former, why were the services assumed? Who controlled them?

CLIENT INTERVIEWS: HELPING SERVICES

An important perspective on the helping services and the factors that cause or influence people to use them, both of which may indicate community well-being, can be obtained from interviewing clients at hospitals, clinics and jails.

Some of the questions that are asked of the key personnel in the helping agencies can be compared with responses to similar questions posed to clients. See the Institutional Protocol: Helping Services.

For clients, identify 5 representing different services and ask:

- (1) What is the objective or purpose of the service program.
- (2) How successful is the program? How can you tell?
- (3) Who controls the program?
- (4) What would make the program better?
- (5) What causes the problems that make people need the services in the first place.

INSTITUTIONAL PROTOCOL: MODALITIES, CLUBS, ASSOCIATIONS

To be used in eliciting information from representatives of key modalities, clubs, and associations in the community after an inventory of all such groups is made. One or two interviews may suffice.

- (1) Develop an inventory of **all** known modalities, **clubs**, and associations. Some of these groups may be invisible, or faintly visible, but direct questioning of members of some groups about the nature of other groups may fill in the picture.
- (2) The inventory should include the following information about each sodality, club, and association:
 - a. approximate number of members.
 - b. goals of the organization.
 - c. approximate number of formal activities in which members participate each year.
 - d. the way in which membership is obtained:
 - self-selection/volunteer.
 - nominati on-el ecti on.
 - birth or some other ascriptive means.
 - e. preconditions, if any, to membership:
 - prior residence in a different village.
 - long-term residence in community.
 - membership in a particular religion, political party or the like.
 - f. **Intitial** procedures, if any.
 - g. Conduct of group:
 - secret meetings only.
 - public meetings only.
 - secret and public meetings.
 - h. Performance or activities other than meetings.
 - secret.
 - public.
 - secret and public.
 - i. Relations among clubs, modalities, assoc.
 1. **Is** each a sodality in the community, say, independent of every other in goals, activities, and membership, or are there overlaps?
 - 2* Overlaps can be of two kinds: overlapping membership, and overlapping activities (perhaps even coordinated activities). Some sense of how many join, and what activities the members participate in after joining will be helpful .

For respondent, ask: **What** other clubs or associations do you belong to? What about other people in your group?

3. Important to determine whether clubs, modalities, and associations are local chapters or more widely distributed organizations, or whether they are sole organizations exclusive and particular to the village in question. If they are local chapters of larger organizations, pay special attention to (a) local goals and activities, and (b) amount of coordination with, and activities conducted in conjunction with, other chapters of the same organization.
-
- j. Issues that exercise the modalities, i.e., the issues which are addressed by one or more modalities per year should be assessed. In particular the issues that animate members of clubs, modalities, or other associations, should be compared with the goals of those clubs, and we should seek to learn whether some issues cut across all or most clubs, animating networks of people whose memberships are in different organizations.
 - k. Brief history of the groups, narrative format developed through questions above.

INSTITUTIONAL PROTOCOL: RELIGION

An inventory of formal, established religions should be made, collecting data *on* membership, observing the size of weekly attendance. One or two religious functionaries - priests, ministers, missionaries, or the like should be interviewed to determine:

(1) The different roles that the church serves in the community.

- a) Does it provide social services, welfare, counseling, money for the needy? Does it do this officially, or "under the counter"?
- b) Does it serve as a broker, or as a conduit to state and federal helping service agencies, referring needy or troubled persons and families to those agencies?
- c) Does it provide counsel and help to people referred to them by state and federal agencies?

(2) The functionary should be asked about the nature and extent of **lay** participation in religious activities. Elaborate. Do **people** volunteer? Are they appointed? Role rotate?

(3) If extra-curricular activities are organized by **co-religionists** that stem from their common membership in the same church, determine what these groups are and what they do (singing, sewing, sponsoring games or feasts, visiting **invalids**, and the like). Is this considered by participants to be a "church" activity?

Questions should also be asked regarding religious movements (Charismatic Christians, native prophets, or such) are operating in the community. If so, seek to determine:

(1) The issues around which the movement is formed.

(2) **Its** goals.

(3) Its participants.

(4) The manner in which adherents of such movements interact with non-members in the community (proselytize? shun? exhort?)

(5) The manner in which members define the problems of the village, or the region, or the world.

(6) The manner of formation. Where these missionaries etc. invited? By whom? Are they local? Where did they come from? When?

(7) Brief history of central religious group(s) in area. What do they do now that they did not before? What did they do before that they do not now?

(8) Identify one or two central Church leaders. Document the other community **roles** that they participate in.

NOTE: Be sensitive to informal and formal social movements with **religious** overtones. Religious movements often occur when people sense life obstacles, and they sense resistance to changing the **obstacle**, and from the obstacle. The movement may be transcendent, reformative, etc., and may have political overtones.

(4) What were their reasons for locating in the current village?

- a) Job? Requests from kin or wife's kin? Access to subsistence resources?

Composi ti on:

(1) Who resides in the household? Prepare chart and/or list of names and relations.

(2) Relations among kin, **affines**, and non-kin, including adoptive members-, should be determined.

(3) Document status of family member not present in household. Have respondent define their limits of "family". Where are they, what other communities? **In** hospital? Deceased? Unknown? Did these family members live with you before?

(4) Domestic functions of each members should be assessed:

- a) Participation in child rearing; teaching - **verbally** or by **perceptnative** ways; participating in education (formal); providing counsel and moral guidance cleaning house; preparing clothing; preparing **meals**; repairing house, **boats, etc.** Inventory.
- b) Document verbal reports with observation over time.

Dynami cs:

(1) Age of household head.

(2) Time when children **are** expected to leave.

(3) Ease of return to a natal household after once leaving.

(4) Conditions under which people, kin **affines**, or non-kin leave and return to household, or under which new members might join.

Confli ct Resol uti on:

(1) Are there fights in households? **What** happens? Who resolves them?

(2) Do people seek help at church, at state or federal agencies? Do people seek help from residents of other households? **Who** are they?

(3) Is there heavy drinking in household? Does drinking precipitate fights?

(4) Are responsibilities shirked?

(5) Are wives, children, or the aged beaten? By whom? Are helping services used in such instances? Double check with the helping services.

(6) Is there ambivalence about the paternity of any of the children in the household?

(7) Do women talk about rape? Does or has rape occurred to women in the households?

(8) Check verbal reports against observations over time.

Club-Sodality Membership:

(1) To what clubs, modalities, or associations do members of the household belong?

(2) What is (are) the purpose(s) of the club(s)? "

(3) Why did members of the household join such clubs?

(4) Do they associate with members of the club in activities other than club activities?

(5) Where do you/they meet?

Family Rituals:

(1) Who were the members of the family named after?

(2) Why were they so named?

(3) What are the obligations associated with the names?

(4) What do you celebrate? Inventory. Where do you celebrate these things? Who else with?

Helping Services:

(1) Provide an inventory of the services available in the village or region and determine which ones are used by the respondent, under which circumstances, and why.

A list will probably include the following: IHS Hospital (Kotzebue, Anchorage) IHS Clinics; IRS Health projects, mental health services, state social services regional alcohol and substance abuse programs, manpower, winterization program, weathrization program, fuel projects, housing improvement projects, credit union, regional credit unions, community health

aids, search and rescue programs, domestic violence programs, teen center . . .

For each service used by family, ask: What is the purpose of that service? Does the program work? How can you tell? Who controls the program? What would improve the service? What causes the problems that make people use the service in the first place?

Education:

- (1) Ask particular questions of parents about:
 - a) What they expect the children to achieve in school.
 - b) The importance of schooling.
 - c) The relation between schooling and accomplishing, including financial solvency and success.
 - d) The effectiveness of **the** local school. Does education prepare people for jobs? Which? In what way?
 - e) The manner in which they encourage, direct, or admonish their children to study, or help them in their exercises, and the like. Double check these responses with information from teachers and principals.
 - f) See ed **protocol** for questions regarding contradictions, dissonances. Ask these questions of parents.

Fictive Kinship:

- (1) Are fictive terms used? (Namesakes, **etc**).
- (2) What is the purpose of each use?

Friends-Peer Groups:

- (1) Determine who they are for a couple of members of the family.
- (2) Determine whether they like and help the respondent.
- (3) Determine whether they also **dislike** the respondent and let him (her) down on occasion.

APPENDIX B

VARIABLE **CODE** DEFINITIONS

APPENDIX ?3

VARIABLE CODE DEFINITIONS

PROTOCOL TOPIC NUMBER	VARIABLE NUMBER	SPSS VARIABLE NAME	DESCRIPTION AND CODES
	1	RESP I D	RESPONDENT ID NUMBER
	2	12ARDN01	CARD NUMBER 1. first card
	3	VI LLNO	VILLAGE NUMBER 1. Unalaska 2. King Cove 3. St. George 4. Nikolski 5. Kotzebue 6. Kiana 7. Noatak 8. Selawik 9. Not ascertained
		REGNO	REGION NUMBER 1. Aleutians 2. NANA 9. Not ascertained
	5	EI COMP	ECONOMIC INSTITUTION COMPOSITION/VILLAGE 1. Federal majority (IRA, Native corps etc.) 2. State majority (city council, AK corps etc.) 3. both 9. Not ascertained
		EIPART	ECONOMIC INSTITUTION PARTICIPATION/VILLAGE 1. Natives primary reps

		<ul style="list-style-type: none"> all institutions 2. Natives not primary reps all institutions 9. Not ascertained
7	EICOORD	<p>ECONOMIC INSTITUTION COOP and COORD</p> <ul style="list-style-type: none"> 1. low coop, low coord 2. low coop, high coord 3. high coop, low coord 4. high coop, high coord 9. Not ascertained
	EIREV	<p>ECONOMIC INSTITUTION REVENUES</p> <ul style="list-style-type: none"> 1. low reliance local rev 2. mod reliance local rev 3. high reliance local rev 9. Not ascertained
	POLDIS	<p>POLITICAL DISPUTES</p> <ul style="list-style-type: none"> 1. most common w/less rank institutions 2. most common w/high rank institutions 3. approx. equal 9. not ascertained
10	POLDCAUS	<p>CAUSE OF POLITICAL DISPUTE</p> <ul style="list-style-type: none"> 1. money 2. other issues; pol fact. 3. personalities; domest. factions. 4. 1 and 2 5. 1 and 3 9. Not ascertained
11	EDAD	<p>LOCAL ADEQUACY OF EDUC- ATION/CURRI CULUM</p> <ul style="list-style-type: none"> 1. generally no 2. generally yes

