

Alaska Bureau of Vital Statistics 1999 Annual Report

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PREFACE 1

PURPOSE OF THIS REPORT 1

HOW THIS REPORT IS ORGANIZED 1

HOW TO OBTAIN A COPY 2

ADDITIONAL INFORMATION 2

ACKNOWLEDGMENTS 2

EXECUTIVE SUMMARY 3

SUMMARY OF POPULATION AND VITAL STATISTICS INFORMATION 3

INTRODUCTION 5

ABOUT ALASKA 5

HOW VITAL STATISTICS ARE COLLECTED 5

POPULATION ESTIMATES 6

HOW CERTIFICATES ARE PROCESSED 6

HOW THIS REPORT WAS PREPARED 7

DETERMINATION OF RACE 7

BIRTHS 9

INTRODUCTION 9

RESIDENT BIRTHS, 1990-1999 10

MOST POPULAR BOYS' AND GIRLS' NAMES, 1989, 1994, 1999 10

CRUDE BIRTH RATES, 1990-1999 10

FERTILITY RATES, 1990-1999 11

TEEN BIRTH RATES, 1990-1999 11

LOW BIRTH WEIGHT BIRTHS, 1990-1999 12

BIRTHS TO UNWED MOTHERS, 1990-1999 12

STATEWIDE BIRTH STATISTICS 14-15

BOROUGH AND CENSUS AREA MAP OF ALASKA 17

BIRTH STATISTICS BY BOROUGH OR CENSUS AREA 19-45

 ALEUTIANS EAST BOROUGH 19

 ALEUTIANS WEST CENSUS AREA 20

 MUNICIPALITY OF ANCHORAGE 21

 BETHEL CENSUS AREA 22

 BRISTOL BAY BOROUGH 23

 DENALI BOROUGH 24

 DILLINGHAM CENSUS AREA 25

 FAIRBANKS NORTH STAR BOROUGH 26

 HAINES BOROUGH 27

 JUNEAU BOROUGH 28

 KENAI PENINSULA BOROUGH 29

 KETCHIKAN GATEWAY BOROUGH 30

 KODIAK ISLAND BOROUGH 31

 LAKE AND PENINSULA BOROUGH 32

 MATANUSKA-SUSITNA BOROUGH 33

 NOME CENSUS AREA 34

 NORTH SLOPE BOROUGH 35

 NORTHWEST ARCTIC BOROUGH 36

 PRINCE OF WALES-OUTER KETCHIKAN CENSUS AREA 37

 SITKA BOROUGH 38

 SKAGWAY-HOONAH-ANGOON CENSUS AREA 39

 SOUTHEAST FAIRBANKS CENSUS AREA 40

 VALDEZ-CORDOVA CENSUS AREA 41

 WADE HAMPTON CENSUS AREA 42

 WRANGELL-PETERSBURG CENSUS AREA 43

 YAKUTAT BOROUGH 44

 YUKON-KOYUKUK CENSUS AREA 45

NATIVE REGIONAL CORPORATION MAP OF ALASKA	47
BIRTH STATISTICS BY NATIVE REGIONAL CORPORATION	49-60
AHTNA INCORPORATED	49
ALEUT CORPORATION	50
ARCTIC SLOPE CORPORATION	51
BERING STRAITS NATIVE CORPORATION	52
BRISTOL BAY NATIVE CORPORATION	53
CALISTA CORPORATION	54
CHUGACH ALASKA CORPORATION	55
COOK INLET REGIONAL CORPORATION	56
DOYON LIMITED	57
KONIAG INCORPORATED	58
NANA REGIONAL CORPORATION	59
SEALASKA CORPORATION	60
FETAL & INFANT DEATHS	61
FETAL DEATHS	61
INFANT DEATHS	62
STATEWIDE FETAL AND INFANT DEATHS (DEATH COHORT) BY RACE	65
STATEWIDE FETAL AND INFANT DEATHS (BIRTH COHORT) BY RACE	66
FETAL AND INFANT DEATHS (DEATH COHORT) BY BOROUGH OR CENSUS AREA AND RACE	67
ALEUTIANS EAST BOROUGH - HAINES BOROUGH	67
JUNEAU BOROUGH - NORTHWEST ARCTIC BOROUGH	68
PRINCE OF WALES-OUTER KETCHIKAN CENSUS AREA - YUKON-KOYUKUK CENSUS AREA	69
FETAL AND INFANT DEATHS (DEATH COHORT) BY NATIVE REGIONAL CORPORATION AND RACE	70
AHTNA INCORPORATED - CALISTA CORPORATION	70
CHUGACH ALASKA CORPORATION - SEALASKA CORPORATION	71
STATEWIDE INFANT DEATHS (DEATH COHORT) BY SELECTED CAUSES OF DEATH	72
STATEWIDE INFANT DEATHS (BIRTH COHORT) BY SELECTED CAUSES OF DEATH	72
CHILD AND ADOLESCENT DEATHS	73
STATEWIDE ADOLESCENT DEATHS BY RACE, SEX AND AGE GROUP	75
ADOLESCENT DEATHS BY BOROUGH OR CENSUS AREA AND AGE GROUP	76-77
ADOLESCENT DEATHS BY NATIVE REGIONAL CORPORATION AND AGE GROUP	78
STATEWIDE ADOLESCENT DEATHS BY SELECTED CAUSES OF DEATH AND AGE GROUP	79-81
DEATHS	83
CRUDE DEATH RATES	84
AGE-ADJUSTED DEATH RATES	84
AGE-ADJUSTED DEATH RATES BY SEX AND RACE	85
DEATHS AND AGE-ADJUSTED DEATH RATES BY AGE	86
LEADING CAUSES OF DEATH	87-92
OTHER CAUSES OF DEATH	92-94
LEADING CAUSES OF DEATH BY RACE AND SEX	95-96
DETAILED CAUSES OF DEATH BY RACE AND SEX	97-98
DETAILED CAUSES OF DEATH BY AGE GROUP	99-100
DEATHS AND DEATH RATES BY BOROUGH OR CENSUS AREA	101-114
ALEUTIANS EAST BOROUGH - ALEUTIANS WEST CENSUS AREA	101
MUNICIPALITY OF ANCHORAGE - BETHEL CENSUS AREA	102
BRISTOL BAY BOROUGH - DENALI BOROUGH	103
DILLINGHAM CENSUS AREA - FAIRBANKS NORTH STAR BOROUGH	104
HAINES BOROUGH - JUNEAU BOROUGH	105
KENAI PENINSULA BOROUGH - KETCHIKAN GATEWAY BOROUGH	106
KODIAK ISLAND BOROUGH - LAKE AND PENINSULA BOROUGH	107
MATANUSKA-SUSITNA BOROUGH - NOME CENSUS AREA	108
NORTH SLOPE BOROUGH - NORTHWEST ARCTIC BOROUGH	109
PRINCE OF WALES-OUTER KETCHIKAN CENSUS AREA - SITKA BOROUGH	110
SKAGWAY-HOONAH-ANGOON CENSUS AREA - SOUTHEAST FAIRBANKS CENSUS AREA	111

VALDEZ-CORDOVA CENSUS AREA - WADE HAMPTON CENSUS AREA 112

WRANGELL-PETERSBURG CENSUS AREA - YAKUTAT BOROUGH 113

YUKON-KOYUKUK CENSUS AREA 114

DETAILED CAUSES OF DEATH BY CENSUS AREA OR BOROUGH 115-130

 ALEUTIANS EAST BOROUGH - ALEUTIANS WEST CENSUS AREA 115

 MUNICIPALITY OF ANCHORAGE 115-116

 BETHEL CENSUS AREA - BRISTOL BAY BOROUGH 116-117

 DENALI BOROUGH - DILLINGHAM CENSUS AREA 117-118

 FAIRBANKS NORTH STAR BOROUGH - HAINES BOROUGH 118-119

 JUNEAU BOROUGH 119-120

 KENAI PENINSULA BOROUGH. 120-121

 KETCHIKAN GATEWAY BOROUGH - KENAI PENINSULA BOROUGH 121-122

 KODIAK ISLAND BOROUGH - LAKE AND PENINSULA BOROUGH 122-123

 MATANUSKA-SUSITNA BOROUGH. 123-124

 NOME CENSUS AREA - NORTH SLOPE BOROUGH 124-125

 NORTHWEST ARCTIC BOROUGH - PRINCE OF WALES - OUTER KETCHIKAN 126

 SITKA BOROUGH - SKAGWAY-HOONAH-ANGOON CENSUS AREA 126-127

 SOUTHEAST FAIRBANKS CENSUS AREA - VALDEZ-CORDOVA CENSUS AREA 127-128

 WADE HAMPTON CENSUS AREA - WRANGELL-PETERSBURG CENSUS AREA 128-129

 YAKUTAT BOROUGH - YUKON-KOYUKUK CENSUS AREA. 130

DEATHS BY NATIVE REGIONAL CORPORATION. 131-134

 AHTNA INCORPORATED - ARCTIC SLOPE CORPORATION 131

 BERING STRAITS NATIVE CORPORATION - CALISTA CORPORATION 132

 CHUGACH ALASKA CORPORATION - DOYON LIMITED 133

 KONIAG INCORPORATED - SEALASKA CORPORATION 134

DETAILED CAUSES OF DEATH BY NATIVE REGIONAL CORPORATION. 135-143

 AHTNA INCORPORATED -ALEUT CORPORATION. 135

 ARCTIC SLOPE CORPORATION - BERING STRAITS NATIVE CORPORATION. 135-136

 BRISTOL BAY NATIVE CORPORATION 136-137

 CALISTA CORPORATION 137-138

 CHUGACH ALASKA CORPORATION 138-139

 COOK INLET REGIONAL CORPORATION 139-140

 DOYON LIMITED 140-141

 KONIAG INCORPORATED - NANA REGIONAL CORPORATION 141-142

 SEALASKA CORPORATION. 142-143

ADOPTIONS 145

 ADOPTIONS BY ADOPTEE’S RACE 146

 ADOPTIONS BY RACE AND BOROUGH OR CENSUS AREA OF OCCURRENCE 147-151

 ADOPTIONS BY RACE AND NATIVE REGIONAL CORPORATION OF OCCURRENCE 152-154

MARRIAGES AND DIVORCES 155

 MARRIAGES. 155

 DIVORCES 156

 MARRIAGES AND DIVORCES 1999, 1997-1999 156

 MARRIAGES AND DIVORCES BY CENSUS AREA OR BOROUGH 157-159

 MARRIAGES AND DIVORCES BY NATIVE REGIONAL CORPORATION. 160-161

APPENDIX A: DEFINITION OF TERMS 163

APPENDIX B: TECHNICAL NOTES 167

 HOW TO USE VITAL STATISTICS 167

 VITAL STATISTICS FORMULAS 169

APPENDIX C: MORTALITY 173

 COMPARISON BETWEEN ICD-9 AND ICD-10 173

 AGE-ADJUSTED RATES. 174

 ICD CAUSE OF DEATH CODES 175-176

 ESTIMATED COMPARABILITY RATIOS FOR 113 SELECTED CAUSES OF DEATH 177-179

TABLE OF CONTENTS

ESTIMATED COMPARABILITY RATIOS FOR 130 SELECTED CAUSES OF INFANT DEATH. 180-182

APPENDIX D: PRENATAL CARE. 183

 KESSNER INDEX 183

 APNCU INDEX 184

APPENDIX E: DETERMINATION OF CHILD’S RACE 185

 NCHS STANDARDS 185

 STATISTICAL CALCULATIONS. 185

APPENDIX F: YEAR 2000 HEALTH OBJECTIVES. 187

APPENDIX G: SAMPLE CERTIFICATES 189

 CERTIFICATE OF LIVE BIRTH. 189

 CERTIFICATE OF LIVE BIRTH (continued). 190

 CERTIFICATE OF FETAL DEATH. 191

 CERTIFICATE OF FETAL DEATH (continued). 192

 REPORT OF ADOPTION. 193

 CERTIFICATE OF MARRIAGE. 194

 CERTIFICATE OF DIVORCE, DISSOLUTION OF MARRIAGE, OR ANNULMENT. 195

 CERTIFICATE OF DEATH 196

 CERTIFICATE OF PRESUMPTIVE DEATH. 197

APPENDIX H: GEOGRAPHIC INFORMATION 199

APPENDIX I: POPULATION OVERVIEW 211

 ALASKA’S POPULATION BY AGE, SEX AND RACE, JULY 1999 211

 ALASKA’S POPULATION BY AGE, SEX AND RACE, JULY 1998 212

 ALASKA’S POPULATION BY AGE, SEX AND RACE, JULY 1997 212

 POPULATION DISTRIBUTION IN ALASKA AND THE UNITED STATES. 213

LIST OF TABLES

TABLE 1	BIRTHS REPORTED BY MOTHER'S RACE: 1999 AND 1997-1999	14
TABLE 2	BIRTHS REPORTED BY MOTHER'S RACE AND RESIDENCE: 1999 AND 1997-1999	19
TABLE 3	BIRTHS REPORTED BY MOTHER'S RACE AND NATIVE REGIONAL CORPORATION OF RESIDENCE: 1999 AND 1997-1999.....	49
TABLE 4	FETAL AND INFANT DEATHS (DEATH COHORT): 1999 AND 1997-1999	65
TABLE 5	FETAL AND INFANT DEATHS (BIRTH COHORT): 1999 AND 1997-1999	66
TABLE 6	FETAL AND INFANT DEATHS (DEATH COHORT) BY RACE AND RESIDENCE: 1999 AND 1997-1999	67
TABLE 7	FETAL AND INFANT DEATHS (DEATH COHORT) BY RACE AND NATIVE REGIONAL CORPORATION OF RESIDENCE: 1999 AND 1997-1999	70
TABLE 8	INFANT DEATHS (DEATH COHORT) FOR SELECTED CAUSES OF DEATH BY AGE: 1999 AND 1997-1999	72
TABLE 9	INFANT DEATHS (BIRTH COHORT) FOR SELECTED CAUSES OF DEATH BY AGE: 1999 AND 1997-1999	72
TABLE 10	AGE-SPECIFIC ADOLESCENT DEATH RATES FOR ALASKA AND THE U.S.: 1992-1999	74
TABLE 11	CHILD AND ADOLESCENT DEATHS BY RACE AND SEX: 1999 AND 1997-1999	75
TABLE 12	CHILD AND ADOLESCENT DEATHS BY CENSUS AREA OR BOROUGH OF RESIDENCE: 1999 AND 1997-1999	76
TABLE 13	CHILD AND ADOLESCENT DEATHS BY NATIVE REGIONAL CORPORATION: 1999 AND 1997-1999.....	78
TABLE 14	CHILD AND ADOLESCENT DEATHS BY AGE GROUP AND SELECTED CAUSES OF DEATH: 1999 AND 1997-1999	79
TABLE 15	RESIDENT DEATHS AND DEATH RATES BY DECEDENT'S RACE AND SEX: 1999	86
TABLE 16A	RESIDENT DEATHS AND DEATH RATES BY DECEDENT'S AGE GROUP AND SEX: 1999.....	86
TABLE 16B	RESIDENT DEATHS AND DEATH RATES BY DECEDENT'S RACE AND AGE GROUP: 1999	86
TABLE 17	LEADING CAUSES OF DEATH BY SEX AND RACE: 1999	95
TABLE 18	DETAILED CAUSES OF DEATH BY SEX AND RACE: 1999	97
TABLE 19	DETAILED CAUSES OF DEATH BY AGE GROUP: 1999.....	99

TABLE 20	DEATHS AND DEATH RATES BY BOROUGH OR CENSUS AREA OF RESIDENCE: 1999 AND 1997-1999	101
TABLE 21	DETAILED CAUSES OF DEATH BY CENSUS AREA OR BOROUGH: 1999 AND 1997-1999.....	115
TABLE 22	DEATHS BY NATIVE REGIONAL CORPORATION BY RACE, SEX AND AGE GROUP: 1999 AND 1997-1999	131
TABLE 23	DETAILED CAUSES OF DEATH BY NATIVE REGIONAL CORPORATION: 1999 AND 1997-1999.....	135
TABLE 24	ADOPTIONS BY ADOPTEE'S RACE: 1999 AND 1997-1999	146
TABLE 25	ADOPTIONS BY BOROUGH OR CENSUS AREA OF OCCURRENCE AND ADOPTEE'S RACE: 1999 AND 1997-1999.....	147
TABLE 26	ADOPTIONS BY NATIVE REGIONAL CORPORATION OF OCCURRENCE AND ADOPTEE'S RACE: 1999 AND 1997-1999.....	152
TABLE 27	MARRIAGES AND DIVORCES: 1999 AND 1997-1999.....	156
TABLE 28	MARRIAGES AND DIVORCES BY CENSUS AREA OR BOROUGH: 1999 AND 1997-1999.....	157
TABLE 29	MARRIAGES AND DIVORCES BY NATIVE REGIONAL CORPORATION: 1999 AND 1997-1999.....	160
TABLE A.1	STANDARD POPULATION	165
TABLE B.1	EXPECTATION OF LIFE FOR ALL ALASKANS, 1995-1999.....	170
TABLE C.1	ICD CAUSE OF DEATH CODES	175
TABLE C.2	ESTIMATED COMPARABILITY RATIOS FOR 113 SELECTED CAUSES OF DEATH.....	177
TABLE C.3	ESTIMATED COMPARABILITY RATIOS FOR 130 SELECTED CAUSES OF INFANT DEATH	180
TABLE D.1	INSTITUTE OF MEDICINE'S THREE-FACTOR PRENATAL CARE INDEX	183
TABLE D.2	ADEQUACY OF PRENATAL CARE INDEX MATRIX	184
TABLE F.1	YEAR 2000 HEALTH OBJECTIVES.....	187
TABLE I.1	ESTIMATED POPULATION OF ALASKA BY AGE, SEX AND RACE, JULY 1999.....	211
TABLE I.2	ESTIMATED POPULATION OF ALASKA BY AGE, SEX, AND RACE, JULY 1998	212
TABLE I.3	ESTIMATED POPULATION OF ALASKA BY AGE, SEX, AND RACE, JULY 1997	212

LIST OF FIGURES

FIGURE 1	ALASKA RESIDENT BIRTHS: 1990-1999	10
FIGURE 2	MOST POPULAR BOYS' AND GIRLS' NAMES: 1989, 1994, AND 1999	10
FIGURE 3	CRUDE BIRTH RATES, U.S. AND ALASKA: 1990-1999	10
FIGURE 4	FERTILITY RATES, U.S. AND ALASKA: 1990-1999	11
FIGURE 5	TEEN BIRTH RATES, U.S. AND ALASKA: 1990-1999	11
FIGURE 6	PERCENTAGE OF LOW BIRTH WEIGHT INFANTS, U.S. AND ALASKA: 1990-1999	12
FIGURE 7	PERCENTAGE OF UNWED MOTHERS, U.S. AND ALASKA: 1990-1999	12
FIGURE 8	INFANT MORTALITY RATES, U.S. AND ALASKA: 1990-1999	62
FIGURE 9	NEONATAL MORTALITY RATES, U.S. AND ALASKA: 1990-1999	63
FIGURE 10	POSTNEONATAL MORTALITY RATES, U.S. AND ALASKA: 1990-1999	63
FIGURE 11	DEATH RATES FOR ADOLESCENTS AGE 15-19, U.S. AND ALASKA: 1992-1999	74
FIGURE 12	NUMBER OF DEATHS TO ALASKA RESIDENTS: 1990-1999	84
FIGURE 13	CRUDE DEATH RATES, U.S. AND ALASKA: 1990-1999	84
FIGURE 14	AGE-ADJUSTED DEATH RATES, U.S. AND ALASKA: 1990-1999	84
FIGURE 15	AGE-ADJUSTED DEATH RATES BY SEX, U.S. AND ALASKA: 1990-1999	85
FIGURE 16	AGE-ADJUSTED DEATH RATES BY RACE: 1990-1999	85
FIGURE 17	MALIGNANT NEOPLASMS AGE-ADJUSTED DEATH RATES: 1990-1999	87
FIGURE 18	HEART DISEASE AGE-ADJUSTED DEATH RATES: 1990-1999	88
FIGURE 19	UNINTENTIONAL INJURY AGE-ADJUSTED DEATH RATES: 1990-1999	88
FIGURE 20	CEREBROVASCULAR AGE-ADJUSTED DEATH RATES: 1990-1999	89
FIGURE 21	CHRONIC LOWER RESPIRATORY DISEASE AGE-ADJUSTED DEATH RATES: 1990-1999	89
FIGURE 22	INTENTIONAL SELF-HARM (SUICIDE) AGE-ADJUSTED DEATH RATES: 1990-1999	90
FIGURE 23	DIABETES MELLITUS AGE-ADJUSTED DEATH RATES: 1990-1999	90
FIGURE 24	ASSAULT (HOMICIDE) AGE-ADJUSTED DEATH RATES: 1990-1999	91
FIGURE 25	INFLUENZA AND PNEUMONIA AGE-ADJUSTED DEATH RATES: 1990-1999	91

LIST OF FIGURES

FIGURE 26	CHRONIC LIVER DISEASE AND CIRRHOSIS AGE-ADJUSTED DEATH RATES: 1990-1999	92
FIGURE 27A	ALCOHOL-INDUCED AGE-ADJUSTED DEATH RATES, BY RACE: 1990-1999	93
FIGURE 27B	ALCOHOL-INDUCED AGE-ADJUSTED DEATH RATES, BY SEX: 1990-1999	93
FIGURE 28A	FIREARM RELATED AGE-ADJUSTED DEATH RATES, BY RACE: 1990-1999	93
FIGURE 28B	FIREARM RELATED AGE-ADJUSTED DEATH RATES, BY SEX: 1990-1999	93
FIGURE 29A	DRUG-INDUCED AGE-ADJUSTED DEATH RATES, BY RACE: 1990-1999	94
FIGURE 29B	DRUG-INDUCED AGE-ADJUSTED DEATH RATES, BY SEX: 1990-1999	94
FIGURE I.1	POPULATION DISTRIBUTION BY AGE GROUP AND SEX, U.S. AND ALASKA: 1999	213

LIST OF MAPS

BOROUGH AND CENSUS AREA MAP OF ALASKA..... 17

NATIVE REGIONAL CORPORATION MAP OF ALASKA 47

PREFACE

PURPOSE OF THIS REPORT

The *Alaska Bureau of Vital Statistics 1999 Annual Report* was written by the Research Unit staff of the Alaska Bureau of Vital Statistics. This report contains data on births, fetal and infant deaths, adoptions, marriages and divorces, and deaths. The purpose of this report is to provide reference material and indicators for health and vital events in Alaska. Other data sources for analyzing public health trends are also available from the Alaska Department of Health and Social Services.