12	EDDIS	<p>3. sometimes/some areas EDUCATIONAL DISJUNCTION</p> <p>1. conspicuous - noted by most respondents or by researcher</p> <p>2. not conspicuous</p> <p>3. marginal/sometimes</p> <p>9. not ascertained</p>
13	SERTEN	<p>TENURE OF SERVICES STAFF</p> <p>1. turn-aver/burn out is identified as a problem w/permanent jobs</p> <p>2. turn-over/burn out seldom identified</p> <p>9. not ascertained</p>
14	SERCON	<p>CONTROL OF SERVICES</p> <p>1. control perceived to be local/regional</p> <p>2. central perceived to be external</p> <p>9. not ascertained</p>
15	SERPER	<p>SERVICE PERCEPTIONS OF CLIENTS</p> <p>1. problems perceived on individual basis</p> <p>2. problems perceived socially</p> <p>3. problems seen in diffuse manner: fate, environmental, etc.</p> <p>9. not ascertained</p>
16	SERREF	<p>SERVICE REFERRALS</p> <p>1. majority of clients have referrals</p> <p>2. majority of clients do not have referrals</p> <p>9. not ascertained</p>

- | | | |
|----|---------|---|
| 17 | SODOV | SODALITY MEMBERSHIP
OVERLAP
1. most memberships
overl ap
2. most memberships do not
overl ap
9. not ascertained |
| 18 | SODISS | SODALITY ISSUES
1. generally, one issue/
goal per sodality
(bounded)
2. generally, issues/goals
overlap, are shared
9. not ascertained |
| 19 | RELMEM | RELIGION MEMBERSHIP
1. church memberships
highly stable
2. church memberships in
flux - at least one is
growing or diminishing
9. not ascertained |
| 20 | RELPART | RELIGION LAY PARTICIPATION
1. chiefly volunteer
2. chiefly appointment
3. mix
9. not ascertained |
| 21 | RELLEAD | RELIGION LEADER ROLES
1. generally, leaders
have other critical
roles in other soc.,
econ. , pol. areas
2. generally, church
leaders do not have
these other roles
9. not ascertained |

**FAMILY/HOUSEHOLD
DATA**

ECON

	22	HINC	HOUSEHOLD INCOME
			1. 0 - 20,000
			2. 20,001 - 30,000
			3. 30,001 - 40,000
			4. 40,001 - 60,000
			5. 60,001 +
			9. not ascertained
COMP 1	23	HSIZE	HOUSEHOLD SIZE
			1. 1-3
			2. 4-6
			3. 7-10
			4. 11 +
			9. not ascertained
ECON 1-4	24	I NSTAB	INCOME STABILITY AND PREDICTABILITY
			1. unstable and un- predictable
			2. unstable and predictable
			3. stable and un- predictable
			4. stable and predictable
			9. not ascertained
ECON 5-8	25	INSTRAT	INCOME AND LABOR STRATEGIES
			1. local pooling and accumulation (in the household}
			2. local pooling and distribution {internal and external)
			3. local and regional pooling and distribution
			9. not ascertained
ECON			

9	26	HAREX	<p>SUBSISTENCE HARVESTING EXPENSE</p> <ol style="list-style-type: none"> 1. low (0-9% of est. income) 2. medium (10% - 19% of est. income) 3. high (20% + of est. income) 9. not ascertained
ECON 10	27	DEVEX	<p>DEVELOPMENT EXPECTATIONS</p> <ol style="list-style-type: none"> 1. chiefly local benefits and control 2. chiefly external benefits and control 3. balanced mix 9. not ascertained
ECON 11	28	ECCON	<p>ECONOMIC CONFLICTS</p> <ol style="list-style-type: none"> 1. no perceived conflict 2. most conflicts seen as Native vs. non-Native 9. not ascertained
ECON 12	29	SUBS	<p>SUBSISTENCE HARVESTS</p> <ol style="list-style-type: none"> 1. harvest and/or consume 2+ species each of fish vegetables fowl land, and sea mammals 2. one specie each 3. less than one in each category (i.e. less than five varieties in all) 9. not ascertained
RES 1-4	30	RES	<p>RESIDENCE PATTERN</p> <ol style="list-style-type: none"> 1. household adults born in same region but not

			<ul style="list-style-type: none"> same subregion 2. adults born or raised in same subregion, but not same village 3. adults born in the same village 4. adults born or raised not in same region 9. not ascertained
COMP			
4	31	DOMF	DOMESTIC FUNCTIONS AND REARING <ul style="list-style-type: none"> 1. traditional child-rearing and gender distinctions 2. Western child-rearing and gender distinctions 3. non-distinct or blend 9. not ascertained
DYN			
1	32	HHEAD	AGE OF HOUSEHOLD HEAR <ul style="list-style-type: none"> 1. under 25 2. 25-40 3. 41-50 4. 51+ 9. not ascertained
DYN			
2-4	33	HDYN	HOUSEHOLD DYNAMICS/ COMPOSITION-MOVEMENT <ul style="list-style-type: none"> 1. fluid household (open options, no set expectations) 2. non-fluid household (structured, clear expectations, rule-

			ordered)
			9. not ascertained.
CON			
1 -8	34	CONFL	HOUSEHOLD CONFLICT
			RESOLUTION
			1. passive internal
			resolution (dialogue,
			withdrawal)
			2. active internal
			resolution (rewards,
			punishment, fights)
			3. informal external
			resolution (advice from
			relatives assistance
			from friends, informal/
			nonformal resources)
			4. formal external
			resolution (helping
			services)
			9. not ascertained
SOD			
1	35	SODMEM	SODALITY MEMBERSHIP
			1. 2+ memberships in home
			2. 1 membership in home
			3. no memberships
			9. not ascertained
SER			
1	36"	SERVUSE	SERVICE UTILIZATION
			1. seek health and/or
			financial services
			primarily
			2. seek family and social
			services primarily
			3. avoid services
			9. not ascertained
ED			
1	37	EDUC	SCHOOLING AND SUCCESS
			1. good association between

			<ul style="list-style-type: none"> school and success 2. occasional association between school and success 3. no association 9. not ascertained
DIV	38	DIV	<ul style="list-style-type: none"> DIVORCE/SEPARATIONS 1. broken unions exist in household 2. no broken unions 9. not ascertained
REL	39	RELIG	<ul style="list-style-type: none"> RELIGIOUS PARTICIPATION IN HOUSEHOLD 1. active in church and extracurricular relig. activities 2. active in one or the other 3. not active 9. not ascertained
HEA	44	NATHEA	<ul style="list-style-type: none"> USE OF NATIVE HEALERS 1. use Native healers 2. do not use Native healers 9. not ascertained
HOU	41	HOUSE	<ul style="list-style-type: none"> HOUSE CONDITIONS 1. all utilities present, working 2. one/only some utilities present, working 3. no utilities present and/or working 9. not ascertained
POL	42	POLPRT	<ul style="list-style-type: none"> POLITICAL PARTICIPATION

POL 43
4

POLISSUE

IN HOUSEHOLD

1. 2 or more official

capacities at present
in household

2. 1 official capacity at
present

3. no official capacities

9. not ascertained

**POLITICAL ISSUES
IDENTIFIED**

1. correct issues ident-
ified, 3+ service-
related

2. correct issues ident-
ified, 3+ political/
power/authority-related

3. correct issues
identified, evenly
divided

4. incorrect issues
identified or no issues
for two or more

9. not ascertained

END FAMILY PROTOCOL

START WORLDVIEW

(use columns 1-22 to identify respondent

and typify village)

1-2	44	ETHOS	ELEMENTS OF ETHOS 1. traditional 2. Western (Christian, competition, achieve- ment , etc.) 3. both 9. not ascertained
3	45	ETHCH	DIFFICULTY OF ACHIEVEMENT 1. easier 2. harder 3. neither 9. not ascertained
4	46	CHREA	REASON FOR THE CHANGE 1. people are different now 2. times/history different 3. neither 9. not ascertained
5	47	ETHRES	RESPONSIBILITY FOR ATTAIN- MENT 1. self 2. self and others 9. not ascertained

STOP WORLDVIEW

CLIENT PROTOCOL BELOW
(use columns 1-22 to identify
the client and typify the village)

48		P TYPE	TYPE OF PROGRAM 1. health 2. <i>emergency</i> non-health 3. housing and energy 4. social services 9. not ascertained
1	49	P OBJ	PERCEIVED PROGRAM OBJECTIVE 1. same or equivalent to

			<ul style="list-style-type: none"> actual goal 2. goal incorrectly identified 9. not ascertained
3	50	PCONT	<p>PERCEIVED CONTROL OF PROGRAM</p> <ul style="list-style-type: none"> 1. seen as local /regional 2. seen as external 9. not ascertained
5	51	PCLIE	<p>PERCEPTIONS OF THE PROBLEMS OF PROGRAM CLIENTS</p> <ul style="list-style-type: none"> 1. individualized 2. social causes 3. diffuse causes - fate, environment, etc. 9. not ascertained
STOP CLIENT PROTOCOL			
NEW VARIABLES			
52		VSIZE	<p>VILLAGE SIZE</p> <ul style="list-style-type: none"> 1. small (less than 500 pop.) 2. large (500 +) 9. not ascertained
53		HARP	<p>HARVESTED PROTEIN PROPORTION OF HOUSEHOLD DIET</p> <ul style="list-style-type: none"> 1. less than 50% 2. 50%-75% 3. 76% + 9. not ascertained
54		UPRO	<p>UNEARNED PROPORTION OF INCOME (welfare, etc.)</p> <ul style="list-style-type: none"> 1. 50% +

		2. 1%-49%	
		3. none	
		9. not ascertained	
55	EPRO	EARNED PROPORTION OF INCOME	
		1. none	
		2. 1%-49%	
		3. 50% +	
		9. not ascertained	
56	GINC	GOVERNMENTAL SOURCE OF EARNED INCOME (State, Fed. , local government wages)	
		1. less than 50%	
		2. 50% +	
		9. not ascertained	
57	NGINC	NON-GOVERNMENTAL SOURCE OF EARNED INCOME (all other classifications)	
		1. less than 50%	
		2. 50% +	
		9. not ascertained	

APPENDIX C

GUIDE TO FOUR MATRICES OF
PRIMARY FIELD **RESEARCH** VARIABLES

APPENDIX C

GUIDE TO FOUR MATRIXES OF PRIMARY FIELD RESEARCH VARIABLES

The following four lists provide information **as** to how the attribute sets within each variable were organized (combined in various ways and various orders) in each matrix. The **original** organization of the variables from which each of the four succeeding lists were obtained can be found in Appendix D (variable code definitions).

The conventions used in reorganizing (combining and/or **altering** the order) the attributes within a variable follow.

(a) In combining attributes colons (:) distinguish **attributes**, while commas (,) are used to designate members of the same attribute, e.g., 1, 3:2. In this example attributes 1 and 3 are combined and distinguished from 2 to create a variable with two rather than three mutually exclusive and mutually inclusive attributes.

(b) In altering the order of attributes within a variable, the new ordering is read from left to right, e.g., 2:1:4:3. In this example attribute 2 precedes 1 **which** precedes 4 which precedes 3 in that order.

(c) In altering and combining attributes both conventions (a) and (b) are employed, e.g., 1:3:2,4. In this example, originally composed of four mutually exclusive attributes arranged in the order 1:2:3:4 is reorganized into three mutually exclusive attributes in which 1 precedes 3, and 3 precedes 2 and 4, which have been combined.

(d) "as is" refers to the variable code as it appears in Appendix D.

FIGURE a1

ORDINAL VARIABLE LIST

1)	V04	as is
2)	V22	1:2:3, 4, 5
3)	V23	as is
4)	V24	as is
5)	V25	as is
6)	V26	as is
7)	V27	1:3:2
8)	V28	as is
9)	V29	as is
10)	V30	2, 3:1, 4
11)	V31	1:3:2
12)	V32	as is
13)	V33	as is
14)	V34	as is
15)	V35	as is
16)	V36	as is
17)	V37	as is
18)	V38	2:1
19)	V39	as is
20)	V40	2:1
21)	V42	as is
22)	V43	as is
23)	V52	as is
24)	V53	as is
25)	V54	as is
26)	V55	as i s
27)	V56	as is
28)	V57	as is

FIGURE b

DICHOTOMOUS VARIABLE LIST I

1)	V04	2:1
2)	V22	1, 2:3, 4, 5
3)	V23	2:1, 3, 4
4)	V24	2:1, 3, 4
5)	V25	1, 2:3
6)	V26	1:2, 3
7)	V27	1, 3:2
8)	V28	as is
9)	V29	1:2, 3
10)	V30	2, 3:1, 4
11)	V31	1:3, 2
12)	V32	2:1, 3, 4
13)	V33	as is
14)	V34	1:2, 3, 4
15)	V35	1:2, 3
16)	V36	1, 2:3
17)	V37	1, 2:3
18)	V38	2:1
19)	V39	1, 2:3
20)	V40	as is
21)	V42	1:2, 3
22)	V43	2:1, 3, 4
23)	V53	1, 2:3
24)	V54	1:2, 3
25)	V55	1, 2:3
26)	V56	as is
27)	V57	as is

TABLE b1

DICHOTOMOUS VARIABLE LIST I

Tau-Betas for 27 variables. **Guttman-Lingoes** Smallest space coordinates for **M = 3** (semi-strong **monotonicity**).

Variable	DI MENSION			
	1	2	3	
V04	-83.924	-23.555	-15.054	90.539
V22	60.555	-29.193	-49.229	60.638
V23	- 6.415	77.684	-93.799	111.657
V24	-81.272	27.627	25.124	110.894
V25	940597	47.881	-45.119	110.110
V26	99.734	5.931	-62.165	101.977
V27	15.120	23.168	31.532	73.708
V28	48.747	-13.047	26.728	72.796
V29	-100.000	-30.342	-40.048	106.284
V30	-21.513	-49.734	24.773	71,322
V31	6.266	-84.222	-15.813	71.804
V32	-79.767	55.434	-76.667	118.456
V33	- 5.212	-48.507	-83.378	63.282
V34	-34.618	-59.698	-76.488	75.323
V35	-42.667	-64.858	-23.354	69.840
V36	70.761	- 6.380	-27.581	66.646
V37	100.000	-15.170	19.248	107.910
V38	7.182	-68.238	-37.233	54.529
V39	42.678	-36.508	-100.000	81.742
V40	-94.524	-16.129	- 2.157	103.368
V42	-15.744	11.565	-81.147	59.757
V43	-65.614	24.181	- 7.800	83.376
V53	47*473	62.586	-60.944	922.731
V54	67.194	-82.018	-10.822	94.539
V55	68.146	-82.683	- 9.845	95.860
V56	36.126	93.471	18.921	122.773
V57	- 7.412	-100.000	-69.967	95.014

Guttman-Lingoes' coefficient of alienation = 0.19610 in 25 iterations. **Kruskal's** stress = 0.17834.

FIGURE C

DICHOTOMOUS VARIABLE LIST 11

1) V04	2:1
2) V22	1:2, 3, 4, 5
3) V23	1, 4:2, 3
4) V24	2, 4:1, 3
5) V25	1:2, 3
6) V26	1:2, 3
7) V27	1, 3:2
8) V28	as is
9) V29	1, 2:3
10) V30	2, 3:1, 4
11) V31	1, 3:2
12) V32	2:1, 3, 4
13) V33	as is
14) V34	1:2, 3, 4
15) V35	1, 2:3
16) V36	1, 2:3
17) V37	1:2, 3
18) V38	2:1
19) V39	1:2, 3
20) V40	as is
21) V42	1, 2:3
22) V43	1, 2, 3:4
23) V53	1:2, 3
24) V54	1:2, 3
25) V55	1, 2:3
26) V56	as is
27) V57	as is

Table c1

DICHOTOMOUS VARIABLE LIST II

Tan-Betas for 27 variables. **Guttman-Lingoes'** smallest space coordinates for M=3 (semi-strong **monotonicity**).

VARIABLE	DIMENSION			
	1	2	3	
V04	-95.318	-31.010	-32.619	97.337
V22	76.007	1.090	-44.386	78.634
V23	46.084	38.693	-82.399	87.575
V24	-84.067	46.585	-53.793	106.356
V25	92.175	-30.199	-31.381	93.503
V26	100.000	- 3.330	- 5.290	102.893
V27	-23.165	-28.422	-96.550	73.414
V28	37.416	-39.893	20.697	67.330
V29	-94.383	-48.747	- 7.481	103.340
V30	- 2.976	-65.262	-81.845	74.527
V31	21.126	19.845	37.828	80.390
V32	-72.357	16.300	64.535	121.787
V33	-23.234	-79.874	15.900	83.634
V34	-21.702	-55.330	27.963	73.976
V35	-71.993	-12.201	-100.000	101.542
V36	55.745	3.701	19.803	75.567
V37	87.690	-55.254	-21.453	97.296
V38	- 0.699	-89.256	-32.557	76.228
V39	- 9.713	-73.152	-45.588	63.150
V40	-100.000	- 5.941	-39.214	101.089
V42	- 7.180	61.247	24.294	91.622
V43	-75.175	24.391	-44.674	85.777
V53	35.328	86.285	- 8.549	107.320
V54	55.375	-13.112	-90.160	82.552
V55	55.630	-12.333	-91.083	83.414
V56	2.021	90.597	-58.936	108.067
V57	14.969	-100.00	-17.465	88.810

Guttman-Lingoes' coefficient of alienation = 0.18572 in 25 iterations. **Kruskal**'s stress = 0.17011.

FIGURE d

INSTITUTIONAL VARIABLE LIST

1)	V04	2:1
2)	V06	as is
3)	V07	as is
4)	V09	1:3:2
5)	V10	1:3:2:5:4
6)	V11	1:3:2
7)	V13	2:1
8)	V14	as is
9)	V16	2:1
10)	V17	as is
11)	V19	as is
12)	V40	as is
13)	V44	1:3:2
14)	V47	2:1
15)	V49	as is
16)	V50	as is
17)	V52	as is

APPENDIX D

THE PRESENT STATE OF COMMUNITY WELL-BEING IN
TWO SELECTED REGIONS OF ALASKA

TABLE OF CONTENTS

Introduction

Section I: **General Data** Review

A. Population

1. Aleutian Islands
2. **Kobuk** (NANA)
3. Statewide
4. **Active Duty Military**
 - a. Aleutian Islands
 - b. **Kobuk** (NANA)
 - c. Statewide

B. **Births**

1. **King** Cove
2. **Nikolski**
3. St. George
4. **Unalaska**
5. **Kiana**
6. Kotzebue
7. Noatak
8. **Selawik**
9. **Aleutian** Islands
10. NANA

c. School Enrollment

1. By Grade Level

- a. King Cove
- b. **Nikolski**
- c. St. George
- d. **Unalaska**
- e. **Kiana**
- f. Kotzebue
- g. Noatak
- h. **Selawik**

2. Totals

- a. King Cove, **Nikolski**, St. George
Unalaska and **Region**
- b. **Kiana**, **Kotzebue**, Noatak,
Selawik and **Region**

Section II. Social Indicators Review

A. Deaths

1. King Cove
2. Nikolski
3. St. George
4. Unalaska
5. Kiana
6. Kotzebue
7. Noatak
8. Selawik

B. Deaths by Suicide

1. Aleutian Islands
- 2* NANA

C. Deaths by Homicide

1. Aleutian Islands
2. NANA

D. Deaths by Accident

1. NANA

E. Social Services Cases

1. King Cove
2. Nikolski
3. St. George
4. Unalaska
5. Kiana
6. Kotzebue
7. Noatak
8. Selawik

F. Social Security:

Old Age, Survivors, Disabled Insurance (OASDI)