HOW THIS REPORT IS ORGANIZED

Table of Contents

The table of contents contains chapter headings and major sections, and lists of tables, charts, and maps.

Preface

This section describes the organization of this report.

Executive Summary

The executive summary includes population estimates and numbers and rates of vital events (births, deaths, marriages, divorces and adoptions) in Alaska for the 1999 calendar year.

Introduction

The introduction provides an overview of Alaska, information on population and demographics, and an explanation of how vital statistics are collected and recorded.

Births

The birth section includes tables showing numbers of births by census area (borough) and Native regional corporation, birth characteristics of babies, and demographic and behavioral information on parents.

Fetal and Infant Deaths

This chapter includes tables showing fetal deaths by census area (borough) and Native regional corporation, and deaths and mortality rates for infants up to one year of age by census areas, Native regional corporations, and causes of death.

Childhood Deaths

This chapter provides specific information on deaths to children from birth through 19 years of age.

Deaths

This section includes information on all deaths by census area (borough) and Native regional corporation; death rates; causes of death; and age, gender, and race of decedents.

Adoptions

The adoption chapter provides information on census areas (borough) and Native regional corporation boundaries where adoption decrees were granted; adoptions by age, race, and type of adoption.

Marriages and Divorces

This chapter provides information on the number and rates of marriages and divorces by residence and census area (borough) of occurrence.

Appendices

The appendices include definitions of terms, technical notes, classification of causes of death, prenatal care index, method of determining child's race, Year 2000 health objectives, geographic overview, sample certificates, and population statistics.

HOW TO OBTAIN A COPY

The 1999 Annual Report of the Bureau of Vital Statistics is available at many local libraries throughout the state and on the Internet at:

www.hss.state.ak.us/dph/bvs/statistics/99annualreport.htm

We welcome any comments, questions, or concerns you may have about this report. You may contact us at:

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ADDITIONAL INFORMATION

Additional information, including how to obtain copies of vital event certificates, is available on the Internet at:

www.hss.state.ak.us/dph/bvs/default.htm

The Research Unit is also available for special information requests on vital statistics data. For non-governmental organizations the fee for research is \$70/hour. For further assistance, please contact the Research Unit at:

Phone: (907) 465-8603

Fax: (907) 465-4589

Email: BVSResearch@health.state.ak.us

ACKNOWLEDGMENTS

Most of the data and health indicators presented in this report are based upon information supplied by many people throughout the state. Birth mothers, doctors, midwives, other birth attendants, medical facilities, medical examiners, magistrates, funeral directors, and a host of other individuals complete information on vital records.

The staff of the Bureau of Vital Statistics extends our gratitude to each person who participated in our data gathering effort. Accurate data are essential to the Bureau's effort to report reliable vital event information. We appreciate the assistance of others in maintaining the integrity of our data.

EXECUTIVE SUMMARY

SUMMARY OF POPULATION AND VITAL STATISTICS INFORMATION

Alaska's Population

Total Population	622,000 ¹
White	458,662
Native	104,745 ²
African American	27,617
Asian and Pacific Islander	30,976
Male	323,686
Female	298,314
Natural Increase	7,262 ³
Natural Increase Rate.	11.7

Births

Total Births	9,959
Crude Birth Rate	16.0 ⁴
White Crude Birth Rate	14.1
Native Crude Birth Rate	23.4
African American Crude Birth Rate	15.5
Asian/Pacific Islander Crude Birth Rate	14.6
Teen Birth Rate	47.8 ⁸
Fertility Rate	72.5 ⁹
White Fertility Rate	64.3
Native Fertility Rate	106.0
African American Fertility Rate.	65.0
Asian/Pacific Islander Fertility Rate	61.8
Low Birth Weight Percentage	5.7 ¹⁰
White Low Birth Weight Percentage	5.2
Native Low Birth Weight Percentage	5.9
African Amer. Low Birth Weight Percentage	10.3
Asian/PI Low Birth Weight Percentage	7.5

Deaths

Total Resident Deaths	2,697
Crude Death Rate.	433.6 ⁵
Age-Adjusted Death Rate.	873.0 ⁶
Male Age-Adjusted Death Rate	970.3
Female Age-Adjusted Death Rate.	773.0
Age-Adjusted Cancer Death Rate	192.4
Age-Adjusted Heart Disease Death Rate.	206.5
Age-Adjusted Accidental Death Rate	57.2
Age-Adjusted Suicide Death Rate.	17.2
Infant Mortality Rate	6.5 ⁷
White Infant Mortality Rate.	5.2
Native Infant Mortality Rate	9.4

Other Vital Events

Fetal Deaths	53
Fetal Death Rate	4.5 ⁷
Adoptions	783
Crude Adoption Rate	1.4 ⁴
Marriages	5,474
Crude Marriage Rate	8.8 ⁴
Divorces	3,153
Crude Divorce Rate	5.1 ⁴

1. Alaska population data from the Alaska Department of Labor, Research and Analysis Section, Demographics Unit.
2. For purposes of this report, Native includes any person indigenous to the Western Hemisphere: Alaska Native, Native mixed, Aleut, Eskimo, Canadian Eskimo and Indian, and American Indian.
3. Natural Increase is the difference between live births and deaths. Natural Increase does not include migration.
4. Natural Increase, Birth, Marriage, Divorce, and Adoption Rates are events per 1,000 population.
5. Crude Death Rates are deaths per 100,000 population.
6. Age-Adjusted Death Rates are adjusted to the 2000 U.S. standard population. (See Appendix B)
7. Infant Mortality and Fetal Death Rates are 3-year averages (1997-1999) of infant deaths (death cohort) and fetal deaths per 1,000 live births.
8. Teen Birth Rate is the number of births to teens per 1,000 females 15-19 years of age. This does not include births to females under 15 years of age.
9. Fertility Rates are births per 1,000 females 15-44 years of age.
10. Low Birth Weight Percentages are infants born weighing less than 2,500 grams per 100 live births.

INTRODUCTION

ABOUT ALASKA

Alaska is the largest of the 50 states and contains approximately 16 percent of the country's landmass. Because of its size, Alaska has widely diverse geographic, climatic, and demographic characteristics, all of which affect public health.

Alaska contains roughly 586,412 square miles of land. Alaska's estimated population in 1999 was 622,000, or slightly more than one person per square mile. Alaska also claims the most northern, western and eastern points of land in the United States, more miles of coastline than all of the contiguous 48 states combined (6,640 miles not including islands), over 5,000 glaciers, over 3 million fresh water lakes (one of which, Iliamna, is the second largest lake entirely within the U.S.), and 3,000 rivers, of which the Yukon is the third longest river in the United States. Much of the coastline and fresh water areas are used as transportation corridors, as well as fishing grounds. Remote lands are used for hunting and recreational activities.

Unique climatic conditions affect Alaska's people. Temperatures can range from as high as 100°F to lows that approach -80°F. Alaska experiences extremes in precipitation as well. Some areas of the state may receive up to 200 inches of precipitation annually, while other areas receive as little as 12 inches.

Demographically, whites make up 73.7 percent of the total population; Natives¹, 16.8 percent; African Americans, 4.4 percent; and Asian and Pacific Islanders, 5.0 percent. Males comprise 52 percent and females, 48 percent of the population².

With diverse cultures, sparse population, severe temperatures, vast coastline, and outdoor lifestyles, the state experiences many unique health care challenges. One such challenge is assisting residents who live in remote areas of the state. The Native Health Corporations, the Alaska Compact between the Indian Health Service and individual tribes, the State of Alaska, and private entities provide health care in these areas

through funding for public health nurses and other health care workers.

The *Bureau of Vital Statistics 1999 Annual Report* focuses on health status indicators in Alaska. Some comparisons between Alaska health status indicators and national indicators are made. Although some similarities exist between Alaska and the rest of the United States, there is much dissimilarity. By reporting these indicators, our hope is to assist other professionals to evaluate the status of health in Alaska. The events and vital statistics discussed throughout this report can be useful tools for health care planners, providers, and professionals, but do not provide answers in themselves.

HOW VITAL STATISTICS ARE COLLECTED

Section 18.50.010 of the Alaska Statutes establishes the Bureau of Vital Statistics to install, maintain, and operate a system of vital records. These records contain birth, death, fetal death, divorce, marriage, and adoption information.

When a birth occurs in Alaska, there is a legal process for recording that birth (AS 18.50.160). Generally, a physician, midwife, and/or hospital medical records staff person prepares a birth certificate from information provided by the birth parent(s) and the delivery attendant.

Death certificates are usually completed by a funeral home staff member or a local magistrate, and then certified by the attending physician or medical examiner. Death certificates should be filed with the local recording district office within three days of the date of death (AS 18.50.230). After the certificate has been recorded at the local district office, it is then forwarded to the Bureau of Vital Statistics in Juneau for registration.

When a birth or death occurs in Alaska to a resident of another state, the Bureau sends the respective state's registrar a copy of the certificate. Similarly, when a birth or death occurs to an Alaskan resident in another state,

that state's registrar, by formal agreement, sends a copy of the certificate to the Alaska Bureau of Vital Statistics. This cooperative arrangement allows us to include all births and deaths involving Alaskan residents wherever they occur within the country.

In the past, the Alaska Court System issued a license and filed a certificate for each marriage performed in the state. The certificate was filed with the local recording office of the Court System within seven days of the marriage (AS18.50.270). The local recording office then forwarded the certificate to the Bureau for registration and permanent retention. In 1997 the Bureau of Vital Statistics began issuing marriage licenses in Juneau, Anchorage, and Fairbanks, as well as registering and providing permanent retention of documents. Marriage licenses in other parts of the state continue to be issued by the Court System under the Bureau's oversight.

Divorce, dissolution, and annulment certificates are prepared by a clerk of the court from information provided by the petitioner, plaintiff, and (possibly) court documents. The completed certificate is then forwarded to the Bureau for final registration (AS 18.50.280).

For each adoption granted by the court, a report of adoption is prepared and registered with the Bureau (AS 18.50.210). In the event that a child was born in Alaska and adopted in another state, the Bureau receives and acts on that state's report of adoption.

POPULATION ESTIMATES

Population estimates used in this report were obtained from the State of Alaska, Department of Labor (DOL), Research and Analysis Section (R&A), Demographics Unit. Estimates are made by race, age, and geographic area. The 1999 estimated Alaskan population was 622,000 persons, with 323,686 males and 298,314 females. During 1999 there were 108.5 males for every 100 females in Alaska.

The Alaska Department of Labor updates its population estimates annually. The estimate of total population is revised each year to correspond to the U.S. Census Bureau state total. Using the decennial census as a base, birth, death, IRS, Alaska Permanent Fund and education

statistics are used to produce annual population estimates for geographic areas.

In Alaska during 1999, 458,662 persons were white, 104,745 were Native, 27,617 were African American, and 30,976 were Asian and Pacific Islander. Residents of the Anchorage census area comprised 41.7 percent of the state's population during 1999. About 79 percent of Alaska's population was concentrated in six census areas: Anchorage, Fairbanks, Juneau, Kenai, Ketchikan, and Matanuska-Susitna.

The age of a population is important when interpreting vital statistics, because behaviors and health risks of younger populations differ from those exhibited by older populations. Age, race, and sex distributions within a population are also important. The median age for Alaskan males during 1999 was 33.1 years; for females it was 32.8 years; and for all Alaskans it was 32.9 years. There was a difference of more than ten years in the median age of whites (35.4) and Alaska Natives (23.3). The overall median age in the United States during 1999 was 35.6 years. The median age for males in the United States was 34.3 years and for females it was 36.6 years³. The median age for U.S. whites was 36.6 and for Native Americans it was 27.6. For an example of the disparity of the age distribution of Alaska versus that of the United States, please refer to Figure I.1 in Appendix I. For further information about interpretation of vital statistics, refer to "How to Use Vital Statistics" in Appendix B.

HOW CERTIFICATES ARE PROCESSED

In 1994, the Bureau instituted an Electronic Birth Certificate (EBC) system. This system enables hospital and clinic staff to record all birth certificate information by computer. As information is entered for each individual certificate, the computer checks for invalid or improbable data. When the certificate has been entered on the EBC system, the data is certified, recorded, and filed by the Bureau. Each certificate is then examined electronically for missing or out-of-range information and returned to the facility or birth attendant for verification and/or correction. During 1999, almost 97percent of all births occurring in Alaska were recorded using the EBC.

Other vital records received by the Bureau go through a different verification process. First, a trained documents processor reviews the certificate for completeness. If the certificate is incomplete it is returned to the appropriate office for completion. Once a document has been received and accepted, two different employees enter information into the database. This double-entry verification process reduces data entry errors.

A physician or medical examiner determines causes of death and narrative descriptions are entered on the death certificate. The narrative causes of death are typed into a computer file by Bureau staff. SuperMICAR, a program produced, maintained, and provided by the National Center for Health Statistics (NCHS), codes 75-80 percent of causes of death according to ICD-10 standards. (See Appendix C for groupings of ICD-10 causes of death). The Bureau transmits the computer file by diskette or e-mail to NCHS. NCHS completes coding for the remainder of the records. This coding is then returned to the Bureau and transmitted into its database.

HOW THIS REPORT WAS PREPARED

After documents have been entered into the Bureau's database, research staff performs computer checks to test for missing, out-of-range, and duplicate data. Because this report is based not only on events that occur in Alaska, but also events that occur in other states to Alaska residents, there may be a significant lag time before data is received. One of the important checks made by research staff is for duplicate entries of events.

Waiting for all data to arrive and eliminating duplicate entries are both important steps for ensuring the most accurate report possible. After we believe the data is both accurate and complete, data programs can be run to generate information from which the tables, charts, and narrative analyses can be written for this report.

There are a number of ways to report vital events including numbers of events, rates based on total populations, or rates based on specific populations. For a discussion of the use of vital statistics and a comparison of different populations, see Appendix B.

DETERMINATION OF RACE

The National Center for Health Statistics (NCHS) issues guidelines for determining the race of a child at birth. With few exceptions, the child's race on the birth certificate is the same as the mother's stated race. These guidelines became effective in 1989. Appendix E provides more details on how the race of the child is determined.

Sometimes race will be recorded differently on death certificates. This can distort death rates, particularly in the case of infant mortality, where a child's race may be reported as white on the birth certificate because the mother is white, and Native on the death certificate because the father is Native. To ensure consistent reporting and calculation of rates, all death certificates for decedents who were born in Alaska in 1989 or later are matched with the birth certificate and the child's race at birth is used for calculating deaths and death rates by race.

¹ In this report, Native includes any people indigenous to the Western Hemisphere: Alaska Native, Native mixed, Aleut, Eskimo, Canadian Eskimo and Indian, and American Indian.

² Alaska Department of Labor, Research and Analysis Section, Demographics Unit, Juneau, Alaska.

³ Population Estimates Program, Population Division, US Census Bureau, Washington DC

APPENDIX A: DEFINITION OF TERMS

Age-Adjusted Death Rate. A summary of age-specific death rates standardized to one age distribution (such as the 2000 standard population). This summary allows comparisons to be made between populations with different age distributions. (See Appendix B for specific instructions on calculating age-adjusted rates.)

Age-Specific Birth Rate. The number of live births for a specific age group divided by the population for the same specific age group, multiplied by a constant of proportionality (usually 1,000).

Age-Specific Death Rate. The number of deaths for a specific age group divided by the population for the same specific age group, multiplied by a constant of proportionality (usually 100,000).

Birth Cohort Infant Mortality Rate. The birth cohort method of calculating the infant mortality tracks all infants born within a calendar year throughout their first year of life. When calculating 1999 birth cohort rate, all infants who were born during 1999 and died prior to their first birthday, whether in 1999 or in 2000 are included in the numerator. The denominator includes all live births in 2000.

Birth Weight. Weight of the infant when born, usually reported in grams.

Cause of Death. The cause of death reported is the underlying cause of death and is based on information contained on the death certificate, defined by the World Health Organization's International Classification of Diseases - Tenth Revision as the disease or injury which initiated the train of morbid events leading directly to death, or the circumstances of the accident or violence which produced the fatal injury. (See appendix C for specific categories.)

Cause-Specific Death Rate. The number of deaths due to a specific cause of death divided by the estimated total population, multiplied by a constant of proportionality (usually 100,000).

Constant of Proportionality. A number (often 1,000 or 100,000) which is used for calculating a rate so that comparisons are possible and more understandable. (It is easier to compare 21.7 to 21.3 than it is to compare 0.0217 to 0.0213.)

Crude Birth Rate. The number of live births divided by the estimated population, multiplied by a constant of proportionality (usually 1,000).

Crude Death Rate. The number of deaths divided by the estimated population, multiplied by a constant of proportionality (usually 100,000).

Crude Divorce Rate. The number of divorces of all types (divorces, dissolutions, and annulments) divided by the estimated population, multiplied by a constant of proportionality (usually 1,000).

Crude Marriage Rate. The number of marriages divided by the estimated population, multiplied by a constant of proportionality (usually 1,000).

Death Cohort Infant Mortality Rate. The death cohort method is determined by dividing the number of infant deaths by the number of live births in a calendar year. For example, to calculate the death cohort infant mortality rate for 1999, divide the number of infant deaths that occurred in 1999 by the number of live births that occurred during 1999, and multiply the result by a constant of proportionality (usually 1,000). By using the death cohort infant mortality method, some infant deaths will be counted in 1999 when the infant was actually born in 1998. Other deaths to infants born in 1999 who died before their first birthday in 2000 will not be counted. Since the death cohort method of calculating infant mortality does not reflect the number of infant deaths experienced by infants born in a given year, the birth cohort is the preferred calculation method.

Expectation of Life. Expectation of life (life expectancy) is the number of years infants born in a specific year can expect to live if they experience the same age-specific death rate experienced during their birth year. (See Appendix B for an explanation of calculating life expectancy.)

Fertility Rate. The total number of live births divided by the number of women in the estimated population between ages 15 and 44, multiplied by a constant of proportionality (usually 1,000).

Gestation. The period beginning with the first day of the last normal menstrual period and ending with the day of birth. Births occurring between 37 and 41 weeks gestational age are considered full-term.

ICD-10. International Classification of Diseases - Tenth Revision. The official classification system which codifies all diseases and injuries. ICD-10 was first introduced in 1999. All deaths between 1979 and 1998 were coded using ICD-9. Prior to 1979, ICD-8 was used to code all deaths. (Refer to Appendix C)

Infant Deaths. Infants who died before their first birthday.