1. Monthly Beneficial'ie~
 - a. Aleutian Islands
 - b. NANA
2. Monthly Payments
 - a. Aleutian Islands
 - b. NANA

Section III. Economic Indicators Review

A. Employment

1. Aleutian Islands
2. **Kobuk** (NANA)

B. Unemployment

1. Aleutian Islands
2. **Kobuk** (NANA)

C. Unemployment Rate

1. Aleutian Islands
2. **Kobuk** (NANA)

D. Employment

1. King Cove
2. **Nikolski**
3. St. George
4. Unalaska
5. Kiana
6. Kotzebue
7. Noatak
8. **Selawik**

E. Employment **Firms**

1. King Cove
2. **Nikolski**
3. St. George
4. **Unalaska**
5. Kiana
6. **Kotzebue**
7. Noatak
8. **Selawik**

F. Employment Wages

1. King Cove
2. **Nikolski**
3. St. George
4. **Unalaska**
5. Kiana
6. **Kotzebue**
7. **Noatak**
8. **Selawik**

G. Employment (Numbers of Employees)

1. Aleutian Islands

- a. Contract Construction
- b. Manufacturing
- c. Transportation Communications & Utilities
- d. Wholesale and **Retail** Trade
- e. Finance, Insurance & **Real Estate**
- f. Services
- g. Federal Government
- h. State and **Local** Government
- i. Miscellaneous

2. **Kobuk** (NANA)

- a. Contract Construction
- b. Manufacturing
- c. Transportation, Communications & Utilities
- d. Wholesale & **Retail** Trade
- e. Finance, Insurance **and** Real Estate
- f. Services
- g. Federal Government
- h. State and **Local** Government

H. Employment Payroll

1. Aleutian Islands

- a. Contract Construction
- b. Manufacturing
- c. Transportation, Communication & Utilities
- d. **Wholesale** and **Retail** Trade.
- e. **Finance**, Insurance and **Real Estate**
- f. Services
- g. Federal Government
- h. State and Local Government
- i.. Miscellaneous

2. **Kobuk** (NANA)

- a. Contract Construction
- b. Manufacturing
- c. **Transportation**, Communications and Utilities
- d. **Wholesale** and **Retail** Trade
- e. Finance, Insurance and Real Estate
- f. Services
- g. Federal Government
- h. State and Local Government

Section IV: Independent Variables Review

A. Commercial **Salmon** Catch

1. Aleutian Islands-Alaska Peninsula and Kotzebue

B. Commercial, **Salmon** Catch **Value**

1. Aleutian Islands-Alaska Peninsula and **Kotzebue**

C. Commercial Fishing Licenses

1. **NANA**

D. Commercial Chum Salmon

1. Fishermen

- a. NANA

2. Catch

- a. NANA

3* Catch Value

- a. NANA

4. Mean Prices

- a. NANA

E. Subsistence Chum Salmon

1. Mean Catch

- a. Kiana
- b. Kotzebue**
- c. Noatak

2. Catch

- a.** Kiana
- b.** Kotzebue
- c. Noatak
- d. NANA

F. Chum Salmon Aerial Survey Escapement Estimates

- 1.** Noatak River
2. **Kobuk** River

G. Subsistence Inconnu (Sheefish) Catch

1. **Kiana**
2. Kotzebue
3. **Selawik**
4. NANA

H. Commercial Fishing Periods

1. **Kiana**
2. **Kotzebue**
3. **Noatak**
4. NANA

I. Weather

1. **Total Precipitation**
 - a. **Aleutian Islands (Cold Bay)**
 - b. **Aleutian Islands {St. Paul}**
 - c. **NANA (Kotzebue)**
2. **Peak Weekly Precipitation**
 - a. **NANA**
3. **Average Hourly Wind Speed**
 - a. **NANA**
4. **Peak Weekly Wind Speed**
 - a. **NANA**

Appendix I

General Data Coding Forms
Series A-C

Appendix II

Social Indicators Coding Forms
Series A-1?

Appendix III

Economic Indicators Coding Forms
Series A-H

Appendix IV

Independent Variables Coding Forms
Series A-I

Appendix V
Descriptive Data

- A. Registered Voters
 - 1. King Cove
 - 2. **Nikolski**
 - 3. St. George
 - 4. **Unalaska**
 - 5. Kiana
 - 6. **Kotzebue**
 - 7. Noatak
 - 8. **Selawik**

- B. Marriages
 - 1-8 above

- c. Divorces
 - 1-8** above

- D. Alcoholism
(Treatment Program Client Data)
 - 1. Admissions
 - a. **Unalaska**
 - b. **Kotzebue**

 - 2. Discharges
 - a. **Unalaska**
 - b. **Kotzebue**

- E. Mental **Health** Patient Encounters
 - 1. Ambler
 - 2. **Buckland**
 - 3. Deering
 - 4. **Kiana**
 - 5. **Kivalina**
 - 6. **Kobuk**
 - 7. **Noatak**
 - 8. **Noorvik**
 - 9. **Selawik**

- F. Alcohol-Related Mental/Health
Patient Encounters
 - 1-9 above

- G. Suicide Attempts
 - 1-9** above

- H. Injuries
 1-9 above
- I. Patient Care Information System
 (Indian **Health** Service) Patients/Visits
1. Psychoses
 - a. King Cove
 - b. Nikolski
 - c. St. George
 - d. Unalaska
 2. Neuroses
 a-d above ,
 - 3* Substance Abuse
 a-d "
 4. Circulatory
 a-d "
 5. Digestive
 a-d "
 6. Pregnancy
 a-d "
 7. Vague Symptoms
 a-d "
 8. Violence by Accident
 a-d "
 9. Violence, **non-accident**
 a-d "
 10. Psychoses
 - a. Kiana
 - b. Kotzebue
 - c. Noatak
 - d. Selawik
 11. Neuroses
 a-d above
 12. Substance Abuse
 a-d "
 13. Circulatory
 a-d w
 14. Digestive
 a-d "

15. Pregnancy
a-d "
 16. Vague Symptoms
a-d "
 17. Violence by Accident
a-d "
 18. Violence, Non-Accident
a-d "
- J. Alaska State Troopers Arrest Data
Totals/Breakdowns
1. King Cove
 2. **Nikolski**
 3. St. George
 4. **Unalaska**
 5. Kiana
 6. Kotzebue
 7. Noatak.
 8. **Selawik**
- K. Village Public Safety Officer
Service Request Activity Data
1. Atka
 2. Aleutian Islands
 3. **Buckland**
 4. Kiana
 5. **Kivalina**
 6. NANA
- L. Criminal Justice System **Resource** Descriptions
- | | |
|---------------------|---------------------|
| 1. Adak | 13. Ambler |
| 2. Akutan | 14. Buckland |
| 3. Atka | 15. Deering |
| 4. Belkofski | 16. Kiana |
| 5. Cold Bay | 17. Kivalina |
| 6. False Pass | 18. Kobuk |
| 7. King Cove | 19. Kotzebue |
| 8. Nikolski | 20. Noatak |
| 9. Sand Point | 21. Noorvik |
| 10. St. George | 22. Selawik |
| 11. St. Paul | 23. Shungnak |
| 12. Unalaska | |
- M. Retail Gas Prices
1. NANA
 2. Kotzebue

N. Retail Fuel Oil Prices

1. NANA
2. **Kotzebue**

o* **Chum** Salmon Escapement

1. **Noatak** River
2. **Kobuk** River

P. Subsistence Whitefish Catch

1. NANA

Introduction

Technical Memorandum S1-2 is the second in a series of documents designed to characterize the two study population areas, the **Aleutian-Pribilof** region and the NANA region, and analyze the data that are available for characterizing them. The purpose of this document is to display the aggregate quantitative data that may prove useful in the analysis of community well-being in the study areas and possibly other study areas, and in the final development of proposed social indicators for assessing this community well-being. Although this document is chiefly a descriptive display of collected aggregate data, some comments in the brief introduction will be directed at the analytic utility of the data categories to the extent that this utility can be evaluated thus far, as well as a very brief discussion of the analysis to follow (to be detailed in Technical Memorandum S1-3) and the rationale for collecting aggregate data in these categories in the first place.

Although the study team had originally proposed to investigate the development of two kinds of aggregate indicator models, it is likely that only one will be feasible. Due to considerable gaps in the data sets needed for the development of a multiple indicator panel model, such a model is unlikely to be developed although the feasibility, perhaps for selected data sets or specific villages, will be assessed after the first stages of analysis begin. The model type to be developed will probably be restricted to forecasting tools based on long time series of aggregate data. Model development in either category is dependent on a sample of at least sixty consecutive data observations for monthly data (5 years) or thirty six data observations for quarterly data (9 years); furthermore, for the multiple indicator panel model, similarly constituted time series are required in every central data category (such as politics, economics, social welfare, subsistence, and so on) . Because comparable time series were not available in all areas, the panel model feasibility looks weak on the surface. There are especially few long time series in the areas of criminal justice and mental health, categories crucial to a well-being model.

The **models** that **will be** developed will incorporate aggregate time series data that are publicly available, and derived from records that are available at or near the selected **field** sites, or at centralized archives elsewhere . Selection criteria were whether plausible relations between aggregate data, such as types of transfer payments, and other social phenomena, such as employment, **family** income, and household income, could be posited. Our rationale is that some aggregate data may indicate complex and recurrent relations among social phenomena, hence they may serve as social indicators that may be used to represent the status of the relations among those phenomena whenever those **aggregate** data are sampled - monthly, quarterly, or yearly. Data were collected **at** both the regional and village **levels** in many occasions, so **as** to broaden the data base and assess the likelihood **of** certain regional data categories serving as plausible indicators **at** the specific village level, and vice versa.

In order to determine the relation **of** the aggregate data to **social** phenomena it **will** be necessary to measure how the aggregate data and the data gathered through field investigations vary in relation to one another. The reasons for the selection of data from specified aggregate data categories are summarized **below**.

Aggregate economic data, such as unemployment and employment data, transfer payments, numbers of jobs and payroll size, and similar figures **will allow** testing of **the** relations of these data to household size and composition, employability, dependence on harvested resources, sharing and pooling of **income**, skills and resources among households and larger networks of **kinspeople** and friends, changes in kinship obligations, recent in and out migration, and a wide variety of other relations that may be critical to overall community well-being. Many other phenomena that indicate well-being may certainly **entail** changes in the economic aggregate data. Weather, subsistence, and commercial fishing data may also correlate with the same types of social phenomena, especially with regard to factors of well-being that are associated with resource harvesting and expectations about the harvest.

Many of the same economic data will **allow** for analysis of political phenomena. For the **purposes** of economic analysis these data serve to document assets, expenses and income that underlie **local** and regional financial status. For purposes of political analysis, these same data and other similar categories of data can be viewed as elements central to political processes, control, and authority. The aggregate data detailing among other things the movement of money through villages and regions will be analyzed in light of field data in order to determine the issues that animate local political processes, the roles of different constituencies, how and in what areas political authority and power are implemented, and the relation of these factors to the programmatic and financial consequences of decision-making evident in the data.

Data have also been collected in categories that include school attendance and enrollment, criminal justice, health service utilization, and other social services. The data have been collected in such a way as to allow review in several finer categories where the data are sufficient; for instance, total health service utilization is broken down into multiple categories, such as alcohol abuse, other substance abuse, neuroses and psychoses, and accidents, among others. Field collection of qualitative data centered on staff, recipient, and broader community-wide practices and attitudes concerning the objectives and success of the services, and the origins of the problems that spurred the need for the services. The qualitative and aggregate data **will** eventually be integrated with the aim of determining how services are officially constituted, how they are actually delivered, and how they are experienced by both staff and recipients. The various matches and **covariations** that may be discovered between these data will then provide a clue as to what these aggregate data actually indicate in the community or region.

Family level data ranging from divorce and marriage figures through other vital statistics and similar data have also been collected. These domestic data by themselves do not portray **community** or family well-being, although it is posited that they may provide evidence of **well-being** when

correlated with other indices derived from other data categories, and when complemented with qualitative data concerning family dynamics and the domestic interface with other community institutions.

Qualitative data from **field** investigations focus on **family strategies** for income allocation and distribution, stability and predictability of income, subsistence patterns, job and development expectations, **intra-** and inter-village mobility, domestic roles and functions, the domestic cycle, conflict resolution and authority, memberships in institutions and associations, family rituals, and friend and peer relations.

The aggregate data summarized in this Technical Memorandum **will later** be compared to and integrated with the qualitative data collected at the **field** sites in the effort to ascertain the parameters within which **the** aggregate data categories function to indicate documented domestic processes, practices and events.

Section I - General Data Review

A. Population

- 1) DATA : Population/Aleutian Islands/Yearly 1970 - 1980
COMMENTS: See Population/Statewide
BIAS : See Population/Statewide

- 2) DATA : **Population/Kobuk (NANA)/Yearly 1970 - 1980**
COMMENTS: 1) See Population/Statewide
2) **Point Hope was included through first quarter of 1975, after which it was included under North Slope Borough.**
BIAS: 1) See Population/Statewide
2) **Figures from 1970 - 1975 (first quarter) represent an overestimate of approximately 480 persons per year for what, since 1975, is the Kobuk Region.**

- 3) DATA : Population/Statewide/Yearly 1970 - 1980.
COMMENTS: The figures for 1970 and 1980 are actual census totals; those for 1971-1979 are estimates; all figures include the resident military population.

The 19'78 population estimate was developed using a new methodology. The Alaska Department of Labor, accordingly, cautious against use of this figure for trend analysis as it is "not comparable to prior years estimates."
BIAS: 1) Figures include military population.
2) Estimation method changed in 1978.

- 4) DATA : Population/Active Duty Military/
Aleutian Islands/Yearly 1970-1979
COMMENTS: None
BIAS: None

DATA : Population/Active Duty Military/
Kobuk (NANA)/Yearly 19'70 - 1979.

COMMENT' S: None

BIAS: None

DATA : Population/Active Duty Military/
Statewide/Yearly 1970-1979.

COMMENTS: None

BIAS: None

B. Births

1) DATA : Births/King Cove/Yearly 1970-1980

COMMENTS: All births are recorded by Mother's
Residence Village.

BIAS : None

2) DATA : Births/Nikolski/Yearly 1970-1980

COMMENTS: All births are recorded by Mother's
Residence Village.

BIAS : None

3) DATA : Births/St. George/Yearly 1970-1980

COMMENTS: All births are recorded by Mother's
Residence Village.

BIAS: None

4) DATA : Births/Unalaska/Yearly 1970-1980

COMMENTS: All births are recorded by Mother's
Residence Village.

BIAS: None

- 5) DATA : Births/Kiana/Yearly 1970-1980
COMMENTS: All births are recorded by Mother's Residence Village.
BIAS: None
- 6) DATA : Births/Kotzebue/Yearly 19'70-1980
COMMENTS: All births are recorded by Mother's Residence Village.
BIAS: None
- 7) DATA : Births/Noatak/Yearly 1970-1980
COMMENTS: All births are recorded by Mother's Residence Village.
BIAS: None
- 8) DATA : Births/Selawik/Yearly 1970-1980
COMMENTS: All births are recorded by Mother's Residence Village.
BIAS: None
- 9) DATA : Births/Aleutian Islands/Yearly 1970-1979
COMMENTS: None
BIAS: None
- 10) DATA : Births/NANA/Yearly 1970-1979
COMMENTS: None
BIAS: None

C. School Enrollment

1. By Grade Level:

- a) DATA : School Enrollment by Grade/King Cove/
Annually 1969-1981
- COMMENTS: These are first quarter figures which are typically higher! then year-end or final enrollment
- BIAS: Figures may represent overestimate of final enrollment.
- b) DATA : School Enrollment by Grade/Nikolski/
Annually 1969-1981.
- COMMENTS: These are first quarter figures which are typically higher than year-end or final enrollment.
- BIAS: Figures may represent overestimate of final enrollment.
- c) DATA : School Enrollment by Grade/St. George/
Annually 1969-1981.
- COMMENTS: These are first quarter figures which are typically higher than year-end or final enrollment.
- BIAS: Figures may represent overestimate of final enrollment.
- d) DATA : School Enrollment by Grade/Unalaska/
Annually 1969-1981.
- COMMENTS: These are first quarter figures which are typically higher than year-end or final enrollment.
- BIAS : Figures may represent Overestimate of final enrollment.

- e) DATA : **School Enrollment by Grade/Kiana/
Annually 1969-1981.**
- COMMENTS: These **are first quarter** figures which **are** typically higher? than year-end **or** final enrollment.
- BIAS : Figures may represent overestimate **of** final **enrollment.**
- f") DATA : **School Enrollment by Grade/Kotzebue/
Annually 1969-1981.**
- COMMENTS: These **are first quarter** figures, which are typically **higher** than **year-end or** final enrollment.
- BIAS: **Figures** may **represent** overestimate **of** final enrollment.
- g) DATA : **School Enrollment by Grade/Noatak/
Annually 1969-1981**
- COMMENTS: These **are first** quarter figures which **are** typically higher than **year-end or** final enrollment.
- BIAS: Figures may represent overestimate **of** **final** enrollment.
- h) DATA : **School Enrollment by Grade/Selawik/
Annually 1969-1981.**
- COMMENTS: These **are** fist quarter figures which **are** typically **higher** than **year** end **or** final enrollment.
- BIAS: Figures may **represent** overestimate **of** **final** enrollment.

2. **Totals**

- a) DATA : School Enrollment Totals/King Cove,
Nikolski, St. George, Unalaska & Region/
Annually 1969-1981.
- COMMENTS: *These are first quarter figures which are
typically higher than year-end or final
enrollment.*
- BIAS: Figures may represent overestimate of
final enrollment.
- b) DATA: School Enrollment Totals/Kiana, Kotzebue,
Noatak, Selawik and Region/Annually 1969-
1981.
- COMMENTS: *These are first quarter figures which
are typically higher than year-end or
final enrollment.*
- BIAS: Figures may represent overestimate of
final enrollment.

Section II - Social-Indicators Review

A. Deaths

1. DATA : Deaths/King Cove/Yearly 1970-1980
COMMENTS: **None**
BIAS: **None**

2. DATA: Deaths/Nikolski/Yearly 1970-1980
COMMENTS: **None**
BIAS: **None**

3. DATA : Deaths/St. George/Yearly 1970-1980
COMMENTS: None
BIAS: None

4. DATA : Deaths/Unalaska/Yearly 1970-1980
COMMENTS: **None**
BIAS: **None**

5. DATA: Deaths/Kiana/Yearly 1970-1980
COMMENTS: **None**
BIAS: None

6. DATA : Deaths/Kotzebue/Yearly 1970-1980
COMMENTS: **None**
BIAS: **None**

7* DATA : Deaths/Noatak/Yearly 1970-1980

COMMENTS: None

BIAS: None

8. DATA : Deaths/Selawik/Yearly 1970-1980

COMMENTS: None .

BIAS: None

B. Deaths by Suicide

1. DATA : Deaths by Suicide/Aleutian Islands/
Yearly 1968-1979

COMMENTS: There is a strong Russian Orthodox Church influence in the region. The Church has strong sanctions, (principally against Christian funeral and burial on Church grounds) against suicide which is viewed as completely unacceptable behavior.

BIAS : Suicides appear to be genuinely rare. However, it is very likely that any actual suicide is most unlikely to be reported as such.

2. DATA : Deaths by Suicide/NANA/Yearly 1968-1969

COMMENTS: None

BIAS: None

C. Deaths by Homicide

1. DATA : Deaths by Homicide/Aleutian Islands/
Yearly 1968-1979.

COMMENTS: None

BIAS: None

2. DATA : Deaths by **Homicide/NANA/Yearly** 1968-1979
COMMENTS: None
BIAS : **None**

D. Deaths by Accident

1. DATA : Deaths by Accident/NANA/YeaFly 1968-1979
COMMENTS: It is believed that a majority **of** accidental deaths are alcohol-related and that **some** of **these** may **in** fact be suicides.
BIAS: May contain some deaths by suicide.

E. Social Services Cases

1. DATA : **Social Services Cases/King Cove/**
Monthly 1977-1981.
COMMENTS: **Cases** are organized accordingly to the **clients'** home community. **Therefore**, even though **most** clients receive **services** in **their** home community, it is possible for figures **here** to include clients residing elsewhere **in** the State.
BIAS: Case numbers may reflect **an over-estimate** of activity occurring in the subject community itself.