Infant Mortality Rate (IMR). The number of infant deaths divided by the number of live births, multiplied by a constant of proportionality (usually 1,000). The IMR can be calculated using either the birth cohort or the death cohort method. The infant mortality rate is the same as the sum of the neonatal infant mortality rate and the post-neonatal infant mortality rate.

Life Expectancy. See Expectation of Life.

Live Birth. A birth where the baby exhibits signs of life after delivery. These signs include breathing, beating of the heart, pulsation of the umbilical cord and movement of voluntary muscles.

Location of Occurrence. The place or location where a vital event occurred.

Location of Residence. Most tables report Alaska resident information and are based upon or are categorized by place of residence. The location of actual residence; i.e., census area or Native regional corporation, is not necessarily the same as a person's "legal residence". The location of residence during a tour of military duty or while attending college is considered actual residence.

Low Birth Weight. An infant born weighing less than 2,500 grams. Also see Very Low Birth Weight.

Low Birth Weight Percentage. The number of infants born weighing less than 2,500 grams divided by the number of live births, multiplied by 100.

Native. Includes Alaska Natives, Native mixed, Aleuts, Eskimos, Canadian Eskimos and Indians, and American Indians.

Natural Increase. Population change that results when the number of births exceed the number of deaths. Natural increase does not include population changes as a result of migration in and out of Alaska.

Neonatal Infant Mortality Rate. The number of deaths to infants less than 28 days of age divided by the number of live births, multiplied by a constant of proportionality (usually 1,000). The sum of the neonatal infant mortality rate and the post-neonatal mortality rate is the infant mortality rate.

Race of Child. The first reported race of mother is the race of the child. Prior to 1989, races of both parents were taken into consideration when determining the race of the child using a look-up table. Beginning in 1989, the National Centers for Health Statistics (NCHS) recommended that all states adopt the same standard for determining the race of the child at birth. (See Appendix E for more detailed information.)

Race/Sex-Specific Death Rate. The number of deaths for a specific race and sex group, divided by the population for the same specific race and sex group, multiplied by a constant of proportionality (usually 100,000).

Race-Specific Death Rate. The number of deaths for a specific racial group divided by the population for the same specific racial group, multiplied by a constant of proportionality (usually 100,000).

Ratio. A ratio is a comparative statistic calculated by dividing the number of events experienced by one group by the number of events experienced by a comparable group, i.e., males to females.

Residence. See Location of Residence

Sex-Specific Death Rate. The number of deaths for a specific sex (male or female) divided by the population for the same sex, multiplied by a constant of proportionality (usually 100,000).

Standard Population. The 2000 standard population is used in this publication for age-adjusted rates. (See Table A.1)

TABLE A.1

AGE	POPULATION	WEIGHT
Under 1 year	13,818	.013818
1-4 years	55,317	.055317
5-14 years	145,565	.145565
15-24 years	138,646	.138646
25-34 years	135,573	.135573
35-44 years	162,613	.162613
45-54 years	134,834	.134834
55-64 years	87,247	.087247
65-74 years	66,037	.066037
75-84 years	44,842	.044842
85 & over	15,508	.015508
TOTAL	1,000,000	1.000000

Teen Birth Rate. The number of births to females ages 15-19 divided by the estimated population of females ages 15-19, multiplied by a constant of proportionality (usually 1,000).

Underlying Cause of Death. The disease or injury which initiated the sequence of events that led to death.

Very Low Birth Weight. Infants born weighing less than 1,500 grams.

Years of Life Lost. For all deaths occurring before age 65, the difference between 65 (assumed productive life span) and the age at death; sometimes referred to as "years of productive life lost". (See Appendix B for calculation of years of life lost.)

APPENDIX B: TECHNICAL NOTES

HOW TO USE VITAL STATISTICS

VITAL EVENTS

Vital events are registered with the Bureau of Vital Statistics and include live births, fetal deaths (after at least 20 weeks gestation), adoptions, marriages, divorces, and deaths. Information on each of these events is provided on standard forms (see Appendix G).

RELIABILITY OF THE DATA

Reliability of information may vary depending on the data collection method. For instance, some information on birth and death certificates is collected and provided by health facilities or medical professionals (birth weight, complications of labor and delivery, cause of death, etc.), while other information is self-reported or reported by relatives (smoking during pregnancy, marital status of deceased, etc.). The Bureau of Vital Statistics makes every effort to complete, verify, and correct information which is missing, invalid, or inconsistent. Ultimately, the reliability of the data depends on everyone who is involved in data collection, storage and retrieval: Bureau staff, medical professionals, magistrates, funeral directors, marriage commissioners, judges, and each individual involved in, or witness to, a vital event.

COUNTING NUMBERS OF EVENTS

The most basic data available is the number of events. In any analysis, the most pertinent information must be determined and the limitations of that information must be identified. For instance, if you wanted to predict public school kindergarten enrollment, the most pertinent vital event data would be the number of live births in the period which qualifies children for enrollment. You would want to count only resident births for the geographic area of the appropriate schools. You would also want to consider limitations of this data, such as effects of infant and preschool mortality (this information can be obtained from death data), in-migration and out-migration, and alternatives to public school enrollment.

COMPARING DIFFERENT POPULATIONS

Comparing the number of events in two separate locations may not be meaningful. We can guess that Anchorage will have more births than Juneau because Anchorage has a larger population. A more meaningful question is, what is the number of births compared to the size of the population? To make this comparison, we calculate a rate or a ratio by dividing the number of events by the population for which that event could have occurred. For instance, if there were 4,200 births in Anchorage and a population of 280,000 people, then the ratio of births to population would be $4200/280000$ or 0.015 births for every person living in Anchorage. If there were 500 births in Juneau and a population of 30,000 then the ratio of births to population in Juneau would be $500/30000$ or 0.016666 births for every person living in Juneau.

Since small decimal numbers are awkward to interpret, we change the ratio to a rate by multiplying it by a constant of proportionality. This constant of proportionality can be any number, as long as the same number is used in calculating every rate. To calculate birth rates, we usually use a constant of proportionality of 1,000. Using this method, the birth rate for Anchorage would be $0.015 \times 1,000$ or 15 births per 1,000 population. The birth rate for Juneau would be $0.016666 \times 1,000$ or 16.666 births per 1,000 population. This number is usually rounded to the nearest tenth (16.7). We can see that while there are fewer births in Juneau in this example, the rate per 1,000 population is greater.

The birth rates described in the last paragraph are crude birth rates because they compare events to the total population. A more meaningful comparison would use only the female population of childbearing ages (15-44 years of age). Let's assume that the number of women ages 15-44 in Anchorage is 60,000 and in Juneau is 7,300. The Anchorage fertility rate would be $(4200/60000)*1000$ or 70.0 births for every 1,000 women of childbearing age. The Juneau fertility rate would be $(500/7300)*1000$ or 68.5 births for every 1,000 women of childbearing age. While Anchorage would have a lower crude birth rate than Juneau in this example, the Anchorage fertility rate would be higher than for Juneau. This is because the ratio of women of childbearing age to the total population in Anchorage ($60000/280000$ or .2143) is lower than in Juneau ($7300/30000$ or .2433).

Please note that all of the numbers in the foregoing examples are hypothetical for purposes of illustration.

CONSTANT OF PROPORTIONALITY

In calculating crude birth rates and fertility rates, we used a constant of proportionality of 1,000. Vital statistics may be reported with different constants of proportionality. Readers should familiarize themselves with how rates are calculated so that validity is maintained when comparing rates. Unless rates are calculated with the same constant of proportionality, comparisons will lead to incorrect conclusions. For instance, in this report we calculate death rates per 100,000 population. For example, if the National Center of Health Statistics (NCHS) reported deaths per 1,000 population, you would have to convert the NCHS rates to 100,000 population for a valid comparison.

SMALL POPULATIONS & FEW EVENTS

Data based upon small populations and few events require particular care in data analysis. In Alaska, variability is expected when looking at small groups within the population. Precautions are taken to avoid drawing false conclusions from random or unusual events. Two methods are used in this report to provide greater reliability: moving averages and confidence intervals. (For an explanation of each method, see "Vital Statistics Formulas" in Appendix B.

VITAL STATISTICS FORMULAS

AGE-ADJUSTED RATES

Age-adjusted rates are calculated so comparisons can be made between populations that have different age distributions. For example, a population with a high proportion of young people, generally will have a lower crude death rate than a population with a high percentage of elderly persons. Age-adjusted rates are more appropriate than crude rates when comparing health indicators for populations that have different age distributions. The age-adjusted rates in this report were calculated using the standard population based on the decennial U.S. Census of 2000. (See the Standard Population in Appendix A)

$$\text{Age-Adjusted Death Rate} = \sum m_a (P_a / p)$$

where: \sum is sum

m_a is the age-specific death rate

P_a is the standard population for the age group

p is the total standard population

CONFIDENCE INTERVALS

In this report, confidence intervals are used to provide a range within which the true rate will fall with a probability of 95 percent. The size of the range is determined by the number of occurrences, the base population, and the standard error.

Using teen birth rate by census area as an example:

$$3\text{-year births to teens ages 15-19 in 1995-1997} = 3,326 (b)$$

$$3\text{-year annual female teen population in 1995-1997} = 63,687 (p)$$

$$\text{Annual teen birth rate per 1,000 female teens} = (3,326/63,687)*1,000 = 52.2 (R)$$

$$\text{Standard error} = R/\sqrt{b} \quad \text{ci} = R \pm 1.96(R/\sqrt{b}) \quad \text{ci} = 52.2 \pm 1.96(52.2/\sqrt{3,326}) \text{ or ci} = 50.4 - 54.0$$

We can say, then, that there is a 95 percent probability that the interval from 50.4 to 54.0 contains the true teen birth rate for the state of Alaska for the period 1995-1997.

EXPECTATION OF LIFE

Expectation of life is the number of years infants born in a specific year can expect to live if they experience the same age-specific death rates experienced during their birth year. Table B.1 illustrates the calculation of life expectancy for all Alaskans based on data from a five year period.

TABLE B.1 EXPECTATION OF LIFE FOR ALL ALASKANS, 1995-1999

COLUMN IDENTIFICATION AND DESCRIPTION										
	A	B	C	D	E	F	G	H	I	J
AGE AT DEATH	DEATHS	POPULATION	RATIO	PROPORTION DYING IN AGE AGROUP	PROPORTION LIVING IN AGE AGROUP	NUMBER LIVING AT BEGINNING OF AGE GROUP	NUMBER DYING IN AGE GROUP	NUMBER LIVING IN AGE GROUP	CUMULATIVE POPULATION	YEARS LEFT AT BEGINNING OF AGE GROUP
<1	349	50,438	0.00692	0.00690	0.99310	100,000	690	99,414	7,492,637	74.9
1-4	104	211,601	0.00049	0.00196	0.99804	99,310	195	396,754	7,393,223	74.4
5-9	67	283,260	0.00024	0.00118	0.99882	99,115	117	495,284	6,996,469	70.6
10-14	80	271,446	0.00029	0.00147	0.99853	98,998	146	494,627	6,501,184	65.7
15-19	254	229,314	0.00111	0.00552	0.99448	98,853	546	492,898	6,006,557	60.8
20-24	270	168,282	0.00160	0.00799	0.99201	98,307	785	489,569	5,513,659	56.1
25-29	308	206,029	0.00149	0.00745	0.99255	97,521	726	485,790	5,024,090	51.5
30-34	399	258,730	0.00154	0.00768	0.99232	96,795	743	482,116	4,538,301	46.9
35-39	533	301,898	0.00177	0.00879	0.99121	96,051	844	478,146	4,056,185	42.2
40-44	650	298,097	0.00218	0.01084	0.98916	95,207	1,032	473,455	3,578,039	37.6
45-49	759	251,694	0.00302	0.01497	0.98503	94,175	1,409	467,351	3,104,584	33.0
50-54	750	175,315	0.00428	0.02116	0.97884	92,765	1,963	458,919	2,637,233	28.4
55-59	856	115,495	0.00741	0.03638	0.96362	90,802	3,304	445,752	2,178,314	24.0
60-64	974	77,439	0.01258	0.06097	0.93903	87,499	5,335	424,155	1,732,562	19.8
65-69	1,201	58,497	0.02053	0.09764	0.90236	82,164	8,023	390,761	1,308,406	15.9
70-74	1,434	44,323	0.03235	0.14966	0.85034	74,141	11,096	342,964	917,645	12.4
75-79	1,350	29,016	0.04653	0.20839	0.79161	63,045	13,138	282,379	574,681	9.1
80-84	1,202	15,284	0.07864	0.32861	0.67139	49,907	16,400	208,534	292,301	5.9
85+	1,526	9,372	0.16283	0.57860	0.42140	33,507	33,507	83,767	83,767	2.5

- Column A:** total deaths during five years.
- Column B:** sum of population for each of the five years.
- Column C:** ratio. A/B
- Column D:** proportion dying in the age group. For less than 1 year: $(2 * C) / (2 + C)$; for 1-4 years: $(2 * 4 * C) / (2 + 4 * (1.25 * C))$; all others: $(2 * 5 * C) / (2 + 5 * C)$
- Column E:** proportion living in age group. 1-D
- Column F:** number living at beginning of age. For less than 1 year: 100,000; all others: E * F (both from next younger age group)
- Column G:** number dying in the age group. F(this age group)-F(next older age group)
- Column H:** number living in the age group. For less than 1 year: $F - (.85 * G)$; for 1-4 years: $4 * F - (2.5 * G)$; all others: $(5 * F) - (2.5 * G)$
- Column I:** cumulative population. Sum of H for this and all older age groups
- Column J:** years left at beginning of age. I/F

MOVING AVERAGES

Calculations of 3-year, 5-year, and 10-year moving averages are performed when single-year rates are not reliable. When calculations are based on small numbers, moving averages can help to smooth out rates which vary widely from one year to another.

In Alaska, single-year infant mortality rates are seldom good indicators for the state of health within populations because rates can fluctuate dramatically from year to year. In Alaska, 132 infants died during 1988 and 108 infants died during 1989. The single-year infant mortality rates during 1988 and 1989 were 11.7 and 9.3, respectively. The 3-year moving average IMR (using 1986, 1987, and 1988 data) was 11.0 and (using 1987, 1988, and 1989) 10.4 infant deaths per 1,000 live births.

YEARS OF LIFE LOST

Years of Life Lost (YLL), or Years of Productive Life Lost, is the difference between the standardized age of 65 and the age of a decedent who dies before age 65. For purposes of calculation, deaths are assumed to occur at the midpoint of a five-year age interval; i.e. a 41-year-old decedent is assumed to be 42.5 years or halfway between 40 and 45. A person dying at age 41 would be said to have 22.5 years of life lost (65-42.5). Years of Life Lost emphasizes mortality in younger populations and is used in this report to measure the impact of specific causes of death. For a specific decedent group, Years of Life Lost is calculated as follows:

$$YLL = \sum 65 - mp$$

Where: YLL is Years of Life Lost

\sum Is sum of all decedents' years of productive life lost

65 represents years of productive life

mp is the mid-point of the decedent's 5-year age group

APPENDIX C: MORTALITY

COMPARISON BETWEEN ICD-9 AND ICD-10

Mortality statistics are compiled under guidelines of the World Health Organization (WHO). The procedures for coding and classifying mortality statistics are known collectively as the International Classification of Diseases (ICD). The ICD provides guidelines for coding death certificates, gives the disease (injury/poisoning) categories, the procedures for selecting the underlying cause of death, and provides definitions such as 'live birth', 'maternal death', or 'underlying cause of death'. The ICD also provides the tabulation lists for classifying mortality and the format of the medical certificate of death. Periodically the ICD is revised to allow for advances in medicine and changes in diagnostic terminology. The last revision was in 1979, when the ninth revision (ICD-9) replaced the eighth revision (ICD-8). Beginning with 1999 mortality statistics, causes of death will be classified using the tenth revision of this classification (ICD-10).

The ICD structure comprises cause of death categories that are identified by codes. The ninth revision of the ICD had more than 4000 categories and used all numeric codes (001-999) to identify the categories. ICD-10 has approximately twice the clinical detail of ICD-9, with more than 8000 categories identified by alphanumeric codes (A00-Z99). Both revisions provide for greater detail with a decimal numeric subdivision at the four-character level. Tabulation lists, which provide the cause-of-death groupings to present mortality statistics, have also changed. In ICD-9, 72 selected causes of death were used to rank the leading causes of death. This list has been expanded to 113 causes in ICD-10. Sixty-one selected causes were used to rank infant mortality statistics in ICD-9; this list has been expanded to 130 selected causes in ICD-10.

ICD-10 also has more chapters than ICD-9. Diseases of the nervous system and sense organs was split into three chapters in ICD-10: diseases of the nervous system, diseases of the eye and adnexa, and diseases of the ear and mastoid process. Other chapters have been rearranged; in ICD-10 diseases of the immune system are now included with diseases of the blood and blood-forming organs. They were included in the chapter endocrine, nutritional, and metabolic diseases in ICD-9. External causes of injury and poisoning (E codes) and factors influencing health status and contact with health services (V codes) were supplementary chapters in ICD-9; in ICD-10 they are part of the core classification. Additionally, some cause-of-death titles have changed (e.g. Suicide, ICD-9; Intentional self-harm, ICD-10) and some titles have shifted from one section to another. Arguably the change that will have the biggest impact on mortality statistics is the change in cause-of-death coding rules.

Cause-of-death coding rules determine how the underlying cause of death is assigned from the medical information on the death certificate. Changes in these coding rules can produce serious breaks in cause-of-death trends. For example, in 1979 the eleventh leading cause of death (Nephritis, nephritic syndrome, and nephrosis) had a rate that was 70% higher than the rate in 1978. The underlying cause of death in 1978 was assigned using ICD-8 coding rules, while mortality statistics in 1979 were coded using ICD-9 rules. Almost all of this increase was due to changes in the coding rules. In this example, the ICD-9 coding rules had a much greater assignment of deaths to this particular cause. Of course, an increase in assignments to one or more causes of death must come at the expense of assignments of death to other causes.

To help measure the impact of changing cause-of-death coding rules, comparability ratios are used. Comparability ratios are calculated by double coding all deaths in a particular year. That is, each death in a given year is assigned a cause of death using both ICD-9 coding rules and ICD-10 coding rules. The comparability ratio is calculated by counting the number of deaths for a selected cause in the new revision (ICD-10) and dividing by the number of deaths for the selected cause in the old revision (ICD-9). The National Center for Health Statistics (NCHS) used the national 1996 death file to derive the comparability ratios.

A comparability ratio that is equal to 1.0 shows that either revision will produce the same number of deaths. It does not, however, suggest that the cause of death was unaffected by the revision change. It is possible that any changes to the assignment of death could have balanced out, leaving the same number of deaths. For example, an increase in assignment of deaths could be counterbalanced by a narrower cause of death title (i.e. fewer cause of death codes).

A comparability ratio that is greater than 1.0 usually suggests an increase in the assignments of death under ICD-10 or that the cause-of-death title is broader under ICD-10. Conversely, a comparability ratio less than 1.0 usually suggests a decrease in the assignments of death under ICD-10 or the cause of death title is narrower under ICD-10.

Leading causes of death are based on the 113 selected causes-of-death list developed by the National Center for Health Statistics (NCHS). This list replaces the 72 selected causes-of-death list used in ICD-9. Since comparability ratios are used to measure the impact of changing coding rules, it is important to remove the effects of changing tabulation lists. For that reason, the ICD-9 codes used for some causes of death in this report differ from the codes used in the ICD-9 tabulation list. For example, accidents and adverse effects (E800-E949) was a cause-of-death category in the ICD-9 tabulation list. In the ICD-10 tabulation list, however, adverse effects are listed separately from accidents. For that reason, adverse effects (E870-E879, E930-E949) are not included in the ICD-9 codes for unintentional injury (accidents) in this report. For the same reasons, ICD-9 code 435 is not included in the cause-of-death category Cerebrovascular diseases.

AGE-ADJUSTED RATES

The crude death rate is commonly used to measure mortality. However, the age composition of the population can greatly influence the crude death rate. For example, since most deaths occur over 70 years of age, a population that is aging will naturally see an increase in the crude death rate. Therefore, using the crude death rate to measure trends can be misleading if the age distribution of the population has changed over time. To help overcome this and other limitations of the crude death rate, age adjustment is used in mortality statistics. Age adjustment needs a standard age distribution, usually called a standard population. In the past, the most frequently used standard in the United States was based on the 1940 U.S. population. Beginning with 1999 mortality statistics, however, the U.S. and the Bureau of Vital Statistics will begin using the year 2000 standard population for age adjustment. **One impact of changing the standard population is that comparisons with previously published age-adjusted death rates will be meaningless, since age-adjusted death rates using different standard populations are not directly comparable.** Generally, the year 2000 standard will give age-adjusted death rates that are much higher than those based on the 1940 standard.