2. DATA : **Social Services Cases/Nikolski/**
Monthly 1977-1981.
COMMENTS: **Cases** are organized according to the **clients'** home community. **Therefore**, even though most clients receive services in **their home** community, it is possible **for** figures **here** to include clients residing elsewhere **in** the State.
BIAS: Case **numbers** may reflect **an oven-estimate** of activity occurring in the subject community itself.

3. DATA : **Social Services Cases/St. George/
Monthly 1977-1981.**
- COMMENTS: **Cases are organized according to the clients home community. Therefore, even though most clients receive services in their home community it is possible for figures here to include clients residing elsewhere in the State.**
- BIAS: **Case numbers may reflect an over-estimate of activity occurring in the subject community itself.**
4. DATA : **Social Services Cases/Unalaska/
Monthly 1977-1981.**
- COMMENTS: **Cases are organized according to the clients' home community. Therefore, even though most clients receive services in their home community it is possible for figures here to include clients residing elsewhere in the State.**
- BIAS: **Case numbers may reflect an over-estimate of activity occurring in the subject community itself.**
5. DATA : **Social Services Cases/Kiana/
Monthly 1977-1981**
- COMMENTS: 1) See Social Services Cases/King Cove
- 2) **Departmental reorganization in 1980 resulted in the reporting of youth services probation cases through the Division of Family & Youth Services (formerly Division of Social Services). Previously such cases were reported through the Division of Corrections. This accounts for a total of 3 cases in Kiana.**
- BIAS : 1) See **Social Services** Cases/King Cove
- 2) **Level of activity is over-estimated by a total of 3 compared to period preceding 1980 and compared to communities with no youth services probation cases.**

- 6) DATA : **Social Services Cases/Kotzebue/**
 Monthly 1977-1981.
- COMMENTS: 1) See **Social Services Cases/King Cove**
- 2) Departmental **reorganization in 1980** resulted in the reporting of **youth services** probation cases through the Division of Family & Youth Services (formerly Division of Social Services). Previously such cases were reported through the Division of Corrections. This accounts for a total of 17 cases in Kotzebue.
- BIAS: 1) See **Social Services Cases/King Cove**
- 2) Level of activity is over-estimated by a total of 17 compared to the period preceding 1980 and compared to communities with **no youth services** probation cases.
7. DATA: **Social Services Cases/Noatak/**
 Monthly 1977-1981
- COMMENTS: 1) See **Social Services Cases/King Cove.**
- 2) Departmental reorganization in 1980 resulted in the reporting of **youth services** probation cases through the Division of Family and Youth Services (formerly Division of Social Services). Previously such cases were reported through the Division of Corrections. This accounts for a total of 5 cases in Noatak.
- BIAS: 1) See **Social Services Cases/King Cove.**
- 2) Level of activity is over-estimated by a total of 5 compared to period preceding 1980 and compared to communities with **no youth services** probation cases.
8. DATA: **Social Services Cases/Selawik/**
 Monthly 1977-1981.
- COMMENT: 1) See **Social Services Cases/King Cove.**
- 2) Departmental **reorganization in 1980 re-**

Selawik Con't

suit ed in the reporting of youth services probation cases through the Division of Family & Youth Services (formerly Division of Social Services). Previously such cases were reported through the Division of Connections. This accounts for a total of 3 cases in Selawik.

- BIAS: 1) See Social Services Cases/King Cove.
2) Level of activity is oven-estimated by a total of 3 compared to period preceding 1980 and compared to communities with no youth services probation cases.

F. Social Security:
Old Age, Survivors, Disabled Insurance (OASDI)

- 1a. DATA : OASDI Monthly Beneficiaries/
Aleutian Islands/Yearly 1970-1980.
COMMENTS : These are December or year end figures.
BIAS: None
- 1b. DATA : OASDI Monthly Beneficiaries/
NANA/Yearly 1970-1980
COMMENTS: These are December or year end figures.
BIAS : None
- 2a. DATA : OASDI Monthly Payments/
Aleutian Island/Yearly 1970-1980.
COMMENTS: 1) See OASDI Monthly Beneficiaries/
Aleutian Islands.
2) Figures were reported rounded from
1970-1974.
BIAS: None

3. DATA: OASDI Monthly Payments/
NANA/Yearly 1970-1980.

COMMENTS: 1) See OASDI Monthly Beneficiaries/
NANA .

2) Figures were reported rounded from
1970-1974.

BIAS: None

Section 111: Economic Indicators Review

A. Employment

1. DATA : Employment/Aleutian Islands/
Monthly 1975-1981.
- COMMENTS: These figures reflect employment by place
of residence and are derived from state-
wide totals controlled by results of the
Current Population Survey.
- BIAS: Users estimation rather than actual numbers.
- 2* DATA : Employment/Kobuk (NANA)/Monthly 1975-1981
- COMMENTS: See Employment/Aleutian Islands.
- BIAS: See Employment/Aleutian Islands.

B. Unemployment

1. DATA : Unemployment/Aleutian Islands/
Monthly 1975-1981.
- COMMENTS: See Employment/Aleutian Islands.
- BIAS: See Employment/Aleutian Islands.
2. DATA : Unemployment/Kobuk (NANA)/Monthly 1975-1981
- COMMENTS: See Employment/Aleutian Islands.
- BIAS: See Employment/Aleutian Islands.

C. Unemployment Rate

1. DATA : Unemployment Rate/Aleutian Islands/
Monthly 1975-1981.
- COMMENTS: See Employment/Aleutian Islands.
- BIAS: See Employment/Aleutian Islands.

2. DATA: Unemployment Rate/Kobuk (NANA)/
Monthly 1975-1981.

COMMENTS: See Employment/Aleutian Islands.

BIAS: See **Employemnt/Aleutian** Islands.

D. Employment

1. DATA : Employment/King Cove/Monthly 1970-1980.

COMMENTS: 1) **These figures reflect** employment only by those employers subject to Alaska's Unemployment Insurance Act.

2) As of January 1, 1978, State and local government **employers** were subject to the Unemployment Insurance Act.

3) State government agencies, however, **report** data at the census division level only. Accordingly, Kotzebue and St. Paul/St. George include the figures (for State government employment) for the entire respective **division** areas.

4) Blank spaces marked with an asterisk (*) reflects data which is "nondisclosable", i.e., unavailable due to confidentiality laws.

5) Includes employment **for** Belkofski.

6) Data **for** the last three months of 1980 **is** not available at this time.

BIAS : 1) **Uncovered** employment **is not** included; producing an underestimate of total employment.

2) **Does not** include State and local **govern-ment** prior to 1978; producing an under-estimate of total employment.

3) State government employment from 1978 forward inflates Kotzebue and St. George St. Paul figures, while under-estimating figures **for other** villages.

4) **Nondisclosable** items weakens value of **series** in proportion to **their** frequency.

5) Overestimates employment for King Cove alone.

2. DATA: Employment/Nikolski/Monthly 1970-1980

COMMENTS: 1-4) See Employment/King Cove

5) Includes employment for: Adak, Akutan, Atka, Attu, Cape Sarichef, Chernofski, Cold Bay, Driftwood Bay, Ivanof Bay, Kashega, Navy Town, Nelson Lagoon, Panlo Harbor?, Pennyville, Sanak Island, Umnak, Umnak Island, Unimak

6) See Employment/King Cove.

BIAS: 1-4) See Employment/King Cove.

5) Over-estimates employment for Nikolski alone.

3. DATA: Employment/St. George/Monthly 1970-1980.

COMMENTS: 1-4) See Employment/King Cove.

5) Includes employment for St. Paul.

6) See Employment/King Cove.

BIAS: 1-4) See Employment/King Cove

5) Over-estimates employment for St. George alone.

4. DATA : Employment/Unalaska/Monthly 1970-1980.

COMMENTS: 1-4) See Employment/King Cove.

5) Includes employment for Dutch Harbor.

6) See Employment/King Cove.

BIAS: 1-4) See Employment/King Cove.

5) Over-estimates employment for Unalaska alone.

5. DATA : **Employment/Kiana/Monthly 1970-1980.**
 COMMENTS: 1-4) See **Employment/King Cove.**
 5) Includes **Employment for Noorvik.**
 6) See **Employment/King Cove.**
 BIAS: 1-4) See **Employment/King Cove.**
 5) **Over-estimates** employment **for Kiana only.**
6. DATA : **Employment/Kotzebue/Monthly 1970-1980.**
 COMMENTS: See **Employment/King Cove, 1-4 and 6.**
 BIAS: See **Employment/King Cove, 1-4.**
- 7* DATA: **Employment/Noatak/Monthly 1970-1980.**
 COMMENTS: See **Employment/King Cove, 1-4 and 6.**
 BIAS: See **Employment/King Cove, 1-4.**
8. DATA: **Employment/Selawik/Monthly 1970-1980.**
 COMMENTS: See **Employment/King Cove, 1-4 and 6.**
 BIAS: See **Employment/King Cove, 1-4.**

E. Employment Firms

1. DATA : **Employment Firms/King Cove/
 Quarterly 1970-1980.**
 COMMENTS: See **Employment/King Cove.**
 BIAS: See **Employemnt/King Cove.**

2. DATA: Employment Firms/Nikolski/
Quarterly 1970-1980.
COMMENTS: See Employment/Nikolski.
BIAS: See Employment/Nikolski.
3. DATA : Employment Firms/St. George/
Quarterly 1970-1980.
COMMENTS: See Employment/St. George.
BIAS: See Employment/St. George.
4. DATA: Employment Firms/Unalaska/
Quarterly 1970-1980.
COMMENTS: See Employment/Unalaska.
BIAS: See Employment/Unalaska.
5. DATA : Employment Firms/Kiana/
Quarterly 1970-1980.
COMMENTS: See Employment/Kiana
BIAS: See Employment/Kiana.
6. DATA : Employment Firms/Kotzebue/
Quarterly 1970-1980.
COMMENTS: See Employment/Kotzebue.
BIAS: . See Employment/Kotzebue.
7. DATA : Employment Firms/Noatak/
Quartlery 197'0-1980.
COMMENTS: See Employment/Noatak.
BIAS: See Employment/Noatak.

8. DATA*: Employment Firms/Selawik/
Quarterly 1970-1980.
COMMENTS: See Employment/Selawik.
BIAS: See Employment/Selawik.

F. Employment Wages

1. DATA : Employment Wages/King Cove/
Quarterly 1970-1980.
COMMENTS: See Employment/King Cove
BIAS: See Employment/King Cove.