With all the changes to how mortality statistics are calculated in 1999, it may take several years before new trends can be discerned. Caution should be taken when interpreting the results of this report. More information on the impacts of changing ICD revisions can be found at:

<http://www.cdc.gov/nchs/about/major/dvs/icd10des.htm>

TABLE C.1 ICD CAUSE OF DEATH CODES

CAUSE OF DEATH	ICD-10 CODES	ICD-9 CODES
INFECTIOUS AND PARASITIC DISEASE	A00-B99	001-139
TUBERCULOSIS	A16-A19	101-018
MENINGOCOCCAL INFECTION	A39	036
SEPTICEMIA	A40-A41	038
VIRAL HEPATITIS	B15-B19	070
HUMAN IMMUNODEFICIENCY VIRUS (HIV) DISEASE	B20-B24	042-044
MALIGNANT NEOPLASMS	C00-C97	140-208
ESOPHAGUS	C15	150
STOMACH	C16	151
COLON, RECTUM AND ANUS	C18-C21	153-154
LIVER AND INTRAHEPATIC BILE DUCTS	C22	155
PANCREAS	C25	157
BRONCHUS AND LUNG	C33-C34	162
SKIN	C43	172
BREAST	C50	174-175
CERVICAL	C53	180
UTERINE	C53	179,182
OVARIAN	C56	183.0
PROSTATE	C61	185
KIDNEY AND RENAL PELVIS	C64-C65	189.0, 189.1
BLADDER	C67	188
BRAIN	C70-C72	191-192
LYMPHOID AND HEMATOPOIETIC	C81-C96	201
HODGKIN'S DISEASE	C81	201
NON-HODGKIN'S LYMPHOMA	C82-C85	200,202
LEUKEMIA	C91-C95	204-208
MULTIPLE MYELOMA	C88	203
BENIGN AND UNCERTAIN NEOPLASMS	D00-D48	210-239
DIABETES MELLITUS	E10-E14	250
PARKINSON'S DISEASE	G20-G21	332
ALZHEIMER'S DISEASE	G30	331.0
MAJOR CARDIOVASCULAR DISEASES	I00-I78	390-434, 436-448
DISEASES OF THE HEART	I00-I09, I11, I13, I20-I51	390-398, 402, 404, 410-429
RHEUMATIC HEART DISEASES	I00-I09	390-398
HYPERTENSIVE HEART AND RENAL DISEASE	I13	404
ISCHEMIC HEART DISEASES	I20-I25	410-414, 429.2
ACUTE MYCARDIAL INFARCTION	I21-I22	410
OTHER ACUTE ISCHEMIC HEART DISEASES	I24	411
ATHEROSCLEROTIC CARDIOVASCULAR DISEASE	I25.0	429.2
OTHER HEART DISEASES	I26-I51	415-429.1, 429.3-429.9
HEART FAILURE	I50	428
CEREBROVASCULAR DISEASES	I60-I69	430-434, 436-438
INFLUENZA AND PNEUMONIA	J10-J18	480-487
INFLUENZA	J10-J11	487
PNEUMONIA	J12-J18	480-486
CHRONIC LOWER RESPIRATORY DISEASES	J40-J47	490-494, 496
EMPHYSEMA	J43	492
ASTHMA	J45-J46	493
CHRONIC LIVER DISEASE AND CIRRHOSIS	K70, K73-K74	571
ALCOHOLIC LIVER DISEASE	K70	571.0-571.3
OTHER CHRONIC LIVER DISEASE AND CIRRHOSIS	K73-K74	571.4-571.9
NEPHRITIS, NEPHROTIC SYNDROME AND NEPHROSIS	N00-N07, N17-N19, N25-N27	580-589
RENAL FAILURE	N17-N19	584-586
CONDITIONS ORIGINATING IN THE PERINATAL PERIOD	P00-P96	760-771.2, 771.4-779
CONGENITAL MALFORMATIONS	Q00-Q99	740-759

(CONTINUED =>)

TABLE C.1 ICD CAUSE OF DEATH CODES

CAUSE OF DEATH	ICD-10 CODES	ICD-9 CODES
UNINTENTIONAL INJURY	V01 - X59, Y85 - Y86	E800 - E869, E880 - E929
TRANSPORT ACCIDENTS	V01 - V99, Y85	E800 - E848, E929.0, E929.1
MOTOR VEHICLE ACCIDENTS	V02 - V04, V090, V092, V12 - V14, V190 - V192, V194 - V196, V20 - V79, V803 - V805, V810 - V811, V820 - V821, V83 - V86, V870 - V878, V880 - V888, V890, V892	E810 - E825
WATER TRANSPORT	V90 - V94	E830 - E838
AIR TRANSPORT	V95 - V97	E840 - E845
NONTRANSPORT ACCIDENTS	W00 - X59, Y86	E850 - E869, E880 - E928, E929.2 - E929.9
FALLS	W00 - W19	E880 - E888
DISCHARGE OF FIREARMS	W32 - W34	E922
DROWNING AND SUBMERSION	W65 - W74	E910
SMOKE, FIRE AND FLAME	X00 - X09	E890 - E899
POISONING	X40 - X49	E850 - E869, E924.1
INTENTIONAL SELF-HARM (SUICIDE)	X60 - X84, Y87.0	E950 - E959
BY DISCHARGE OF FIREARMS	X72 - X74	E955.0 - E955.4
ASSAULT (HOMICIDE)	X85 - Y09, Y87.1	E960 - E969
BY DISCHARGE OF FIREARMS	X93 - X95	E965.0 - E965.4

TABLE C.2 ESTIMATED COMPARABILITY RATIOS FOR 113 SELECTED CAUSES OF DEATH

List number	Cause of death ¹	Number of deaths allocated according to		Estimated comparability ratio	Standard error	Relative standard error	95 percent confidence limits	
		ICD-10 ²	ICD-9 ²				Lower	Upper
001	Salmonella infections	30	37	0.8108	0.0644	7.9	0.6846	0.9370
002	Shigellosis and amebiasis	*	*	*	*	*	*	*
003	Certain other intestinal infections	*	*	*	*	*	*	*
004	Tuberculosis	653	764	0.8547	0.0172	2	0.8209	0.8885
005	Respiratory tuberculosis	518	572	0.9056	0.0201	2.2	0.8662	0.9450
006	Other tuberculosis	135	192	0.7031	0.0407	5.8	0.6233	0.7830
007	Whooping cough	*	*	*	*	*	*	*
008	Scarlet fever and erysipelas	*	*	*	*	*	*	*
009	Meningococcal infection	221	222	0.9955	0.0149	1.5	0.9663	1.0247
010	Septicemia	21,258	17,791	1.1949	0.0042	0.3	1.1867	1.2030
011	Syphilis	21	33	0.6364	0.1184	18.6	0.4043	0.8685
012	Acute poliomyelitis	*	*	*	*	*	*	*
013	Arthropod-borne viral encephalitis	*	*	*	*	*	*	*
014	Measles	*	*	*	*	*	*	*
015	Viral hepatitis	1,123	1,346	0.8343	0.0120	1.4	0.8109	0.8578
016	Human immunodeficiency virus (HIV) disease	25,089	23,586	1.0637	0.0018	0.2	1.0601	1.0673
017	Malaria	*	*	*	*	*	*	*
018	Other and unspecified infectious and parasitic diseases and their sequelae	2,865	2,607	1.0990	0.0154	1.4	1.0688	1.1291
019	Malignant neoplasms	464,688	461,544	1.0068	0.0002	0.0	1.0064	1.0072
020	Malignant neoplasms of lip, oral cavity and pharynx	5,927	6,172	0.9603	0.0040	0.4	0.9525	0.9681
021	Malignant neoplasm of esophagus	9,596	9,630	0.9965	0.0020	0.2	0.9926	1.0003
022	Malignant neoplasm of stomach	11,480	11,408	1.0063	0.0019	0.2	1.0025	1.0101
023	Malignant neoplasms of colon, rectum and anus	48,583	48,619	0.9993	0.0009	0.1	0.9975	1.0010
024	Malignant neoplasms of liver and intrahepatic bile ducts	9,732	10,102	0.9634	0.0023	0.2	0.9588	0.9679
025	Malignant neoplasm of pancreas	24,313	24,361	0.9980	0.0009	0.1	0.9963	0.9997
026	Malignant neoplasm of larynx	3,209	3,194	1.0047	0.0053	0.5	0.9943	1.0150
027	Malignant neoplasms of trachea, bronchus and lung	131,750	133,936	0.9837	0.0005	0.1	0.9827	0.9846
028	Malignant melanoma of skin	5,941	6,139	0.9677	0.0032	0.3	0.9614	0.9741
029	Malignant neoplasm of breast	38,102	37,891	1.0056	0.0010	0.1	1.0036	1.0075
030	Malignant neoplasm of cervix uteri	3,753	3,802	0.9871	0.0034	0.3	0.9805	0.9938
031	Malignant neoplasms of corpus uteri and uterus, part unspecified	5,318	5,183	1.0260	0.0040	0.4	1.0182	1.0339
032	Malignant neoplasm of ovary	11,292	11,344	0.9954	0.0016	0.2	0.9923	0.9985
033	Malignant neoplasm of prostate	30,672	30,267	1.0134	0.0015	0.1	1.0105	1.0162
034	Malignant neoplasms of kidney and renal pelvis	9,521	9,521	1.0000	0.0022	0.2	0.9957	1.0043
035	Malignant neoplasm of bladder	9,563	9,594	0.9968	0.0026	0.3	0.9916	1.0019
036	Malignant neoplasms of meninges, brain and other parts of central nervous system	10,039	10,359	0.9691	0.0025	0.3	0.9642	0.9740
037	Malignant neoplasms of lymphoid, hematopoietic and related tissue	44,715	44,530	1.0042	0.0012	0.1	1.0019	1.0064
038	Hodgkin's disease	1,021	1,036	0.9855	0.0089	0.9	0.9680	1.0030
039	Non-Hodgkin's lymphoma	17,924	18,326	0.9781	0.0018	0.2	0.9745	0.9817
040	Leukemia	16,600	16,405	1.0119	0.0019	0.2	1.0083	1.0155
041	Multiple myeloma and immunoproliferative neoplasms	9,099	8,763	1.0383	0.0030	0.3	1.0324	1.0443
042	Other and unspecified malignant neoplasms of lymphoid, hematopoietic and related tissue	*	*	*	*	*	*	*
043	All other and unspecified malignant neoplasms	51,182	45,492	1.1251	0.0021	0.2	1.1210	1.1292
044	In situ neoplasms, benign neoplasms and neoplasms of uncertain or unknown behavior	9,263	5,532	1.6744	0.0164	1.0	1.6422	1.7067
045	Anemias	3,059	3,200	0.9559	0.0077	0.8	0.9409	0.9710
046	Diabetes mellitus	48,636	48,242	1.0082	0.0011	0.1	1.0060	1.0103
047	Nutritional deficiencies	3,215	2,763	1.1636	0.0165	1.4	1.1312	1.1960
048	Malnutrition	2,607	2,665	0.9782	0.0151	1.5	0.9487	1.0078
049	Other nutritional deficiencies	608	98	6.2041	0.5961	9.6	5.0358	7.3724
050	Meningitis	592	584	1.0137	0.0136	1.3	0.9871	1.0403
051	Parkinson's disease	10,404	10,392	1.0012	0.0028	0.3	0.9956	1.0067
052	Alzheimer's disease	29,707	19,121	1.5536	0.0071	0.5	1.5398	1.5675
053	Major cardiovascular diseases	796,919	798,435	0.9981	0.0002	0.0	0.9977	0.9985
054	Diseases of heart	615,564	624,405	0.9858	0.0002	0.0	0.9854	0.9863
055	Acute rheumatic fever and chronic rheumatic heart diseases	2,446	2,980	0.8208	0.0089	1.1	0.8034	0.8382
056	Hypertensive heart disease	17,322	21,577	0.8028	0.0028	0.3	0.7973	0.8083
057	Hypertensive heart and renal disease	2,170	2,027	1.0705	0.0160	1.5	1.0392	1.1019
058	Ischemic heart diseases	466,459	466,935	0.9990	0.0002	0.0	0.9985	0.9994
059	Acute myocardial infarction	178,125	180,169	0.9887	0.0003	0.0	0.9880	0.9893
060	Other acute ischemic heart diseases	2,667	2,638	1.0110	0.0117	1.2	0.9880	1.0340
061	Other forms of chronic ischemic heart disease	285,667	284,128	1.0054	0.0004	0.0	1.0046	1.0062

See footnotes at end of table.

TABLE C.2 ESTIMATED COMPARABILITY RATIOS FOR 113 SELECTED CAUSES OF DEATH

List number	Cause of death ¹	Number of deaths allocated according to		Estimated comparability ratio	Standard error	Relative standard error	95 percent confidence limits	
		ICD-10 ²	ICD-9 ²				Lower	Upper
062	Atherosclerotic cardiovascular disease, so described	64,354	61,362	1.0488	0.0016	0.2	1.0456	1.0519
063	All other forms of chronic ischemic heart disease	221,313	222,766	0.9935	0.0004	0.0	0.9927	0.9942
064	Other heart diseases	127,167	130,886	0.9716	0.0010	0.1	0.9696	0.9736
065	Acute and subacute endocarditis	552	554	0.9964	0.0137	1.4	0.9695	1.0233
066	Diseases of pericardium and acute myocarditis	489	475	1.0295	0.0160	1.6	0.9981	1.0608
067	Heart failure	44,297	42,554	1.0410	0.0013	0.1	1.0384	1.0435
068	All other forms of heart disease	81,829	87,303	0.9373	0.0014	0.2	0.9345	0.9401
069	Essential (primary) hypertension and hypertensive renal disease	11,958	10,684	1.1192	0.0050	0.4	1.1094	1.1291
070	Cerebrovascular diseases	137,264	129,640	1.0588	0.0008	0.1	1.0572	1.0604
071	Atherosclerosis	13,894	14,417	0.9637	0.0025	0.3	0.9588	0.9686
072	Other diseases of circulatory system	18,239	19,289	0.9456	0.0021	0.2	0.9414	0.9498
073	Aortic aneurysm and dissection	12,216	12,201	1.0012	0.0010	0.1	0.9992	1.0032
074	Other diseases of arteries, arterioles and capillaries	6,023	7,088	0.8497	0.0053	0.6	0.8394	0.8601
075	Other disorders of circulatory system	2,984	2,899	1.0293	0.0172	1.7	0.9956	1.0631
076	Influenza and pneumonia	50,526	72,371	0.6982	0.0018	0.3	0.6947	0.7016
077	Influenza	572	567	1.0088	0.0073	0.7	0.9945	1.0231
078	Pneumonia	49,954	71,804	0.6957	0.0018	0.3	0.6922	0.6992
079	Other acute lower respiratory infections	346	355	0.9746	0.0392	4.0	0.8978	1.0515
080	Acute bronchitis and bronchiolitis	265	355	0.7465	0.0264	3.5	0.6947	0.7983
081	Unspecified acute lower respiratory infection	*	*	*	*	*	*	*
082	Chronic lower respiratory diseases	94,326	90,022	1.0478	0.0009	0.1	1.0460	1.0496
083	Bronchitis, chronic and unspecified	913	2,320	0.3935	0.0107	2.7	0.3726	0.4145
084	Emphysema	14,369	14,774	0.9726	0.0031	0.3	0.9666	0.9786
085	Asthma	4,217	4,718	0.8938	0.0061	0.7	0.8819	0.9057
086	Other chronic lower respiratory diseases	74,827	68,210	1.0970	0.0014	0.1	1.0943	1.0998
087	Pneumoconioses and chemical effects	860	845	1.0178	0.0099	1.0	0.9983	1.0372
088	Pneumonitis due to solids and liquids	10,183	9,104	1.1185	0.0048	0.4	1.1092	1.1279
089	Other diseases of respiratory system	16,656	14,269	1.1673	0.0052	0.4	1.1572	1.1774
090	Peptic ulcer	3,574	3,686	0.9696	0.0045	0.5	0.9608	0.9784
091	Diseases of appendix	209	202	1.0347	0.0242	2.3	0.9873	1.0820
092	Hernia	658	633	1.0395	0.0154	1.5	1.0094	1.0696
093	Chronic liver disease and cirrhosis	21,688	20,920	1.0367	0.0027	0.3	1.0314	1.0420
094	Alcoholic liver disease	10,147	9,965	1.0183	0.0050	0.5	1.0085	1.0281
095	Other chronic liver disease and cirrhosis	11,541	10,955	1.0535	0.0041	0.4	1.0454	1.0615
096	Cholelithiasis and other disorders of gallbladder	1,725	1,803	0.9567	0.0060	0.6	0.9450	0.9685
097	Nephritis, nephrotic syndrome and nephrosis	24,939	20,242	1.2320	0.0044	0.4	1.2234	1.2407
098	Acute and rapidly progressive nephritic and nephrotic syndrome	161	249	0.6466	0.0342	5.3	0.5796	0.7136
099	Chronic glomerulonephritis, nephritis and nephropathy not specified as acute or chronic, and renal sclerosis unspecified	468	1,213	0.3858	0.0144	3.7	0.3575	0.4141
100	Renal failure	24,290	18,758	1.2949	0.0050	0.4	1.2852	1.3047
101	Other disorders of kidney	20	22	0.9091	0.0867	9.5	0.7392	1.0790
102	Infections of kidney	731	726	1.0069	0.0144	1.4	0.9786	1.0352
103	Hyperplasia of prostate	326	327	0.9969	0.0159	1.6	0.9658	1.0280
104	Inflammatory diseases of female pelvic organs	63	64	0.9844	0.0410	4.2	0.9040	1.0648
105	Pregnancy, childbirth and the puerperium	*	*	*	*	*	*	*
106	Pregnancy with abortive outcome	*	*	*	*	*	*	*
107	Other complications of pregnancy, childbirth and the puerperium	*	*	*	*	*	*	*
108	Certain conditions originating in the perinatal period	10,184	9,555	1.0658	0.0033	0.3	1.0593	1.0724
109	Congenital malformations, deformations and chromosomal abnormalities	5,950	7,025	0.8470	0.0055	0.6	0.8362	0.8577
110	Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified	16,940	17,732	0.9553	0.0034	0.4	0.9487	0.9620
111	All other diseases (Residual)	109,853	122,107	0.8996	0.0015	0.2	0.8968	0.9025
112	Accidents (unintentional injuries)	31,084	30,163	1.0305	0.0014	0.1	1.0278	1.0333
113	Transport accidents	17,547	17,586	0.9978	0.0006	0.1	0.9966	0.9990
114	Motor vehicle accidents	14,539	17,051	0.8527	0.0027	0.3	0.8473	0.8581
115	Other land transport accidents	*	*	*	*	*	*	*
116	Water, air and space, and other and unspecified transport accidents and their sequelae	351	347	1.0115	0.0209	2.1	0.9706	1.0525
117	Nontransport accidents	13,537	12,577	1.0763	0.0035	0.3	1.0696	1.0831
118	Falls	5,173	6,152	0.8409	0.0049	0.6	0.8313	0.8505
119	Accidental discharge of firearms	493	466	1.0579	0.0127	1.2	1.0331	1.0828
120	Accidental drowning and submersion	283	284	0.9965	0.0127	1.3	0.9716	1.0213
121	Accidental exposure to smoke, fire and flames	493	506	0.9743	0.0089	0.9	0.9568	0.9918
122	Accidental poisoning and exposure to noxious substances	*	*	*	*	*	*	*
123	Other and unspecified nontransport accidents and their sequelae	6,698	4,721	1.4188	0.0123	0.9	1.3947	1.4428

See footnotes at end of table.

TABLE C.2 ESTIMATED COMPARABILITY RATIOS FOR 113 SELECTED CAUSES OF DEATH

List number	Cause of death ¹	Number of deaths allocated according to		Estimated comparability ratio	Standard error	Relative standard error	95 percent confidence limits	
		ICD-10 ²	ICD-9 ²				Lower	Upper
124	Intentional self-harm (suicide)	18,352	18,422	0.9962	0.0005	0.0	0.9952	0.9972
125	Intentional self-harm (suicide) by discharge of firearms	14,157	14,183	0.9982	0.0007	0.1	0.9968	0.9996
126	Intentional self-harm (suicide) by other and unspecified means and their sequelae	4,195	4,239	0.9896	0.0023	0.2	0.9850	0.9942
127	Assault (homicide)	12,287	12,308	0.9983	0.0006	0.1	0.9972	0.9994
128	Assault (homicide) by discharge of firearms	8,718	8,745	0.9969	0.0008	0.1	0.9953	0.9985
	Assault (homicide) by other and unspecified means and their sequelae	3,569	3,563	1.0017	0.0024	0.2	0.9969	1.0064
129	Legal intervention	*	*	*	*	*	*	*
130	Events of undetermined intent	*	*	*	*	*	*	*
131	Discharge of firearms, undetermined intent	*	*	*	*	*	*	*
132	Other and unspecified events of undetermined intent and their sequelae	*	*	*	*	*	*	*
133	Operations of war and their sequelae	*	*	*	*	*	*	*
134	Complications of medical and surgical care	*	*	*	*	*	*	*
135		*	*	*	*	*	*	*

* Figure does not meet standards of reliability or precision; see Technical notes.
 0.0 Quantity more than zero but less than 0.05.
¹Based on the Ninth and Tenth Revision categories shown in table B.
²ICD-10 is *International Classification of Diseases, Tenth Revision*, and ICD-9 is *International Classification of Diseases, Ninth Revision*.

Source: Anderson RN, Minino AM, Hoyert DL, Rosenberg HM. Comparability of cause of death between ICD-9 and ICD-10; Preliminary estimates. National vital statistics reports; Vol. 49, number 2. Hyattsville, MD: National Center for Health Statistics. 2001

TABLE C.3 ESTIMATED COMPARABILITY RATIOS FOR 130 SELECTED CAUSES OF INFANT DEATH

List number	Cause of death ¹	Number of deaths allocated according to		Estimated comparability ratio	Standard error	Relative standard error	95 percent confidence limits	
		ICD-10 ²	ICD-9 ²				Lower	Upper
001	Certain infectious and parasitic diseases	284	387	0.7339	0.0339	4.6	0.6673	0.8004
002	Certain intestinal infectious diseases	*	*	*	*	*	*	*
003	Diarrhea and gastroenteritis of infectious origin	-	144	-	-	-	-	-
004	Tuberculosis	*	*	*	*	*	*	*
005	Tetanus	*	*	*	*	*	*	*
006	Diphtheria	*	*	*	*	*	*	*
007	Whooping cough	*	*	*	*	*	*	*
008	Meningococcal infection	25	26	0.9615	0.0377	3.9	0.8876	1.0355
009	Septicemia	167	121	1.3802	0.0713	5.2	1.2403	1.5200
010	Congenital syphilis	*	*	*	*	*	*	*
011	Gonococcal infection	*	*	*	*	*	*	*
012	Viral diseases	62	62	1.0000	0.0757	7.6	0.8517	1.1483
013	Acute poliomyelitis	*	*	*	*	*	*	*
014	Varicella (chickenpox)	*	*	*	*	*	*	*
015	Measles	*	*	*	*	*	*	*
016	Human immunodeficiency virus (HIV) disease	23	22	1.0455	0.0465	4.4	0.9544	1.1365
017	Mumps	*	*	*	*	*	*	*
018	Other and unspecified viral diseases	35	36	0.9722	0.1255	12.9	0.7262	1.2182
019	Candidiasis	*	*	*	*	*	*	*
020	Malaria	*	*	*	*	*	*	*
021	Pneumocystosis	*	*	*	*	*	*	*
022	All other and unspecified infectious and parasitic diseases	*	*	*	*	*	*	*
023	Neoplasms	73	72	1.0139	0.0420	4.1	0.9317	1.0961
024	Malignant neoplasms	48	46	1.0435	0.0544	5.2	0.9369	1.1501
025	Hodgkin's disease and non-Hodgkin's lymphomas	*	*	*	*	*	*	*
026	Leukemia	*	*	*	*	*	*	*
027	Other and unspecified malignant neoplasms	30	28	1.0714	0.0906	8.5	0.8939	1.2489
028	In situ neoplasms, benign neoplasms and neoplasms of uncertain or unknown behavior	25	26	0.9615	0.1131	11.8	0.7398	1.1833
029	Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism	35	50	0.7000	0.0803	11.5	0.5427	0.8573
030	Anemias	*	*	*	*	*	*	*
031	Other diseases of blood and blood-forming organs	*	*	*	*	*	*	*
032	Certain disorders involving the immune mechanism	*	*	*	*	*	*	*
033	Endocrine, nutritional and metabolic diseases	112	129	0.8682	0.0555	6.4	0.7595	0.9770
034	Short stature, not elsewhere classified	*	*	*	*	*	*	*
035	Malnutrition and other nutritional deficiencies	*	*	*	*	*	*	*
036	Cystic fibrosis	*	*	*	*	*	*	*
037	Volume depletion, disorders of fluid, electrolyte and acid-base balance	40	53	0.7547	0.0852	11.3	0.5878	0.9217
038	All other endocrine, nutritional and metabolic diseases	64	55	1.1636	0.0809	6.9	1.0051	1.3221
039	Diseases of the nervous system	305	286	1.0664	0.0263	2.5	1.0149	1.1180
040	Meningitis	70	70	1.0000	0.0404	4.0	0.9208	1.0792
041	Infantile spinal muscular atrophy, type I (Werdnig-Hoffman)	47	47	1.0000	0.0521	5.2	0.8978	1.1022
042	Infantile cerebral palsy	*	*	*	*	*	*	*
043	Anoxic brain damage, not elsewhere classified	29	30	0.9667	0.1269	13.1	0.7179	1.2155
044	Other diseases of nervous system	145	126	1.1508	0.0532	4.6	1.0466	1.2550
045	Diseases of the ear and mastoid process	*	*	*	*	*	*	*
046	Diseases of the circulatory system	419	587	0.7138	0.0244	3.4	0.6659	0.7617
047	Pulmonary heart disease and diseases of pulmonary circulation	138	123	1.1220	0.0447	4.0	1.0342	1.2097
048	Pericarditis, endocarditis and myocarditis	*	*	*	*	*	*	*
049	Cardiomyopathy	82	84	0.9762	0.0166	1.7	0.9436	1.0088
050	Cardiac arrest	25	87	0.2874	0.0508	17.7	0.1878	0.3869
051	Cerebrovascular diseases	77	163	0.4724	0.0510	10.8	0.3725	0.5723
052	All other diseases of circulatory system	88	123	0.7154	0.0519	7.3	0.6137	0.8172
053	Diseases of the respiratory system	420	516	0.8140	0.0220	2.7	0.7709	0.8570
054	Acute upper respiratory infections	*	*	*	*	*	*	*
055	Influenza and pneumonia	231	303	0.7624	0.0261	3.4	0.7112	0.8135
056	Influenza	*	*	*	*	*	*	*
057	Pneumonia	224	295	0.7593	0.0266	3.5	0.7072	0.8114
058	Acute bronchitis and acute bronchiolitis	33	41	0.8049	0.0758	9.4	0.6563	0.9534
059	Bronchitis, chronic and unspecified	*	*	*	*	*	*	*
060	Asthma	*	*	*	*	*	*	*
061	Pneumonitis due to solids and liquids	*	*	*	*	*	*	*
062	Other and unspecified diseases of respiratory system	117	127	0.9213	0.0632	6.9	0.7973	1.0452
063	Diseases of the digestive system	278	167	1.6647	0.1084	6.5	1.4521	1.8772

See footnotes at end of table.

TABLE C.3 ESTIMATED COMPARABILITY RATIOS FOR 130 SELECTED CAUSES OF INFANT DEATH

List number	Cause of death ¹	Number of deaths allocated according to		Estimated comparability ratio	Standard error	Relative standard error	95 percent confidence limits	
		ICD-10 ²	ICD-9 ²				Lower	Upper
064	Gastritis, duodenitis, and noninfective enteritis and colitis	137	47	2.9149	0.3879	13.3	2.1547	3.6751
065	Hernia of abdominal cavity and intestinal obstruction without hernia	*	*	*	*	*	*	*
066	All other and unspecified diseases of digestive system	84	86	0.9767	0.0708	7.3	0.8379	1.1156
067	Diseases of the genitourinary system	117	117	1.0000	0.0567	5.7	0.8889	1.1111
068	Renal failure and other disorders of kidney	102	98	1.0408	0.0658	6.3	0.9118	1.1699
069	Other and unspecified diseases of genitourinary system	*	*	*	*	*	*	*
070	Certain conditions originating in the perinatal period	10,047	9,495	1.0581	0.0032	0.3	1.0519	1.0643
071	Newborn affected by maternal factors and by complications of pregnancy, labor and delivery	1,305	1,256	1.0390	0.0099	1.0	1.0196	1.0585
072	Newborn affected by maternal hypertensive disorders	23	22	1.0455	0.0465	4.4	0.9544	1.1365
073	Newborn affected by other maternal conditions which may be unrelated to present pregnancy	*	*	*	*	*	*	*
074	Newborn affected by maternal complications of pregnancy	662	643	1.0295	0.0138	1.3	1.0024	1.0567
075	Newborn affected by incompetent cervix	205	201	1.0199	0.0188	1.8	0.9831	1.0567
076	Newborn affected by premature rupture of membranes	314	307	1.0228	0.0136	1.3	0.9962	1.0494
077	Newborn affected by multiple pregnancy	104	103	1.0097	0.0507	5.0	0.9103	1.1091
078	Newborn affected by other maternal complications of pregnancy	39	32	1.2188	0.1655	13.6	0.8945	1.5430
079	Newborn affected by complications of placenta, cord, and membranes	579	553	1.0470	0.0128	1.2	1.0219	1.0721
080	Newborn affected by complications involving placenta	306	285	1.0737	0.0174	1.6	1.0395	1.1079
081	Newborn affected by complications involving cord	*	*	*	*	*	*	*
082	Newborn affected by chorioamnionitis	258	255	1.0118	0.0163	1.6	0.9799	1.0436
083	Newborn affected by other and unspecified abnormalities of membranes	*	*	*	*	*	*	*
084	Newborn affected by other complications of labor and delivery	37	20	1.8500	0.3262	17.6	1.2107	2.4893
085	Newborn affected by noxious influences transmitted via placenta or breast milk	*	*	*	*	*	*	*
086	Disorders related to length of gestation and fetal malnutrition	3,843	3,474	1.1062	0.0064	0.6	1.0936	1.1188
087	Slow fetal growth and fetal malnutrition	34	30	1.1333	0.1004	8.9	0.9366	1.3301
088	Disorders related to short gestation and low birth weight, not elsewhere classified	3,809	3,444	1.1060	0.0064	0.6	1.0934	1.1186
089	Extremely low birth weight or extreme immaturity	2,835	2,558	1.1083	0.0079	0.7	1.0927	1.1239
090	Other low birth weight or preterm	974	886	1.0993	0.0135	1.2	1.0729	1.1258
091	Disorders related to long gestation and high birth weight	*	*	*	*	*	*	*
092	Birth trauma	5	113	0.0442	0.0197	44.5	0.0056	0.0829
093	Intrauterine hypoxia and birth asphyxia	401	277	1.4477	0.0599	4.1	1.3303	1.5650
094	Intrauterine hypoxia	57	63	0.9048	0.1227	13.6	0.6643	1.1452
095	Birth asphyxia	344	214	1.6075	0.0763	4.7	1.4579	1.7571
096	Respiratory distress of newborn	917	894	1.0257	0.0131	1.3	1.0001	1.0513
097	Other respiratory conditions originating in the perinatal period	1,160	1,372	0.8455	0.0216	2.6	0.8032	0.8878
098	Congenital pneumonia	57	15	3.8000	0.9004	23.7	2.0352	5.5648
099	Neonatal aspiration syndromes	78	56	1.3929	0.1115	8.0	1.1743	1.6114
100	Interstitial emphysema and related conditions originating in the perinatal period	146	121	1.2066	0.0595	4.9	1.0899	1.3233
101	Pulmonary hemorrhage originating in the perinatal period	212	145	1.4621	0.0751	5.1	1.3150	1.6092
102	Chronic respiratory disease originating in the perinatal period	243	214	1.1355	0.0327	2.9	1.0715	1.1995
103	Atelectasis	382	185	2.0649	0.1144	5.5	1.8406	2.2891
104	All other respiratory conditions originating in the perinatal period	42	636	0.0660	0.0101	15.2	0.0463	0.0858
105	Infections specific to the perinatal period	563	552	1.0199	0.0261	2.6	0.9688	1.0710
106	Bacterial sepsis of newborn	470	514	0.9144	0.0272	3.0	0.8611	0.9677
107	Omphalitis of newborn with or without mild hemorrhage	*	*	*	*	*	*	*
108	All other infections specific to the perinatal period	93	38	2.4474	0.3705	15.1	1.7211	3.1736
109	Hemorrhagic and hematological disorders of newborn	390	274	1.4234	0.0640	4.5	1.2979	1.5488
110	Neonatal hemorrhage	319	222	1.4369	0.0698	4.9	1.3002	1.5737
111	Hemorrhagic disease of newborn	*	*	*	*	*	*	*
112	Hemolytic disease of newborn due to isoimmunization and other perinatal jaundice	*	*	*	*	*	*	*
113	Hematological disorders	*	*	*	*	*	*	*
114	Syndrome of infant of a diabetic mother and neonatal diabetes mellitus	*	*	*	*	*	*	*
115	Necrotizing enterocolitis of newborn	249	203	1.2266	0.0456	3.7	1.1371	1.3161
116	Hydrops fetalis not due to hemolytic disease	120	120	1.0000	0.0264	2.6	0.9483	1.0517
117	Other perinatal conditions	1,092	954	1.1447	0.0192	1.7	1.1070	1.1823
118	Congenital malformations, deformations and chromosomal abnormalities	3,400	3,751	0.9064	0.0057	0.6	0.8953	0.9176

See footnotes at end of table.

TABLE C.3 ESTIMATED COMPARABILITY RATIOS FOR 130 SELECTED CAUSES OF INFANT DEATH

List number	Cause of death ¹	Number of deaths allocated according to		Estimated comparability ratio	Standard error	Relative standard error	95 percent confidence limits	
		ICD-10 ²	ICD-9 ²				Lower	Upper
119	Anencephaly and similar malformations	299	299	1.0000	0.0	0.0	1.0000	1.0000
120	Congenital hydrocephalus	62	91	0.6813	0.0552	8.1	0.5732	0.7895
121	Spina bifida	24	32	0.7500	0.0765	10.2	0.6000	0.9000
122	Other congenital malformations of nervous system	191	177	1.0791	0.0477	4.4	0.9856	1.1725
123	Congenital malformations of heart	1,022	1,027	0.9951	0.0081	0.8	0.9793	1.0109
124	Other congenital malformations of circulatory system	75	121	0.6198	0.0504	8.1	0.5210	0.7186
125	Congenital malformations of respiratory system	361	571	0.6322	0.0225	3.6	0.5882	0.6762
126	Congenital malformations of digestive system	*	*	*	*	*	*	*
127	Congenital malformations of genitourinary system	216	229	0.9432	0.0244	2.6	0.8955	0.9910
128	Congenital malformations and deformations of musculoskeletal system, limbs and integument	269	311	0.8650	0.0319	3.7	0.8024	0.9275
129	Down's syndrome	57	58	0.9828	0.0705	7.2	0.8446	1.1209
130	Edward's syndrome	277	278	0.9964	0.0080	0.8	0.9807	1.0121
131	Patau's syndrome	170	173	0.9827	0.0099	1.0	0.9632	1.0021
132	Other congenital malformations and deformations	304	312	0.9744	0.0210	2.2	0.9332	1.0155
133	Other chromosomal abnormalities, not elsewhere classified	57	53	1.0755	0.0783	7.3	0.9221	1.2289
134	Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified	2,799	2,732	1.0245	0.0042	0.4	1.0163	1.0327
135	Sudden infant death syndrome	2,575	2,485	1.0362	0.0040	0.4	1.0284	1.0440
136	Other symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified	224	247	0.9069	0.0270	3.0	0.8540	0.9598
137	All other diseases	*	*	*	*	*	*	*
138	External causes of mortality	441	444	0.9932	0.0098	1.0	0.9741	1.0124
139	Accidents (unintentional injuries)	292	285	1.0246	0.0107	1.0	1.0037	1.0454
140	Transport accidents	99	108	0.9167	0.0294	3.2	0.8590	0.9743
141	Motor vehicle accidents	85	98	0.8673	0.0368	4.2	0.7952	0.9395
142	Other and unspecified transport accidents	*	*	*	*	*	*	*
143	Falls	*	*	*	*	*	*	*
144	Accidental discharge of firearms	*	*	*	*	*	*	*
145	Accidental drowning and submersion	*	*	*	*	*	*	*
146	Accidental suffocation and strangulation in bed	*	*	*	*	*	*	*
147	Other accidental suffocation and strangulation	79	69	1.1449	0.0537	4.7	1.0396	1.2502
148	Accidental inhalation and ingestion of food or other objects causing obstruction of respiratory tract	32	29	1.1034	0.0810	7.3	0.9447	1.2622
149	Accidents caused by exposure to smoke, fire and flames	*	*	*	*	*	*	*
150	Accidental poisoning and exposure to noxious substances	*	*	*	*	*	*	*
151	Other and unspecified accidents	*	*	*	*	*	*	*
152	Assault (homicide)	146	154	0.9481	0.0179	1.9	0.9130	0.9831
153	Assault (homicide) by hanging, strangulation and suffocation	*	*	*	*	*	*	*
154	Assault (homicide) by discharge of firearms	*	*	*	*	*	*	*
155	Neglect, abandonment and other maltreatment syndromes	*	*	*	*	*	*	*
156	Assault (homicide) by other and unspecified means	91	88	1.0341	0.0417	4.0	0.9524	1.1158
157	Complications of medical and surgical care	*	*	*	*	*	*	*
158	Other external causes	*	*	*	*	*	*	*

* Figure does not meet standards of reliability or precision; see Technical notes.
 - Quantity zero.
¹Based on the Ninth and Tenth Revision categories shown in table C.
²ICD-10 is *Classification of Diseases*, Tenth Revision, and ICD-9 is *International Classification of Diseases*, Ninth Revision.

Source: Anderson RN, Minino AM, Hoyert DL, Rosenberg HM. Comparability of cause of death between ICD-9 and ICD-10; Preliminary estimates. National vital statistics reports; Vol. 49, number 2. Hyattsville, MD: National Center for Health Statistics. 2001

APPENDIX D: PRENATAL CARE

KESSNER INDEX

The classification of prenatal care as adequate, intermediate, or inadequate is derived from the Institute of Medicine's Three-Factor Prenatal Care Index. The classes of care are in accordance with recommendations for prenatal care set forth by the American College of Obstetricians and Gynecologists and the World Health Organization. This classification scheme accounts for length of gestation by requiring fewer prenatal visits for pregnancies with short gestation time. Records with missing information (i.e. last normal menstrual period, gestation weeks, number of visits, or month prenatal care began) are assigned to the inadequate prenatal care category.

The gestation weeks are calculated by subtracting the last menstrual date from the child's birth date. If the last menstrual date is missing from the birth record, the doctor's (or other medical professional's) estimate of gestation is used. The accuracy of the level of prenatal care is only as reliable as the information provided by the mother and her care giver.

The table below shows the Institute of Medicine's Three-Factor Prenatal Care Index.