2. DATA : Employment Wages/Nikolski/
Quarterly 1970-1980.
COMMENTS: See Employment/Nikolski.
BIAS: See Employment/Nikolski.

3. DATA : Employment Wages/St. George/
Quarterly 1970-1980.
COMMENTS: See Employment/St. George.
BIAS: See Employment/St. George.

4. DATA: Employment Wages/Unalaska/
Quarterly 1970-1980.
COMMENTS: See Employment/Unalaska.
BIAS: See Employment/Unalaska.

5. DATA : Employment Wages/Kiana/
Quarterly 1970-1980.
COMMENTS: See Employment/Kiana.
BIAS: See Employment/Kiana.

6. DATA : Employment Wages/Kotzebue/
Quarterly 1970-1980.
- COMMENTS: See Employment/Kotzebue.
- BIAS: See Employment/Kotzebue.
-
- 7* DATA : Employment Wages/Noatak/ '
Quarterly 1970-1980.
- COMMENTS: See Employment/Noatak.
- BIAS: See Employment/Noatak.
-
8. DATA: Employment Wages/Selawik/
Quarterly 19'70-1980.
- COMMENTS: See Employment/Selawik.
- BIAS: See Employment/Selawik.

G. Employment (Number of Employees)

1. Aleutian Islands:

- a) DATA : Employment/Contract Construction/
Aleutian Islands/Monthly 1960-1980.
- COMMENTS: See Employment/King Cove/
1,2,4 and 6.
- BIAS: See Employment/King Cove/
1, 2, and 4.
- b) DATA : Employment/Manufacturing/Aleutian
Islands/Monthly 1960-1980.
- COMMENTS: See Employment/King Cove/
1, 2, 4 and 6.
- BIAS: See Employment/King Cove/
1, 2 and 4.
- c) DATA : Employment/Transportation, Communications &
Utilities/ Aleutian Islands/Monthly 1960-
1980.
- COMMENTS: See Employment/King Cove/
1, 2, 4 and 6.
- BIAS: See Employment/King Cove/
1, 2 and 4.
- d) DATA : Employment/Wholesale & Retail Trade/
Aleutian Islands/Quarterly 1960-1980.
- COMMENTS: See Employment/King Cove/1, 2, 4 and 6.
Also beginning in 1975, Wholesale Trade
reported as nondisclosable and Retail
trade is only number reported.
- BIAS: See Employment/King Cove/1, 2, 4 and 6.
Also category as a whole is under-
estimated from 1975 forward.

- e) **DATA:** Employment/Finance, Insurance and Real Estate, Aleutian Islands/Monthly 1960-1980.
- COMMENTS:** See Employment/King Cove/ 1, 2, 4 and 6.
- BIAS:** See Employment/King Cove/ 1, 2 and 4.
-
- f) **DATA :** Employment/Services/Aleutian Islands/ Monthly 1960-1980.
- COMMENTS:** See Employment/King Cove/ 1, 2, 4 and 6.
- BIAS:** See Employment/King Cove/ 1, 2 and 4.
-
- g) **DATA :** Employment/Federal Government/Aleutian Islands/Monthly 1960-1980.
- COMMENTS:** See Employment/King Cove/ 1, 2, 4 and 6.
- BIAS:** See Employment/King Cove/ 1, 2 and 4.
-
- h) **DATA :** Employment/State and Local Government/ Aleutian Islands/Monthly 1960-1980.
- COMMENTS:** See Employment/King Cove/ 1, 2, 4 and 6.
- BIAS:** See Employment/King Cove/ 1, 2 and 4.
-
- i) **DATA :** Employment/Miscellaneous/Aleutian Islands/ Monthly 1960-1980.
- COMMENTS:** See Employment/King Cove/ 1, 2, 4 and 6.
- BIAS:** See Employment/King Cove/ 1, 2 and 4.

2. **Kobuk (NANA)**

a) DATA: Employment/Contract Construction/
Kobuk (NANA)/Monthly 1970-1980.

COMMENT: 1) See Employment/Kiana/1, 2, 4 and 6.
2) **Point** Hope was included through
4th quarter! 1974, subsequently
changed to different division.
3) All Construction figures for 1960-1970 are
nondisclosable or reported as zero, i.e. ,
no activity.

BIAS: 1) See Employment/Kiana/1, 2 and 4.
2) Figure through 1974 over-estimated by
approximately 480 **persons (Point Hope)**
for region as defined from 1975 forward.

b) DATA : Employment/Manufacturing/Kobuk (NANA)/
Monthly 1970-1980.

COMMENT: 1) See Employment/Kiana/1, 2, 4 and 6.
2) See Employment/Contract Construction/
Kobuk . **Point** Hope was included through
4th quarter 1974, subsequently changed
to different division.
3) All manufacturing figures for
1960-1970 are **nondisclosable or** repented
as zero, i.e. , no activity. **Point Hope**
was included through 4th quarter 1974,
subsequently changed to different division.

BIAS: 1) See Employment/Kiana/1, 2 and 4.
2) See Employment/Contract Construction/
Kobuk.

c) DATA : Employment/Transportation, Communications &
Utilities/Kobuk (NANA)/Monthly 1960-1980.

COMMENT: 1) See Employment/Kiana/1, 2, 4 and 6.
2) See Employment/Contract Construction/Kobuk.

BIAS : 1) See Employment/Kiana/1, 2 and 4.
2) See Employment/Contract Construction/
Kobuk .

- d) DATA : Employment/Wholesale and Retail Trade/
Kobuk (NANA)/Monthly 1960-1980.
- COMMENTS: 1) See Employment/Kiana/1, 2, 4 and 6.
2) See Employment/Contract Construction/Kobuk.
- BIAS: 1) See Employment/Kiana/1, 2, and 4.
2) See Employment/Contract Construction/
Kobuk.
- e) DATA : Employment/Finance, Insurance & Real Estate/
Kobuk (NANA)/Monthly 1970-1980.
- COMMENTS: 1) See Employment/Kiana/1, 2, 4 and 6.
2) See Employment/Contract Construction/
Kobuk. Point Hope was included through
4th quarter 1974, subsequently changed
to different division.
3) All Finance, Insurance and Real. Estate
figures for 1960-1970 are nondisclosable or
reported as zero, i.e., no activity.
- BIAS: 1) See Employment/Kiana/1, 2 and 4.
2) See Employment/Contract Construction\
Kobuk.
- f) DATA: Employment/Services/Kobuk (NANA)/
Monthly 1960-1980.
- COMMENTS: 1) See Employment/Kiana/1, 2, 4 and 6.
2) See Employment/Contract Construction/Kobuk.
- BIAS: 1) See Employment/Kiana/1, 2 and 4.
2) See Employment/Contract Construction/
Kobuk .

- g) DATA: Employment/Federal Government/Kobuk (NANA)/
Monthly 1960-1980.
- COMMENTS: 1) See Employment/Kiana/1, 2, 4 and 6.
2) See Employment/Contract Construction/Kobuk.
- BIAS: 1) See Employment/Kiana/1, 2 and 4.
Z) See Employment/Contract Construction/
Kobuk.
- h) DATA : Employment/State and Local Government/
Kobuk (NANA)/Monthly 1960-1980.
- COMMENTS: 1) See Employment/Kiana/1, 2, 4 and 6.
2) See Employment/Contract Construction/Kobuk.
- BIAS : 1) See Employment/Kiana/1, 2 and 4,
2) See Employment/Contract Construction/
Kobuk.

H. Employment Payroll

1. Aleutian Islands:

- a) DATA : Employment Payroll/Contract Construction/
Aleutian Islands/Quarterly 1960-1980.
- COMMENTS: See Employment/Contract Construction/
Aleutian Islands.
- BIAS: See Employment/Contract Construction/
Aleutian Islands.
- b) DATA : Employment PayRoll/Manufacturing/Aleutian
Islands/Quarterly 1960-1980.
- COMMENTS: See Employment/Contract Construction/
Aleutian Islands.
- BIAS: See Employment/Contract Construction/
Aleutian Islands.

- c) DATA : Employment Payroll/Transportation, Communications & Utilities/Aleutian Islands/
Quarterly 1960-1980.
- COMMENTS: See **Employment/Contract Construction/**
Aleutian Islands.
- BIAS : See **Employment/Contract Construction/**
Aleutian Islands.
- d) DATA: Employment Payroll/Wholesale & Retail Trade/
Aleutian Islands/Quarterly 1960-1980.
- COMMENTS: See **Employment/Wholesale & Retail Trade/**
Aleutian Islands.
- BIAS: See **Employment/Contract Construction/**
Aleutian Islands.
- e) DATA: Employment Payroll/Finance, Insurance &
Real Estate/Aleutian Islands/Quarterly
1960-1980.
- COMMENTS: **See Employment/Contract Construction/**
Aleutian Islands.
- BIAS: See **Employment/Contract Construction/**
Aleutian Islands.
- f) DATA : Employment Payroll/Services/Aleutian Islands
Quarterly 1960-1980.
- COMMENTS: **See Employment/Contract Construction/**
Aleutian Islands.
- BIAS : See **Employment/Contract Construction/**
Aleutian Islands.
- g) DATA: Employment Payroll/Federal Government/
Aleutian Islands/Quarterly 1960-1980.
- COMMENTS: See **Employment/Contract Construction/**
Aleutian Islands.
- BIAS: See **Employment/Contract Construction/**
Aleutian Islands.

- h) DATA: Employment Payroll/State and Local **Government/Aleutian** Islands/Quarterly 1960-1980.
- COMMENTS: See **Employment/Contract** Construction/Aleutian Islands.
- BIAS: See Employment/Contract Construction/Aleutian Islands.
- i) DATA : Employment Payroll/Miscellaneous/Aleutian Islands/Quarterly 1960-1980.
- COMMENTS: See Employment/Contract Construction/Aleutian islands.
- BIAS: See Employment/Contract Construction/Aleutian Islands.
2. **Kobuk (NANA)**
- a) DATA : Employment Payroll/Contract Construction/**Kobuk (NANA)/Quarterly** 1960-1980.
- COMMENTS: See Employment/Contract Construction/**Kobuk (NANA)**.
- BIAS: See Employment/Contract Construction/**Kobuk (NANA)**.
- b) DATA: Employment **Payroll/Manufacturing/Kobuk (NANA)/Quarterly** 1960-1980.
- COMMENTS: See Employment/Manufacturing/**Kobuk (NANA)**.
- BIAS: See Employment/Manufacturing/**Kobuk (NANA)**.
- c) DATA: Employment Payroll/Transportation, Communications & **Utilities/Kobuk (NANA)/**Quarterly 1960-1980.
- COMMENTS: See Employment/Transportation, **Communications & Utilities/Kobuk (NANA)**.

c. Con't.