TABLE D.1

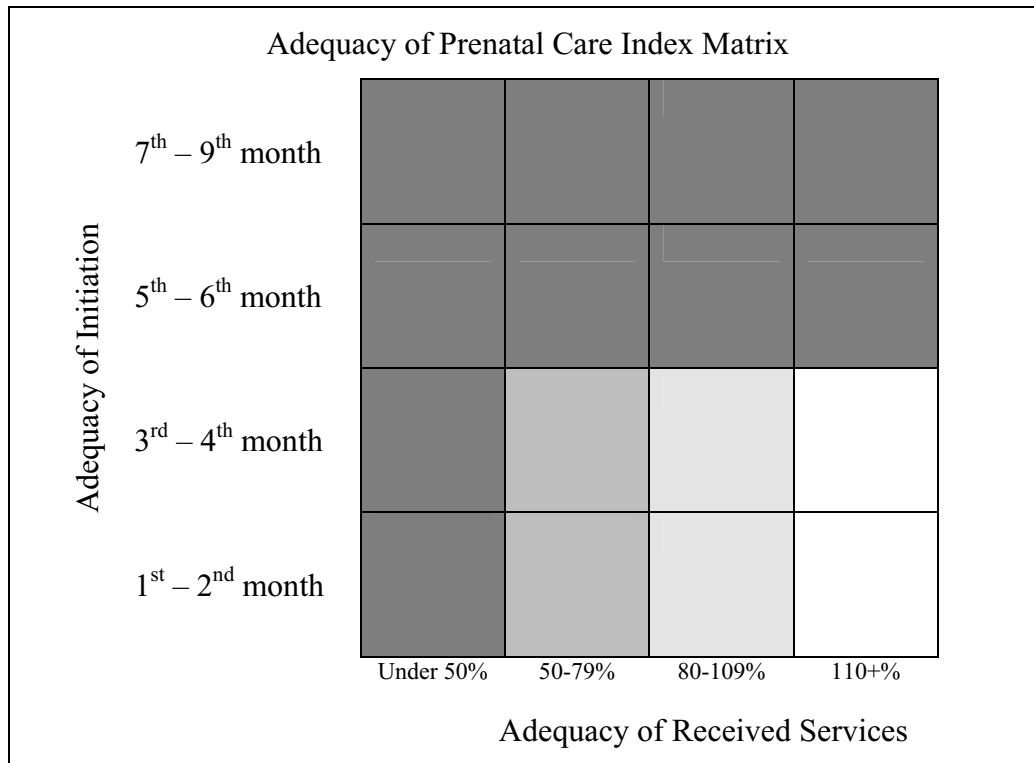
GESTATION	TRIMESTER CARE BEGAN AND/OR NUMBER OF PRENATAL VISITS	LEVEL OF CARE
<= 13 Weeks	At least 1 visit	Adequate
	No visits	Intermediate
14-17 Weeks	1st trimester and at least 2 visits	Adequate
	1st or 2nd trimester and 1 visit	Intermediate
	No prenatal visits	Inadequate
18-21 Weeks	1st trimester and at least 3 visits	Adequate
	1st or 2nd trimester and 1-2 visits	Intermediate
	No prenatal visits	Inadequate
22-25 Weeks	1st trimester and at least 4 visits	Adequate
	1st or 2nd trimester and 2-3 visits	Intermediate
	3rd trimester or no more than 1 visit	Inadequate
26-29 Weeks	1st trimester and at least 5 visits	Adequate
	1st or 2nd trimester and 2-4 visits	Intermediate
	3rd trimester or no more than 1 visit	Inadequate
30-31 Weeks	1st trimester and at least 6 visits	Adequate
	1st or 2nd trimester and 3-5 visits	Intermediate
	3rd trimester or no more than 2 visits	Inadequate
32-33 Weeks	1st trimester and at least 7 visits	Adequate
	1st or 2nd trimester and 4-6 visits	Intermediate
	3rd trimester or no more than 3 visits	Inadequate
34-35 Weeks	1st trimester and at least 8 visits	Adequate
	1st or 2nd trimester and 5-7 visits	Intermediate
	3rd trimester or no more than 4 visits	Inadequate
=> 36 Weeks	1st trimester and at least 9 visits	Adequate
	1st or 2nd trimester and 5-8 visits	Intermediate
	3rd trimester or no more than 4 visits	Inadequate

¹ Kessner, D. "Infant Death: An Analysis by Maternal Risk and health Care" Institute of Medicine, Contrasts in Health Status, Volume 1, 1973. National Academy of Sciences, Washington, DC pp 58-60

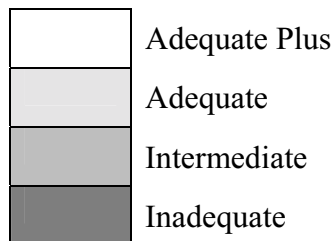
APNCU INDEX

The APNCU index makes use of two types of prenatal care information obtained from birth certificate data—when prenatal care began (adequacy of initiation) and the number of prenatal visits from when prenatal care began until delivery (adequacy of received services). The APNCU index classifies the adequacy of initiation as follows: pregnancy months 1 and 2, months 3 and 4, months 5 and 6, and months 7 to 9. To classify the adequacy of received services, the number of prenatal visits is compared to the expected number of visits for the period between when care began and the delivery date. The expected number of visits is based on the American College of Obstetricians and Gynecologists prenatal care standards for uncomplicated pregnancies and is adjusted for the gestational age when care began and for the gestational age at delivery. A ratio of observed to expected visits is calculated and grouped into four categories—Inadequate (received less than 50% of expected visits), Intermediate (50%-79%), Adequate (80%-109%), and Adequate Plus (110%). The final APNCU index measure combines these two dimensions into a single summary score. The chart below summarizes the two dimensions of the APNCU index.

TABLE D.2



Summary Index



APPENDIX E: DETERMINATION OF CHILD'S RACE

NCHS STANDARDS

Beginning in 1989, the National Center for Health Statistics (NCHS) changed their standards for determining a child's race. Since that time, a child's race has been determined by the race of the mother as reported on the birth certificate. The following are NCHS guidelines for determining the child's race.

- If the mother is a mixture of Hawaiian and any other race, the child's race is recorded as **Hawaiian**.
- If the mother is a mixture of races other than Hawaiian, the child's race is the first listed race of the mother.
- If the mother's race is listed as "Col.", "N", "Negro", "Colored", "B", "Brown", "AA", or "Afro-American", the child's race is recorded as **African American**.
- If the mother's race is listed as Asian, Yellow, Oriental, or Mongolian, and the mother's birth place is given as China, Japan, the Philippines, Hawaii, India, Korea, Vietnam, Samoa, or Guam, the child's race is recorded by the **country of the mother's birth**. If the birth place is not one of those places, the child's race is recorded as **Other Asian or Pacific Islander**.
- If the mother's race is Indian and mother's birth place is not in North, Central, or South America, the child's race is recorded as **Other Asian or Pacific Islander**.
- If "part _____" or "1/4, 1/2, 3/4 _____" is given, the child's race is recorded as the **first reported race** of the mother. The prefix is ignored.
- If the mother's race is shown as unknown, the child's race is recorded as **Unknown**.

STATISTICAL CALCULATIONS

In this report, for any decedents born in Alaska during 1989 or later, a comparison has been made between the decedent's race as shown on the death certificate and the mother's race as shown on the birth certificate. If the two are not the same, the mother's race has been used for statistical analysis.

Birth certificates in which the mother's race is not specified may result in an under-reporting of the race-specific birth rates. Therefore, in this report, for statistical purposes only, any certificates in which the mother's race is unknown are assigned the race of the previous certificate on which the mother's race is known. While not accurate on an individual basis, this does allow for accurate overall estimates of rates by race. This method is also used by the National Centers for Health Statistics.

APPENDIX F: YEAR 2000 HEALTH OBJECTIVES

The U.S. Department of Health and Human Services published Healthy People 2000: National Health Promotion and Disease Prevention Objectives to comprehensively address health promotion and disease prevention opportunities in order to allow local communities and states to choose from among its recommendations in addressing their own highest priority needs. The table below provides a brief comparison of some of these objectives compared with Alaska vital statistics from 1997 through 1999. Note that in 1999, causes of death were classified using ICD-10, while deaths during 1997 and 1998 were classified using ICD-9. Thus the death rates in 1997 and 1998 are not directly comparable to the death rates in 1999. Similarly, the death rates in 1999 are not directly comparable to the Year 2000 Health Objectives, since the Health Objectives were developed using ICD-9 and causes of death in 1999 were classified using ICD-10.

TABLE F.1 YEAR 2000 HEALTH OBJECTIVES

HEALTH INDICATOR	ALASKA STATISTICS			YEAR 2000 OBJECTIVE
	1997	1998	1999	
Malignant Neoplasm (Cancer) Death Rate ²	120.8	120.5	110.8	130.0
Accident and Adverse Effects Death Rate ²	46.5	42.1	50.0	29.3
Intentional Self-Harm (Suicide) Death Rate ²	21.9	23.7	15.9	10.5
Cerebrovascular Disease Death Rate ²	24.1	26.6	29.6	20.0
Chronic Obstructive Pulmonary Disease Death Rate ²	23.8	21.5	25.9	25.0
Diabetes Mellitus Death Rate ²	16.3	12.4	11.5	34.0
Chronic Liver Disease and Cirrhosis Death Rate ²	8.0	8.2	6.8	6.0
Infant Mortality Rate ³	7.7	7.0	6.5	7.0
Neonatal Infant Mortality Rate ³	4.1	3.5	3.1	4.5
Postneonatal Infant Mortality Rate ³	3.6	3.6	3.4	2.5
Low Birth Weight (<2500 grams) Percent	5.8%	5.9%	5.7%	5.0%
Very Low Birth Weight (<1500) Percent	1.2%	1.2%	1.0%	<1%
Mothers Abstaining from Tobacco Use During Pregnancy	80.8%	81.7%	82.2%	90%
Alaska Mothers Receiving Prenatal Care During the First Trimester	79.6%	80.5%	78.4%	90%
White Mothers Receiving Prenatal Care During the First Trimester	81.8%	82.8%	81.4%	90%
Native Mothers Receiving Prenatal Care During the First Trimester	75.6%	74.9%	71.4%	90%

¹ Public Health Service, U.S. Department of Health and Human Services, Healthy People 2000: National Health Promotion and Disease Prevention Objectives, DHHS Pub. No. PHS 91-50212. Washington, D.C.

² Rate per 100,000 U.S. 1940 standard million population. Deaths in 1997 and 1998 were classified using ICD-9; Deaths in 1999 were classified using ICD-10.

³ Infant mortality rates are three-year averages.

APPENDIX G: SAMPLE CERTIFICATES

CERTIFICATE OF LIVE BIRTH

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CERTIFICATE OF LIVE BIRTH (CONTINUED)

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CERTIFICATE OF FETAL DEATH

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(CONTINUED ⇒)

CERTIFICATE OF FETAL DEATH (CONTINUED)

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REPORT OF ADOPTION

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CERTIFICATE OF MARRIAGE

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CERTIFICATE OF DIVORCE, DISSOLUTION OF MARRIAGE, OR ANNULMENT

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CERTIFICATE OF DEATH

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CERTIFICATE OF PRESUMPTIVE DEATH

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APPENDIX H: GEOGRAPHIC INFORMATION

Some of the information in this report is provided by geographic regions. There are three different ways in which Alaska is divided into regions: 1) by census area; 2) by Native regional corporation boundaries; and 3) by judicial districts. The following alphabetic list shows the census area and Native regional corporation for each location.

LOCATION	CENSUS AREA	NATIVE REGIONAL CORPORATION
ADAK	ALEUTIANS WEST	ALEUT CORP.
AFOGNAK	KODIAK ISLAND BOROUGH	KONIAG INC.
AKHIOK	KODIAK ISLAND BOROUGH	KONIAG INC.
AKIACHAK	BETHEL	CALISTA CORP.
AKIAK	BETHEL	CALISTA CORP.
AKULURAK MISSION	BETHEL	CALISTA CORP.
AKUTAN	ALEUTIANS EAST	ALEUT CORP.
ALAKANUK	WADE HAMPTON	CALISTA CORP.
ALASKA HWY	SOUTHEAST FAIRBANKS	DOYON LTD.
ALATNA	YUKON/KOYUKUK	DOYON LTD.
ALCAN	SOUTHEAST FAIRBANKS	DOYON LTD.
ALEKNAGIK	DILLINGHAM	BRISTOL BAY CORP.
ALEXANDER CREEK	MATANUSKA-SUSITNA BOROUGH	COOK INLET REG CORP.
ALITAK	KODIAK ISLAND BOROUGH	KONIAG INC.
ALLAKAKET	YUKON/KOYUKUK	DOYON LTD.
AMBLER	NORTHWEST ARCTIC BOROUGH	NANA REGIONAL CORP.
AMCHITKA	ALEUTIANS WEST	ALEUT CORP.
ANAKTUVAK PASS	NORTH SLOPE BOROUGH	ARCTIC SLOPE CORP.
ANCHOR POINT	KENAI PENINSULA BOROUGH	COOK INLET REG CORP.
ANCHORAGE	ANCHORAGE BOROUGH	COOK INLET REG CORP.
ANCHORAGE (CHUGACH)	ANCHORAGE BOROUGH	CHUGACH NATIVES INC.
ANCHORAGE AIRPORT	ANCHORAGE BOROUGH	COOK INLET REG CORP.
ANDERAFSKI	WADE HAMPTON	CALISTA CORP.
ANDERSON	DENALI BOROUGH	DOYON LTD.
ANGOON	ANGOON/HOONAH/SKAGWAY	SEALASKA CORP.
ANIAK	BETHEL	CALISTA CORP.
ANNETTE	PRINCE OF WALES/OUTER KETCHIKAN	SEALASKA CORP.
ANNETTE ISLAND	PRINCE OF WALES/OUTER KETCHIKAN	SEALASKA CORP.
ANVIK	YUKON/KOYUKUK	DOYON LTD.
ARCTIC CIRCLE	YUKON/KOYUKUK	DOYON LTD.
ARCTIC VILLAGE	YUKON/KOYUKUK	DOYON LTD.
ATKA	ALEUTIANS WEST	ALEUT CORP.
ATKASOOK	NORTH SLOPE BOROUGH	ARCTIC SLOPE CORP.
ATMAUTHUAK	BETHEL	CALISTA CORP.
ATTU	ALEUTIANS WEST	ALEUT CORP.
AUKE BAY	JUNEAU BOROUGH	SEALASKA CORP.
AURORA LODGE	FAIRBANKS NORTH STAR BOROUGH	DOYON LTD.
BARANOF	SITKA BOROUGH	SEALASKA CORP.
BARE ISLAND	KODIAK ISLAND BOROUGH	KONIAG INC.
BARROW	NORTH SLOPE BOROUGH	ARCTIC SLOPE CORP.
BARTER ISLAND	NORTH SLOPE BOROUGH	ARCTIC SLOPE CORP.
BEAVER	YUKON/KOYUKUK	DOYON LTD.
BELL ISLAND	PRINCE OF WALES/OUTER KETCHIKAN	SEALASKA CORP.
BELOFSKI	ALEUTIANS EAST	ALEUT CORP.
BELUGA	KENAI PENINSULA BOROUGH	COOK INLET REG CORP.
BERRY	FAIRBANKS NORTH STAR BOROUGH	DOYON LTD.
BESSIE DREDGE #5	NOME	BERING STRAITS CORP.
BETHEL	BETHEL	CALISTA CORP.
BETTLES	YUKON/KOYUKUK	DOYON LTD.
BIG DELTA	SOUTHEAST FAIRBANKS	DOYON LTD.

LOCATION	CENSUS AREA	NATIVE REGIONAL CORPORATION
BIG HORN	FAIRBANKS NORTH STAR BOROUGH	DOYON LTD.
BIG LAKE	MATANUSKA-SUSITNA BOROUGH	COOK INLET REG CORP.
BILL MOORES SLOUGH	WADE HAMPTON	CALISTA CORP.
BIORKA ISLAND	SITKA BOROUGH	SEALASKA CORP.
BIRCH CREEK	YUKON/KOYUKUK	DOYON LTD.
BIRCH LAKE	FAIRBANKS NORTH STAR BOROUGH	DOYON LTD.
BIRCHWOOD	ANCHORAGE BOROUGH	COOK INLET REG CORP.
BIRD CREEK	ANCHORAGE BOROUGH	COOK INLET REG CORP.
BODENBURG BUTTE	MATANUSKA-SUSITNA BOROUGH	COOK INLET REG CORP.
BOUNDARY	SOUTHEAST FAIRBANKS	DOYON LTD.
BRADFIELD CANAL	WRANGELL/PETERSBURG	SEALASKA CORP.
BREVIK MISSION	NOME	BERING STRAITS CORP.
BROAD PASS	MATANUSKA-SUSITNA BOROUGH	AHTNA INC.
BUCKLAND	NORTHWEST ARCTIC BOROUGH	NANA REGIONAL CORP.
BUTTE	MATANUSKA-SUSITNA BOROUGH	COOK INLET REG CORP.
CAMP CARROL	ANCHORAGE BOROUGH	COOK INLET REG CORP.
CAMPION AFS	YUKON/KOYUKUK	DOYON LTD.
CANDLE	NORTHWEST ARCTIC BOROUGH	NANA REGIONAL CORP.
CANTWELL	DENALI BOROUGH	AHTNA INC.
CANYON CITY	MATANUSKA-SUSITNA BOROUGH	COOK INLET REG CORP.
CANYON VILLAGE	YUKON/KOYUKUK	DOYON LTD.
CAPE LISBURNE	NORTH SLOPE BOROUGH	ARCTIC SLOPE CORP.
CAPE NEWENHAM AFS	BETHEL	CALISTA CORP.
CAPE POLE	PRINCE OF WALES/OUTER KETCHIKAN	SEALASKA CORP.
CAPE ROMANZOFF	WADE HAMPTON	CALISTA CORP.
CAPE YAKATAGA	VALDEZ/CORDOVA	CHUGACH NATIVES INC.
CASWELL	MATANUSKA-SUSITNA BOROUGH	COOK INLET REG CORP.
CENTRAL	YUKON/KOYUKUK	DOYON LTD.
CHALKYITSIK	YUKON/KOYUKUK	DOYON LTD.
CHANDALAR	YUKON/KOYUKUK	DOYON LTD.
CHANLILIUT	WADE HAMPTON	CALISTA CORP.
CHASE	MATANUSKA-SUSITNA BOROUGH	COOK INLET REG CORP.
CHATANIKA	FAIRBANKS NORTH STAR BOROUGH	DOYON LTD.
CHEFORNAK	BETHEL	CALISTA CORP.
CHENA HOT SPRINGS	FAIRBANKS NORTH STAR BOROUGH	DOYON LTD.
CHENEGA	VALDEZ/CORDOVA	CHUGACH NATIVES INC.
CHEVAK	WADE HAMPTON	CALISTA CORP.
CHICHAGOF	SITKA BOROUGH	SEALASKA CORP.
CHICKALOON	MATANUSKA-SUSITNA BOROUGH	COOK INLET REG CORP.
CHICKEN	SOUTHEAST FAIRBANKS	DOYON LTD.
CHIGNIK	LAKE AND PENINSULA	BRISTOL BAY CORP.
CHIGNIK LAGOON	LAKE AND PENINSULA	BRISTOL BAY CORP.
CHIGNIK LAKE	LAKE AND PENINSULA	BRISTOL BAY CORP.
CHILKAT	HAINES BOROUGH	SEALASKA CORP.
CHILKOOT	HAINES BOROUGH	SEALASKA CORP.
CHINIAK	KODIAK ISLAND BOROUGH	KONIAG INC.
CHISANA	VALDEZ/CORDOVA	AHTNA INC.
CHISTOCHINA	VALDEZ/CORDOVA	AHTNA INC.
CHITINA	VALDEZ/CORDOVA	AHTNA INC.
CHRISTIAN	YUKON/KOYUKUK	DOYON LTD.
CHUATHBALUK	BETHEL	CALISTA CORP.
CHUGIAK	ANCHORAGE BOROUGH	COOK INLET REG CORP.
CHULITNA	MATANUSKA-SUSITNA BOROUGH	COOK INLET REG CORP.
CHULLONAWICK	WADE HAMPTON	CALISTA CORP.
CIRCLE	YUKON/KOYUKUK	DOYON LTD.
CIRCLE HOT SPRINGS	YUKON/KOYUKUK	DOYON LTD.
CLAM GULCH	KENAI PENINSULA BOROUGH	COOK INLET REG CORP.
CLARKS POINT	DILLINGHAM	BRISTOL BAY CORP.
CLEAR	DENALI BOROUGH	DOYON LTD.

LOCATION	CENSUS AREA	NATIVE REGIONAL CORPORATION
CLOVER PASS	KETCHIKAN GATEWAY BOROUGH	SEALASKA CORP.
COFFMAN COVE	PRINCE OF WALES/OUTER KETCHIKAN	SEALASKA CORP.
COHOE	KENAI PENINSULA BOROUGH	COOK INLET REG CORP.
COLD BAY	ALEUTIANS EAST	ALEUT CORP.
COLDFOOT	YUKON/KOYUKUK	DOYON LTD.
COLLEGE	FAIRBANKS NORTH STAR BOROUGH	DOYON LTD.
COOPER LANDING	KENAI PENINSULA BOROUGH	COOK INLET REG CORP.
COPPER CENTER	VALDEZ/CORDOVA	AHTNA INC.
COPPERVILLE	VALDEZ/CORDOVA	AHTNA INC.
CORDOVA	VALDEZ/CORDOVA	CHUGACH NATIVES INC.
COUNCIL	NOME	BERING STRAITS CORP.
COVENANT LIFE	HAINES BOROUGH	SEALASKA CORP.
CRAIG	PRINCE OF WALES/OUTER KETCHIKAN	SEALASKA CORP.
CROOKED CREEK	BETHEL	CALISTA CORP.
CROWN POINT	KENAI PENINSULA BOROUGH	CHUGACH NATIVES INC.
CUBE COVE	ANGOON/HOONAH/SKAGWAY	SEALASKA CORP.
CURRY	MATANUSKA-SUSITNA BOROUGH	COOK INLET REG CORP.
CUTOFF	YUKON/KOYUKUK	DOYON LTD.
DALTON HWY 1	YUKON/KOYUKUK	DOYON LTD.
DALTON HWY 2	NORTH SLOPE BOROUGH	ARCTIC SLOPE CORP.
DANGER BAY	KODIAK ISLAND BOROUGH	KONIAG INC.
DEADHORSE	NORTH SLOPE BOROUGH	ARCTIC SLOPE CORP.
DEERING	NORTHWEST ARCTIC BOROUGH	NANA REGIONAL CORP.
DELTA JUNCTION	SOUTHEAST FAIRBANKS	DOYON LTD.
DENALI PARK	DENALI BOROUGH	DOYON LTD.
DILLINGHAM	DILLINGHAM	BRISTOL BAY CORP.
DIOMEDE	NOME	BERING STRAITS CORP.
DOME	FAIRBANKS NORTH STAR BOROUGH	DOYON LTD.
DORA BAY	PRINCE OF WALES/OUTER KETCHIKAN	SEALASKA CORP.
DOT LAKE	SOUTHEAST FAIRBANKS	DOYON LTD.
DOUGLAS	JUNEAU BOROUGH	SEALASKA CORP.
DRY CREEK	SOUTHEAST FAIRBANKS	DOYON LTD.
DUNBAR	YUKON/KOYUKUK	DOYON LTD.
DUTCH HARBOR	ALEUTIANS WEST	ALEUT CORP.
EAGLE	SOUTHEAST FAIRBANKS	DOYON LTD.
EAGLE RIVER	ANCHORAGE BOROUGH	COOK INLET REG CORP.
EAGLE VILLAGE	SOUTHEAST FAIRBANKS	DOYON LTD.
EDGERTON HWY	VALDEZ/CORDOVA	AHTNA INC.
EDNA BAY	PRINCE OF WALES/OUTER KETCHIKAN	SEALASKA CORP.
EEK	BETHEL	CALISTA CORP.
EGEGIK	LAKE AND PENINSULA	BRISTOL BAY CORP.
EIELSON AFB	FAIRBANKS NORTH STAR BOROUGH	DOYON LTD.
EKLUTNA	ANCHORAGE BOROUGH	COOK INLET REG CORP.
EKUK	DILLINGHAM	BRISTOL BAY CORP.
EKWOK	DILLINGHAM	BRISTOL BAY CORP.
ELFIN COVE	ANGOON/HOONAH/SKAGWAY	SEALASKA CORP.
ELIM	NOME	BERING STRAITS CORP.
ELLAMAR	VALDEZ/CORDOVA	CHUGACH NATIVES INC.
ELLIOTT HWY 1	FAIRBANKS NORTH STAR BOROUGH	DOYON LTD.
ELLIOTT HWY 2	YUKON/KOYUKUK	DOYON LTD.
ELMENDORF AFB	ANCHORAGE BOROUGH	COOK INLET REG CORP.
EMMONAK	WADE HAMPTON	CALISTA CORP.
ENGLISH BAY	KENAI PENINSULA BOROUGH	CHUGACH NATIVES INC.
ESKA	MATANUSKA-SUSITNA BOROUGH	COOK INLET REG CORP.
ESTER	FAIRBANKS NORTH STAR BOROUGH	DOYON LTD.
ETOLIN	WRANGELL/PETERSBURG	SEALASKA CORP.
EUREKA LODGE	VALDEZ/CORDOVA	AHTNA INC.
EVANSVILLE	YUKON/KOYUKUK	DOYON LTD.
EXCURSION INLET	HAINES BOROUGH	SEALASKA CORP.

LOCATION	CENSUS AREA	NATIVE REGIONAL CORPORATION
EYAK	VALDEZ/CORDOVA	CHUGACH NATIVES INC.
FAIRBANKS	FAIRBANKS NORTH STAR BOROUGH	DOYON LTD.
FALSE ISLAND	SITKA BOROUGH	SEALASKA CORP.
FALSE PASS	ALEUTIANS EAST	ALEUT CORP.
FAREWELL	YUKON/KOYUKUK	DOYON LTD.
FERRY	DENALI BOROUGH	DOYON LTD.
FIRE ISLAND	ANCHORAGE BOROUGH	COOK INLET REG CORP.
FLAT	YUKON/KOYUKUK	DOYON LTD.
FORT GREELY	SOUTHEAST FAIRBANKS	DOYON LTD.
FORT RANDALL	ALEUTIANS EAST	ALEUT CORP.
FORT RICHARDSON	ANCHORAGE BOROUGH	COOK INLET REG CORP.
FORT WAINWRIGHT	FAIRBANKS NORTH STAR BOROUGH	DOYON LTD.
FORT YUKON	YUKON/KOYUKUK	DOYON LTD.
FORTUNA LEDGE	WADE HAMPTON	CALISTA CORP.
FOX	FAIRBANKS NORTH STAR BOROUGH	DOYON LTD.
FOX RIVER	KENAI PENINSULA BOROUGH	CHUGACH NATIVES INC.
FRESHWATER BAY	ANGOON/HOONAH/SKAGWAY	SEALASKA CORP.
FRITZ CREEK	KENAI PENINSULA BOROUGH	COOK INLET REG CORP.
FUNTER BAY	ANGOON/HOONAH/SKAGWAY	SEALASKA CORP.
GAKONA	VALDEZ/CORDOVA	AHTNA INC.
GALENA	YUKON/KOYUKUK	DOYON LTD.
GALLA LOGG CAMP	WRANGELL/PETERSBURG	SEALASKA CORP.
GAMBELL	NOME	BERING STRAITS CORP.
GAME CREEK	ANGOON/HOONAH/SKAGWAY	SEALASKA CORP.
GEORGE INLET	KETCHIKAN GATEWAY BOROUGH	SEALASKA CORP.
GEORGETOWN	BETHEL	CALISTA CORP.
GIRDWOOD	ANCHORAGE BOROUGH	COOK INLET REG CORP.
GLENN HWY MI 22	ANCHORAGE BOROUGH	COOK INLET REG CORP.
GLENN HWY 1	ANCHORAGE BOROUGH	COOK INLET REG CORP.
GLENN HWY 2	MATANUSKA-SUSITNA BOROUGH	COOK INLET REG CORP.
GLENN HWY 3	MATANUSKA-SUSITNA BOROUGH	AHTNA INC.
GLENN HWY 4	VALDEZ/CORDOVA	AHTNA INC.
GLENN HWY 5	SOUTHEAST FAIRBANKS	DOYON LTD.
GLENNALLEN	VALDEZ/CORDOVA	AHTNA INC.
GODDARD	SITKA BOROUGH	SEALASKA CORP.
GOLD CREEK	MATANUSKA-SUSITNA BOROUGH	COOK INLET REG CORP.
GOLOVIN	NOME	BERING STRAITS CORP.
GOODNEWS BAY	BETHEL	CALISTA CORP.
GRAEHL	FAIRBANKS NORTH STAR BOROUGH	DOYON LTD.
GRAYLING	YUKON/KOYUKUK	DOYON LTD.
GROUSE CREEK GROUP	KENAI PENINSULA BOROUGH	CHUGACH NATIVES INC.
GULKANA	VALDEZ/CORDOVA	AHTNA INC.
GUSTAVUS	ANGOON/HOONAH/SKAGWAY	SEALASKA CORP.
HAINES	HAINES BOROUGH	SEALASKA CORP.
HALIBUT COVE	KENAI PENINSULA BOROUGH	COOK INLET REG CORP.
HAMILTON	WADE HAMPTON	CALISTA CORP.
HAMILTON ACRES	FAIRBANKS NORTH STAR BOROUGH	DOYON LTD.
HAPPY VALLEY	KENAI PENINSULA BOROUGH	COOK INLET REG CORP.
HARDING LAKE	FAIRBANKS NORTH STAR BOROUGH	DOYON LTD.
HASSLER PASS	KETCHIKAN GATEWAY BOROUGH	SEALASKA CORP.
HAWK INLET	ANGOON/HOONAH/SKAGWAY	SEALASKA CORP.
HAYCOCK	NOME	BERING STRAITS CORP.
HEALY	DENALI BOROUGH	DOYON LTD.
HEALY LAKE	SOUTHEAST FAIRBANKS	DOYON LTD.
HERRING COVE	KETCHIKAN GATEWAY BOROUGH	SEALASKA CORP.
HERRING POINT	KETCHIKAN GATEWAY BOROUGH	SEALASKA CORP.
HOBART BAY	ANGOON/HOONAH/SKAGWAY	SEALASKA CORP.
HOGATZA	YUKON/KOYUKUK	DOYON LTD.
HOLIKACHUK	YUKON/KOYUKUK	DOYON LTD.

LOCATION	CENSUS AREA	NATIVE REGIONAL CORPORATION
HOLITNA RIVER	BETHEL	CALISTA CORP.
HOLLIS	PRINCE OF WALES/OUTER KETCHIKAN	SEALASKA CORP.
HOLY CROSS	YUKON/KOYUKUK	DOYON LTD.
HOMER	KENAI PENINSULA BOROUGH	COOK INLET REG CORP.
HOONAH	ANGOON/HOONAH/SKAGWAY	SEALASKA CORP.
HOOPER BAY	WADE HAMPTON	CALISTA CORP.
HOPE	KENAI PENINSULA BOROUGH	COOK INLET REG CORP.
HOUSTON	MATANUSKA-SUSITNA BOROUGH	COOK INLET REG CORP.
HUGHES	YUKON/KOYUKUK	DOYON LTD.
HURRICANE	MATANUSKA-SUSITNA BOROUGH	DOYON LTD.
HUSLIA	YUKON/KOYUKUK	DOYON LTD.
HYDABURG	PRINCE OF WALES/OUTER KETCHIKAN	SEALASKA CORP.
HYDER	PRINCE OF WALES/OUTER KETCHIKAN	SEALASKA CORP.
ICY BAY	VALDEZ/CORDOVA	CHUGACH NATIVES INC.
IDITAROD	YUKON/KOYUKUK	DOYON LTD.
IGIUGIG	LAKE AND PENINSULA	BRISTOL BAY CORP.
IGLOO	NOME	BERING STRAITS CORP.
ILIAMNA	LAKE AND PENINSULA	BRISTOL BAY CORP.
INALIK	NOME	BERING STRAITS CORP.
INDIAN	ANCHORAGE BOROUGH	COOK INLET REG CORP.
INDIAN MOUNTAIN	YUKON/KOYUKUK	DOYON LTD.
IVANOFF BAY	LAKE AND PENINSULA	BRISTOL BAY CORP.
JAKOLOF BAY	KENAI PENINSULA BOROUGH	COOK INLET REG CORP.
JONESVILLE	MATANUSKA-SUSITNA BOROUGH	COOK INLET REG CORP.
JUNEAU	JUNEAU BOROUGH	SEALASKA CORP.
KACHAMAK	KENAI PENINSULA BOROUGH	COOK INLET REG CORP.
KAGUYAK	KODIAK ISLAND BOROUGH	KONIAG INC.
KAKE	WRANGELL/PETERSBURG	SEALASKA CORP.
KAKHONAK BAY	LAKE AND PENINSULA	BRISTOL BAY CORP.
KAKTOVIK	NORTH SLOPE BOROUGH	ARCTIC SLOPE CORP.
KALIFONSKY	KENAI PENINSULA BOROUGH	COOK INLET REG CORP.
KALSKAG	BETHEL	CALISTA CORP.
KALTAG	YUKON/KOYUKUK	DOYON LTD.
KANAKANAK	DILLINGHAM	BRISTOL BAY CORP.
KARLUK	KODIAK ISLAND BOROUGH	KONIAG INC.
KASAAN	PRINCE OF WALES/OUTER KETCHIKAN	SEALASKA CORP.
KASHWITNA	MATANUSKA-SUSITNA BOROUGH	COOK INLET REG CORP.
KASIGLUK	BETHEL	CALISTA CORP.
KASILOF	KENAI PENINSULA BOROUGH	COOK INLET REG CORP.
KENAI	KENAI PENINSULA BOROUGH	COOK INLET REG CORP.
KENNY LAKE	VALDEZ/CORDOVA	AHTNA INC.
KETCHIKAN	KETCHIKAN GATEWAY BOROUGH	SEALASKA CORP.
KETCHIKAN EAST	KETCHIKAN GATEWAY BOROUGH	SEALASKA CORP.
KETCHIKAN SUBURBAN	KETCHIKAN GATEWAY BOROUGH	SEALASKA CORP.
KEYALUVIK	BETHEL	CALISTA CORP.
KIANA	NORTHWEST ARCTIC BOROUGH	NANA REGIONAL CORP.
KING COVE	ALEUTIANS EAST	ALEUT CORP.
KING ISLAND	NOME	BERING STRAITS CORP.
KING SALMON	BRISTOL BAY BOROUGH	BRISTOL BAY CORP.
KINGEGAN	NOME	BERING STRAITS CORP.
KIPNUK	BETHEL	CALISTA CORP.
KITOI BAY	KODIAK ISLAND BOROUGH	KONIAG INC.
KIVALINA	NORTHWEST ARCTIC BOROUGH	NANA REGIONAL CORP.
KIWALIK	NORTHWEST ARCTIC BOROUGH	NANA REGIONAL CORP.
KLAWOCK	PRINCE OF WALES/OUTER KETCHIKAN	SEALASKA CORP.
KLUCHEVA	KENAI PENINSULA BOROUGH	COOK INLET REG CORP.
KLUCHEVA YA	KENAI PENINSULA BOROUGH	COOK INLET REG CORP.
KLUKWAN	ANGOON/HOONAH/SKAGWAY	SEALASKA CORP.
KNIK	MATANUSKA-SUSITNA BOROUGH	COOK INLET REG CORP.

LOCATION	CENSUS AREA	NATIVE REGIONAL CORPORATION
KNUDSON COVE	KETCHIKAN GATEWAY BOROUGH	SEALASKA CORP.
KOBUK	NORTHWEST ARCTIC BOROUGH	NANA REGIONAL CORP.
KODIAK	KODIAK ISLAND BOROUGH	KONIAG INC.
KODIAK NAVAL ST	KODIAK ISLAND BOROUGH	KONIAG INC.
KOKHANOK	LAKE AND PENINSULA	BRISTOL BAY CORP.
KOKRINES	YUKON/KOYUKUK	DOYON LTD.
KOLIGANEK	DILLINGHAM	BRISTOL BAY CORP.
KONGIGANAK	BETHEL	CALISTA CORP.
KOTLIK	WADE HAMPTON	CALISTA CORP.
KOTZEBUE	NORTHWEST ARCTIC BOROUGH	NANA REGIONAL CORP.
KOYUK	NOME	BERING STRAITS CORP.
KOYUKUK	YUKON/KOYUKUK	DOYON LTD.
KUPREANOF	WRANGELL/PETERSBURG	SEALASKA CORP.
KUSKOKWIM RIVER 1	BETHEL	CALISTA CORP.
KUSKOKWIM RIVER 2	BETHEL	CALISTA CORP.
KUSKOKWIM RIVER 3	YUKON/KOYUKUK	DOYON LTD.
KUZITRINE RIVER	NOME	BERING STRAITS CORP.
KVICHAK	LAKE AND PENINSULA	BRISTOL BAY CORP.
KWETHLUK	BETHEL	CALISTA CORP.
KWIGILLINGOK	BETHEL	CALISTA CORP.
KWIGOK	WADE HAMPTON	CALISTA CORP.
LABOUCHERE BAY	PRINCE OF WALES/OUTER KETCHIKAN	SEALASKA CORP.
LADD AFB	FAIRBANKS NORTH STAR BOROUGH	DOYON LTD.
LAKE CLARK PASS	LAKE AND PENINSULA	BRISTOL BAY CORP.
LAKE MINCHUMINA	YUKON/KOYUKUK	DOYON LTD.
LARSEN BAY	KODIAK ISLAND BOROUGH	KONIAG INC.
LAZY BAY	KODIAK ISLAND BOROUGH	KONIAG INC.
LAZY MOUNTAIN	MATANUSKA-SUSITNA BOROUGH	COOK INLET REG CORP.
LEMETA	FAIRBANKS NORTH STAR BOROUGH	DOYON LTD.
LENA BEACH	JUNEAU BOROUGH	SEALASKA CORP.
LENA COVE	JUNEAU BOROUGH	SEALASKA CORP.
LEVELOCK	LAKE AND PENINSULA	BRISTOL BAY CORP.
LIGNITE	DENALI BOROUGH	DOYON LTD.
LIME VILLAGE	BETHEL	CALISTA CORP.
LITTLE DIOMEDE	NOME	BERING STRAITS CORP.
LITTLE PORT WALTER	SITKA BOROUGH	SEALASKA CORP.
LIVENGOD	YUKON/KOYUKUK	DOYON LTD.
LONELY	NORTH SLOPE BOROUGH	ARCTIC SLOPE CORP.
LONG ISLAND	PRINCE OF WALES/OUTER KETCHIKAN	SEALASKA CORP.
LORING	KETCHIKAN GATEWAY BOROUGH	SEALASKA CORP.
LOST RIVER	NOME	BERING STRAITS CORP.
LOWER KALSKAG	BETHEL	CALISTA CORP.
LOWER TONSINA	VALDEZ/CORDOVA	AHTNA INC.
LUTAK	HAINES BOROUGH	SEALASKA CORP.
MANLEY HOT SPRINGS	YUKON/KOYUKUK	DOYON LTD.
MANOKOTAK	DILLINGHAM	BRISTOL BAY CORP.
MARSHALL	WADE HAMPTON	CALISTA CORP.
MARYS IGLOO	NOME	BERING STRAITS CORP.
MAY CREEK	NORTHWEST ARCTIC BOROUGH	NANA REGIONAL CORP.
MCCARTHY	VALDEZ/CORDOVA	AHTNA INC.
MCGRATH	YUKON/KOYUKUK	DOYON LTD.
MCKINLEY PARK	DENALI BOROUGH	DOYON LTD.
MEADOW LAKES	MATANUSKA-SUSITNA BOROUGH	COOK INLET REG CORP.
MEAKERVILLE	VALDEZ/CORDOVA	CHUGACH NATIVES INC.
MEDFRA	YUKON/KOYUKUK	DOYON LTD.
MEKORYUK	BETHEL	CALISTA CORP.
MENDELTNA LODGE	VALDEZ/CORDOVA	AHTNA INC.
MENTASTA LAKE	VALDEZ/CORDOVA	AHTNA INC.
METLAKATLA	PRINCE OF WALES/OUTER KETCHIKAN	SEALASKA CORP.