BIAS: See Employment/Transportation, Communications & Utilities/Kobuk (NANA).

d) DATA : Employment Payroll/Wholesale & Retail Trade/Kobuk (NANA)/Quarterly 1960-1980.

COMMENT: See Employment/Wholesale & Retail Trade/Kobuk (NANA).

BIAS: See Employment/Wholesale & Retail Trade/Kobuk (NANA).

e) DATA : Employment Payroll/Finance, Insurance & Real Estate/Kobuk (NANA)/Quarterly 1960-1980.

COMMENTS: See Employment/Finance, Insurance & Real Estate/Kobuk (NANA).

BIAS: See Employment/Finance, Insurance & Real Estate/Kobuk (NANA).

f) DATA : Employment Payroll/Services/Kobuk (NANA)/Quarterly 1960-1980.

COMMENTS: See Employment/Services

BIAS: See Employment/Services

g) DATA: Employment Payroll/Federal Government/Kobuk (NANA)/Quarterly 1960-1980.

COMMENTS: See Employment/Federal Government/Kobuk (NANA).

BIAS: See Employment/Federal Government/Kobuk (NANA).

h) DATA : Employment Payroll/State and Local Government/Kobuk (NANA)/Quarterly 1960-1980.

COMMENTS: See Employment/State and Local Government/Kobuk (NANA).

BIAS: See Employment/Transportation, Communications & Utilities/Kobuk (NANA).

Section IV: Independent Variables Review

A. Commercial Salmon Catch

1. DATA : Commercial Salmon Catch/Aleutian Islands - Alaska Peninsula and **Kotzebue/Yearly 1969-1979.**

COMMENTS: **Kotzebue** figures for 1969-1974 were included as part of the **total single figure** for the **Arctic-Yukon-Kuskokwim** area.

BIAS: **Kotzebue** figures for 1969-1974 are over-estimated and **not** comparable to 1975-1979.

B. Commercial Salmon Catch Value

1. DATA : Commercial **Salmon** Catch Value/Aleutian Islands-Alaska Peninsula and **Kotzebue/Yearly 1969-1979.**

COMMENTS: **Kotzebue** figures for 1969-1974 were included as part of the **total single figure** for the **Arctic-Yukon-Kuskokwim** area.

BIAS: **Kotzebue** figures for 1969-1974 are over-estimates and **not** comparable to 1975-1979.

c. Commercial Fishing Licenses

1. DATA : Commercial Fishing Licenses/NANA/Yearly 1962-1977.

COMMENTS: 1) 1962 figure includes **Norton Sound** district fishermen who also fished **Kotzebue/NANA** district before area registration was established.

2) 1974-1975 figures include 7 and 21 licenses, respectively, for the **Deering** experimental commercial **fishery.**

BIAS: 1962, 1974 and 1975 figures overestimate the number! **of district** licenses.

D. Commercial Churn Salmon

1. DATA : Commercial Chum Salmon Fishermen/NANA/
Yearly 1962-1981.
- COMMENTS: None
- BIAS: None
-
2. DATA : Commercial Chum Salmon Catch/NANA/
Yearly 1962-1981.
- COMMENTS: Figures for 1974 and 1975 include 6,567 and
10,704, respectively, chum harvested from
Deering experimental fishery.
- BIAS: 1974 and 1975 figures over-estimate compar-
able caught by 1% and 2% respectively.
-
- 3* DATA : Commercial Chum Salmon Catch Value/NANA/
Yearly 1962-1981.
- COMMENTS: The figures for 1974 and 1975 include
\$9,193 and \$17,776, respectively, from
the experimental fishery at Deering.
- BIAS: 1974 and 1975 figures over-estimate
comparable values by 0.5% and 1%
respectively.
-
4. DATA : Estimated Mean Chum Salmon Prices/NANA/
Yearly 1962-1980.
- COMMENTS: 1) Figures for 1962-1965 are for price per
fish .
- 2) Figures for 1974 and 1975 include prices
paid to fishermen of Deering during
experimental commercial fishery.
- BIAS: 1962-1965 figures are not dependably compar-
able to figures from 1966 forward.

E. Subsistence Chum Salmon

- 1a. DATA : Mean Subsistence Chum Salmon Catch/Kiana/
Yearly 1962-1980.
- COMMENTS: None
- BIAS: None
- 1b. DATA : Mean Subsistence Chum Salmon Catch/Kotzebue/
Yearly 1962-1980.
- COMMENTS: None
- BIAS: None
- 1c. DATA: Mean Subsistence Chum Salmon Catch/Noatak/
Yearly 1962-1980.
- COMMENTS: **None**
- BIAS: **None**
- 2a. DATA: Subsistence Chum Salmon Catch/Kiana/
Yearly 1962-1980.
- COMMENTS: Based on interviews and **return of catch forms from** un-interviewed fishermen.
- BIAS: Figures represent **an** underestimate, but at least **70% of** the actual **harvest**.
- 2b . DATA : Subsistence Chum Salmon Catch/Kotzebue/
Yearly 1962-1980.
- COMMENTS: Based on interviews and **return of catch forms from un-interviewed** fishermen.
- BIAS: **Figures** represent an underestimate, but at-least **70% of** the actual **harvest**.

2c . DATA: Subsistence Chum Salmon Catch/Noatak/
Yearly 1961-1980.

COMMENTS: Based on interviews and return of catch
forms from un-interviewed fishermen.

BIAS: Figures represent an underestimate, but at
least 70% of the actual harvest.

2d. DATA: Subsistence Chum Salmon Catch/NANA/
Yearly 1962-1980.

COMMENTS: Based on interviews and return of catch
forms from un-interviewed fishermen.

BIAS: Figures represent an underestimate, but at
least 70% of the actual harvest.

F. Chum Salmon Aerial Survey Escapement Estimates

1. DATA : Chum Salmon Aerial Survey Escapement
Estimates/Noatak River/Yearly 1962-1980.

COMMENTS: There were poor survey conditions or in-
complete surveys during 1963, 1965, 1968,
1972 and 1977.

BIAS: Figures for 1963, 1965, 1968, 1969, 1972
and 1977 represent underestimates of
probable escapement.

2. DATA : Chum Salmon Aerial Survey Escapement
Estimates/Kobuk River/Yearly 1962-1980.

COMMENTS: There were poor survey conditions or in-
complete surveys during 1965, 1968, 1970,
1972, 1973, 1975, 1976, 1977 and 1979.

BIAS: Figures for 1965, 1968, 1970, 1972, 1973,
1975-1977 and 1979 represent underestimates
of probable escapements.

G. Subsistence Inconnu (Sheefish) Catch

1. DATA : Subsistence Inconnu (Sheefish) Catch/
Kiana/Yearly 1966-1980.

COMMENTS: None

BIAS: None

2. DATA : Subsistence Inconnu (Sheefish) Catch/
Kotzebue/Yearly 1966-1980.

COMMENTS: None

BIAS: **None**

3. DATA: Subsistence Inconnu (Sheefish) Catch/
Selawik/Yearly 1966-1980.

COMMENTS: **None**

BIAS : None

4. DATA : Subsistence Inconnu (Sheefish) Catch/
NANA/Yearly 1966-1980.

COMMENTS: **None**

BIAS: None

H. Commercial Fishing Periods

1. DATA : Commercial Salmon Fishing Periods/Kiana/
Weekly (July-Sept) 1962-1980.

COMMENTS: None

BIAS: None

2. DATA : Commercial Salmon Fishing Periods/
Kotzebue/Weekly (July-Sept) 1962-1980.

COMMENTS: None

BIAS: None

3. DATA: " Commercial Salmon Fishing Periods/Noatak/
Weekly (July-Sept) 1962-1980.

COMMENTS: None

BIAS: None

4. DATA : Commercial Salmon Fishing Periods/NANA/
Weekly (July-Sept) 1962-1980.

COMMENTS: None

BIAS: None

I. Weather

1a. DATA : Weather/Total Precipitation/Aleutian Islands
(Cold Bay)/Monthly (June-Sept) 1962-1980.

COMMENTS: None

BIAS: None

1b. DATA : Weather/Total Precipitation/Aleutian Islands
(St. Paul)/Monthly (June-Sept) 1962-1980.

COMMENTS: None

BIAS: None

- 1c. DATA : Weather/Total Precipitation/NANA (Kotzebue)/
Monthly (June-Sept) 1962-1980.
- COMMENTS: Snowfall (during June and/or September for
certain years) was **not** Included in **order to**
maintain greater comparability with Aleutian
Islands data.
- BIAS: Underestimate **total precipitaitaion** for
region during some months.
2. DATA : Weather/Peak Weekly Precipitation/NANA/
Weekly (July-September) 1962-1980.
- COMMENTS: **None**
- BIAS: **None**
3. DATA: Weather/Average Hourly Wind Speed/NANA
Monthly (March-May & October-December)
1962-1980.
- COMMENTS: **None**
- BIAS: **None**
- 4a. DATA: Weather/Peak **Weekly** Wind Speed/NANA/
Weekly (March-May) 1962-1980.
- COMMENTS: **None**
- BIAS: **None**
- 4b. DATA : Weather/Peak Weekly Wind Speed/NANA/
Weekly (**October-December**) 1962-1980.
- COMMENTS: **None**
- BIAS: **None**

APPENDIX V

Descriptive Data

A. Registered Voters

1-8. DATA: Number of Registered Voters/King Cove,
 Nikolski, St. George, Unalaska, Kiana,
 Kotzebue, Noatak, Selawik/Yearly 1974-1981.

COMMENTS: No information available for 1975.

BIAS: See above.