LOCATION	CENSUS AREA	NATIVE REGIONAL CORPORATION
MEYERS CHUCK	PRINCE OF WALES/OUTER KETCHIKAN	SEALASKA CORP.
MILLER HOUSE	YUKON/KOYUKUK	DOYON LTD.
MINTO	YUKON/KOYUKUK	DOYON LTD.
MONTANA	MATANUSKA-SUSITNA BOROUGH	COOK INLET REG CORP.
MONTANA CRK LODGE	MATANUSKA-SUSITNA BOROUGH	COOK INLET REG CORP.
MOOSE CREEK	FAIRBANKS NORTH STAR BOROUGH	DOYON LTD.
MOOSE PASS	KENAI PENINSULA BOROUGH	COOK INLET REG CORP.
MOSER BAY	KODIAK ISLAND BOROUGH	KONIAG INC.
MOSES POINT	NOME	BERING STRAITS CORP.
MOUNTAIN POINT	KETCHIKAN GATEWAY BOROUGH	SEALASKA CORP.
MOUNTAIN VIEW	ANCHORAGE BOROUGH	COOK INLET REG CORP.
MOUNTAIN VILLAGE	WADE HAMPTON	CALISTA CORP.
MT DENALI	DENALI BOROUGH	DOYON LTD.
MT EDGECUMBE	SITKA BOROUGH	SEALASKA CORP.
MT MC KINLEY	DENALI BOROUGH	DOYON LTD.
MUMTRAK	BETHEL	CALISTA CORP.
MURPHY DOME	FAIRBANKS NORTH STAR BOROUGH	DOYON LTD.
NABESNA	VALDEZ/CORDOVA	AHTNA INC.
NAKNEK	BRISTOL BAY BOROUGH	BRISTOL BAY CORP.
NANAKA	ANCHORAGE BOROUGH	COOK INLET REG CORP.
NANWALEK	KENAI PENINSULA BOROUGH	CHUGACH NATIVES INC.
NAPAIMUTE	BETHEL	CALISTA CORP.
NAPAKIAK	BETHEL	CALISTA CORP.
NAPASKIAK	BETHEL	CALISTA CORP.
NAUKATI BAY	PRINCE OF WALES/OUTER KETCHIKAN	SEALASKA CORP.
NEETS BAY	KETCHIKAN GATEWAY BOROUGH	SEALASKA CORP.
NELSON LAGOON	ALEUTIANS EAST	ALEUT CORP.
NENANA	YUKON/KOYUKUK	DOYON LTD.
NEW STUYAHOK	DILLINGHAM	BRISTOL BAY CORP.
NEWHALEN	LAKE AND PENINSULA	BRISTOL BAY CORP.
NEWTOK	BETHEL	CALISTA CORP.
NIGHTMUTE	BETHEL	CALISTA CORP.
NIKISKI	KENAI PENINSULA BOROUGH	COOK INLET REG CORP.
NIKOLAEVSK	KENAI PENINSULA BOROUGH	COOK INLET REG CORP.
NIKOLAI	YUKON/KOYUKUK	DOYON LTD.
NIKOLSKI	ALEUTIANS WEST	ALEUT CORP.
NINILCHIK	KENAI PENINSULA BOROUGH	COOK INLET REG CORP.
NOATAK	NORTHWEST ARCTIC BOROUGH	NANA REGIONAL CORP.
NOHODKA	KENAI PENINSULA BOROUGH	COOK INLET REG CORP.
NOME	NOME	BERING STRAITS CORP.
NONDALTON	LAKE AND PENINSULA	BRISTOL BAY CORP.
NOORVIK	NORTHWEST ARCTIC BOROUGH	NANA REGIONAL CORP.
NORTH KENAI	KENAI PENINSULA BOROUGH	COOK INLET REG CORP.
NORTH POLE	FAIRBANKS NORTH STAR BOROUGH	DOYON LTD.
NORTH WHALE PASS	PRINCE OF WALES/OUTER KETCHIKAN	SEALASKA CORP.
NORTHEAST CAPE	NOME	BERING STRAITS CORP.
NORTHWAY	SOUTHEAST FAIRBANKS	DOYON LTD.
NORTHWAY JUNCTION	SOUTHEAST FAIRBANKS	DOYON LTD.
NORTHWAY VILLAGE	SOUTHEAST FAIRBANKS	DOYON LTD.
NUIQSUT	NORTH SLOPE BOROUGH	ARCTIC SLOPE CORP.
NULATO	YUKON/KOYUKUK	DOYON LTD.
NUNAKA VALLEY	ANCHORAGE BOROUGH	COOK INLET REG CORP.
NUNAPITCHUK	BETHEL	CALISTA CORP.
NUNIVAK ISLAND	BETHEL	CALISTA CORP.
NUSHAGAK	DILLINGHAM	BRISTOL BAY CORP.
NYAC	BETHEL	CALISTA CORP.
OHGSENAKALE	DILLINGHAM	BRISTOL BAY CORP.
OHOAMIUTE	WADE HAMPTON	CALISTA CORP.
OLD HARBOR	KODIAK ISLAND BOROUGH	KONIAG INC.

LOCATION	CENSUS AREA	NATIVE REGIONAL CORPORATION
OLNES	FAIRBANKS NORTH STAR BOROUGH	DOYON LTD.
OPHIR	YUKON/KOYUKUK	DOYON LTD.
OSCARVILLE	BETHEL	CALISTA CORP.
OUZINKIE	KODIAK ISLAND BOROUGH	KONIAG INC.
PAIMUTE	WADE HAMPTON	CALISTA CORP.
PALMER	MATANUSKA-SUSITNA BOROUGH	COOK INLET REG CORP.
PARKS HWY 1	MATANUSKA-SUSITNA BOROUGH	COOK INLET REG CORP.
PARKS HWY 2	MATANUSKA-SUSITNA BOROUGH	DOYON LTD.
PARKS HWY 3	MATANUSKA-SUSITNA BOROUGH	AHTNA INC.
PARKS HWY 4	DENALI BOROUGH	AHTNA INC.
PARKS HWY 5	DENALI BOROUGH	DOYON LTD.
PARKS HWY 6	YUKON/KOYUKUK	UNKNOWN
PARKS HWY 7	FAIRBANKS NORTH STAR BOROUGH	DOYON LTD.
PASTOLIK	WADE HAMPTON	CALISTA CORP.
PAULOFF HARBOR	ALEUTIANS EAST	ALEUT CORP.
PAXSON	VALDEZ/CORDOVA	AHTNA INC.
PEDRO BAY	LAKE AND PENINSULA	BRISTOL BAY CORP.
PELICAN	ANGOON/HOONAH/SKAGWAY	SEALASKA CORP.
PENNOCK ISLAND	KETCHIKAN GATEWAY BOROUGH	SEALASKA CORP.
PERKINSVILLE	NOME	BERING STRAITS CORP.
PERRYVILLE	LAKE AND PENINSULA	BRISTOL BAY CORP.
PETERS CREEK	ANCHORAGE BOROUGH	COOK INLET REG CORP.
PETERSBURG	WRANGELL/PETERSBURG	SEALASKA CORP.
PETERSVILLE	MATANUSKA-SUSITNA BOROUGH	COOK INLET REG CORP.
PILOT POINT	LAKE AND PENINSULA	BRISTOL BAY CORP.
PILOT STATION	WADE HAMPTON	CALISTA CORP.
PITKA'S POINT	WADE HAMPTON	CALISTA CORP.
PLATINUM	BETHEL	CALISTA CORP.
PLEASANT VALLEY	FAIRBANKS NORTH STAR BOROUGH	DOYON LTD.
POINT BAKER	PRINCE OF WALES/OUTER KETCHIKAN	SEALASKA CORP.
POINT BARROW	NORTH SLOPE BOROUGH	ARCTIC SLOPE CORP.
POINT HOPE	NORTH SLOPE BOROUGH	ARCTIC SLOPE CORP.
POINT LAY	NORTH SLOPE BOROUGH	ARCTIC SLOPE CORP.
POLK INLET	PRINCE OF WALES/OUTER KETCHIKAN	SEALASKA CORP.
POPE & VANNOY	LAKE AND PENINSULA	BRISTOL BAY CORP.
PORT ALEXANDER	WRANGELL/PETERSBURG	SEALASKA CORP.
PORT ALICE	PRINCE OF WALES/OUTER KETCHIKAN	SEALASKA CORP.
PORT ALSWORTH	LAKE AND PENINSULA	COOK INLET REG CORP.
PORT ARMSTRONG	SITKA BOROUGH	SEALASKA CORP.
PORT ASHTON	VALDEZ/CORDOVA	CHUGACH NATIVES INC.
PORT BAILEY	KODIAK ISLAND BOROUGH	KONIAG INC.
PORT CHILKOOT	HAINES BOROUGH	SEALASKA CORP.
PORT CLARENCE	NOME	BERING STRAITS CORP.
PORT GRAHAM	KENAI PENINSULA BOROUGH	CHUGACH NATIVES INC.
PORT HEIDEN	LAKE AND PENINSULA	BRISTOL BAY CORP.
PORT LIONS	KODIAK ISLAND BOROUGH	KONIAG INC.
PORT MOLLER	ALEUTIANS EAST	ALEUT CORP.
PORT PROTECTION	PRINCE OF WALES/OUTER KETCHIKAN	SEALASKA CORP.
PORT WAKEFIELD	KODIAK ISLAND BOROUGH	KONIAG INC.
PORTAGE	ANCHORAGE BOROUGH	COOK INLET REG CORP.
PORTAGE CREEK	DILLINGHAM	BRISTOL BAY CORP.
PORTLOCK	KENAI PENINSULA BOROUGH	CHUGACH NATIVES INC.
PRINCE OF WALES LOG CP	PRINCE OF WALES/OUTER KETCHIKAN	SEALASKA CORP.
PRIMROSE	KENAI PENINSULA BOROUGH	CHUGACH NATIVES INC.
PRUDHOE BAY	NORTH SLOPE BOROUGH	ARCTIC SLOPE CORP.
QUINHAGAK	BETHEL	CALISTA CORP.
RAMPART	YUKON/KOYUKUK	DOYON LTD.
RED DEVIL	BETHEL	CALISTA CORP.
RED MOUNTAIN	KENAI PENINSULA BOROUGH	COOK INLET REG CORP.

LOCATION	CENSUS AREA	NATIVE REGIONAL CORPORATION
RICHARDSON HWY 1	VALDEZ/CORDOVA	CHUGACH NATIVES INC.
RICHARDSON HWY 2	VALDEZ/CORDOVA	AHTNA INC.
RICHARDSON HWY 3	SOUTHEAST FAIRBANKS	DOYON LTD.
RICHARDSON HWY 4	FAIRBANKS NORTH STAR BOROUGH	DOYON LTD.
RIDGEWAY	KENAI PENINSULA BOROUGH	COOK INLET REG CORP.
ROWAN BAY	WRANGELL/PETERSBURG	SEALASKA CORP.
RUBY	YUKON/KOYUKUK	DOYON LTD.
RUSS MISS KUSK RV	BETHEL	CALISTA CORP.
RUSSIAN MISSION	WADE HAMPTON	CALISTA CORP.
SALAMATOF	KENAI PENINSULA BOROUGH	COOK INLET REG CORP.
SALCHA	FAIRBANKS NORTH STAR BOROUGH	DOYON LTD.
SALCHAKET	FAIRBANKS NORTH STAR BOROUGH	DOYON LTD.
SANAK	ALEUTIANS EAST	ALEUT CORP.
SAND POINT	ALEUTIANS EAST	ALEUT CORP.
SAVOONGA	NOME	BERING STRAITS CORP.
SAXMAN	KETCHIKAN GATEWAY BOROUGH	SEALASKA CORP.
SAXMAN EAST	KETCHIKAN GATEWAY BOROUGH	SEALASKA CORP.
SCAMMON BAY	WADE HAMPTON	CALISTA CORP.
SCOTTY CREEK	SOUTHEAST FAIRBANKS	DOYON LTD.
SELAWIK	NORTHWEST ARCTIC BOROUGH	NANA REGIONAL CORP.
SELDOVIA	KENAI PENINSULA BOROUGH	COOK INLET REG CORP.
SEVONOSKI	BRISTOL BAY BOROUGH	BRISTOL BAY CORP.
SEWARD	KENAI PENINSULA BOROUGH	CHUGACH NATIVES INC.
SHAGELUK	YUKON/KOYUKUK	DOYON LTD.
SHAKTOOLIK	NOME	BERING STRAITS CORP.
SHELDON POINT	WADE HAMPTON	CALISTA CORP.
SHEMYA AFB	ALEUTIANS WEST	ALEUT CORP.
SHISHMAREF	NOME	BERING STRAITS CORP.
SHUNGNAK	NORTHWEST ARCTIC BOROUGH	NANA REGIONAL CORP.
SILVER TIP	KENAI PENINSULA BOROUGH	COOK INLET REG CORP.
SITKA	SITKA BOROUGH	SEALASKA CORP.
SITKA LOGGING CAMP	SITKA BOROUGH	SEALASKA CORP.
SKAGWAY	ANGOON/HOONAH/SKAGWAY	SEALASKA CORP.
SKWENTNA	MATANUSKA-SUSITNA BOROUGH	COOK INLET REG CORP.
SLANA	VALDEZ/CORDOVA	AHTNA INC.
SLATERVILLE	FAIRBANKS NORTH STAR BOROUGH	DOYON LTD.
SLEETMUTE	BETHEL	CALISTA CORP.
SNETTISHAM	JUNEAU BOROUGH	SEALASKA CORP.
SOLDOTNA	KENAI PENINSULA BOROUGH	COOK INLET REG CORP.
SOLOMON	NOME	BERING STRAITS CORP.
SOURDOUGH	VALDEZ/CORDOVA	AHTNA INC.
SOUTH NAKNEK	BRISTOL BAY BOROUGH	BRISTOL BAY CORP.
SPARREVOHN	BETHEL	CALISTA CORP.
SPENARD	ANCHORAGE BOROUGH	COOK INLET REG CORP.
SQUAW HARBOR	ALEUTIANS EAST	ALEUT CORP.
ST. GEORGE ISLAND	ALEUTIANS WEST	ALEUT CORP.
ST. JOHN HARBOR	WRANGELL/PETERSBURG	SEALASKA CORP.
ST. LAWRENCE IS.	NOME	BERING STRAITS CORP.
ST. MARY'S	WADE HAMPTON	CALISTA CORP.
ST. MICHAEL	NOME	BERING STRAITS CORP.
ST. PAUL ISLAND	ALEUTIANS WEST	ALEUT CORP.
STEBBINS	NOME	BERING STRAITS CORP.
STEESE HWY 1	FAIRBANKS NORTH STAR BOROUGH	DOYON LTD.
STEESE HWY 2	YUKON/KOYUKUK	DOYON LTD.
STERLING	KENAI PENINSULA BOROUGH	COOK INLET REG CORP.
STEVENS VILLAGE	YUKON/KOYUKUK	DOYON LTD.
STONY RIVER	BETHEL	CALISTA CORP.
SUMMIT	MATANUSKA-SUSITNA BOROUGH	AHTNA INC.
SUNRISE VILLAGE	KENAI PENINSULA BOROUGH	COOK INLET REG CORP.

LOCATION	CENSUS AREA	NATIVE REGIONAL CORPORATION
SUNSHINE	MATANUSKA-SUSITNA BOROUGH	COOK INLET REG CORP.
SUNTRANA	DENALI BOROUGH	DOYON LTD.
SUSITNA	MATANUSKA-SUSITNA BOROUGH	COOK INLET REG CORP.
SUTTON	MATANUSKA-SUSITNA BOROUGH	COOK INLET REG CORP.
TAKOTNA	YUKON/KOYUKUK	DOYON LTD.
TAKU HARBOR	JUNEAU BOROUGH	SEALASKA CORP.
TALKEETNA	MATANUSKA-SUSITNA BOROUGH	COOK INLET REG CORP.
TANACROSS	SOUTHEAST FAIRBANKS	DOYON LTD.
TANANA	YUKON/KOYUKUK	DOYON LTD.
TANUNAK	BETHEL	CALISTA CORP.
TATALINA AFS	YUKON/KOYUKUK	DOYON LTD.
TATITLEK	VALDEZ/CORDOVA	CHUGACH NATIVES INC.
TAYLOR HWY	SOUTHEAST FAIRBANKS	DOYON LTD.
TAZLINA	VALDEZ/CORDOVA	AHTNA INC.
TEE HARBOR	JUNEAU BOROUGH	SEALASKA CORP.
TELIDA	YUKON/KOYUKUK	DOYON LTD.
TELLER	NOME	BERING STRAITS CORP.
TELLER MISSION	NOME	BERING STRAITS CORP.
TENAKEE SPRINGS	ANGOON/HOONAH/SKAGWAY	SEALASKA CORP.
TETLIN	SOUTHEAST FAIRBANKS	DOYON LTD.
THOMAS BASIN	KETCHIKAN GATEWAY BOROUGH	SEALASKA CORP.
THORNE BAY	PRINCE OF WALES/OUTER KETCHIKAN	SEALASKA CORP.
TIKILUK	NORTH SLOPE BOROUGH	ARCTIC SLOPE CORP.
TIN CITY AFS	NOME	BERING STRAITS CORP.
TOGIAK	DILLINGHAM	BRISTOL BAY CORP.
TOK JUNCTION	SOUTHEAST FAIRBANKS	DOYON LTD.
TOKEEN	PRINCE OF WALES/OUTER KETCHIKAN	SEALASKA CORP.
TOKSOOK BAY	BETHEL	CALISTA CORP.
TONSINA	VALDEZ/CORDOVA	AHTNA INC.
TRAPPER CREEK	MATANUSKA-SUSITNA BOROUGH	COOK INLET REG CORP.
TULUKSAK	BETHEL	CALISTA CORP.
TUNTUTULIAK	BETHEL	CALISTA CORP.
TUSTUMENA	KENAI PENINSULA BOROUGH	COOK INLET REG CORP.
TUXEKAN	PRINCE OF WALES/OUTER KETCHIKAN	SEALASKA CORP.
TWELVE MILE ARM	PRINCE OF WALES/OUTER KETCHIKAN	SEALASKA CORP.
TWIN HILLS	DILLINGHAM	BRISTOL BAY CORP.
TWO RIVERS	FAIRBANKS NORTH STAR BOROUGH	DOYON LTD.
TYONEK	KENAI PENINSULA BOROUGH	COOK INLET REG CORP.
UGANIK BAY	KODIAK ISLAND BOROUGH	KONIAG INC.
UGASHIK	LAKE AND PENINSULA	BRISTOL BAY CORP.
UKIVOK	NOME	BERING STRAITS CORP.
UMIAT	NORTH SLOPE BOROUGH	ARCTIC SLOPE CORP.
UMKUMUTE	BETHEL	CALISTA CORP.
UNALAKLEET	NOME	BERING STRAITS CORP.
UNALASKA	ALEUTIANS WEST	ALEUT CORP.
UNGA	ALEUTIANS EAST	ALEUT CORP.
UPPER KALSKAG	BETHEL	CALISTA CORP.
USIBELLI	DENALI BOROUGH	DOYON LTD.
UYAK	KODIAK ISLAND BOROUGH	KONIAG INC.
VALDEZ	VALDEZ/CORDOVA	CHUGACH NATIVES INC.
VENETIE	YUKON/KOYUKUK	DOYON LTD.
WACKER	KETCHIKAN GATEWAY BOROUGH	SEALASKA CORP.
WAINWRIGHT	NORTH SLOPE BOROUGH	ARCTIC SLOPE CORP.
WALES	NOME	BERING STRAITS CORP.
WARD COVE	KETCHIKAN GATEWAY BOROUGH	SEALASKA CORP.
WASILLA	MATANUSKA-SUSITNA BOROUGH	COOK INLET REG CORP.
WATERFALL	PRINCE OF WALES/OUTER KETCHIKAN	SEALASKA CORP.
WEST POINT	KODIAK ISLAND BOROUGH	KONIAG INC.
WEVOK	NORTH SLOPE BOROUGH	ARCTIC SLOPE CORP.

LOCATION	CENSUS AREA	NATIVE REGIONAL CORPORATION
WHALE PASS	PRINCE OF WALES/OUTER KETCHIKAN	SEALASKA CORP.
WHITE MOUNTAIN	NOME	BERING STRAITS CORP.
WHITESTONE LOGGING	ANGOON/HOONAH/SKAGWAY	SEALASKA CORP.
WHITTIER	VALDEZ/CORDOVA	CHUGACH NATIVES INC.
WILDWOOD AFS	KENAI PENINSULA BOROUGH	COOK INLET REG CORP.
WILLOW	MATANUSKA-SUSITNA BOROUGH	COOK INLET REG CORP.
WISEMAN	YUKON/KOYUKUK	DOYON LTD.
WOMENS BAY	KODIAK ISLAND BOROUGH	KONIAG INC.
WOODY ISLAND	KODIAK ISLAND BOROUGH	KONIAG INC.
WRANGELL	WRANGELL/PETERSBURG	SEALASKA CORP.
YAKATAGA	VALDEZ/CORDOVA	CHUGACH NATIVES INC.
YAKUTAT	YAKUTAT	SEALASKA CORP.
YUKON RIVER BRIDGE	YUKON/KOYUKUK	DOYON LTD.
YUKON RIVER 1	WADE HAMPTON	CALISTA CORP.
YUKON RIVER 2	YUKON/KOYUKUK	DOYON LTD.
YUKON RIVER 3	YUKON/KOYUKUK	DOYON LTD.
YUKON RIVER 4	YUKON/KOYUKUK	DOYON LTD.
YUKON RIVER 5	SOUTHEAST FAIRBANKS	DOYON LTD.
ZACHER BAY	KODIAK ISLAND BOROUGH	KONIAG INC.
ZAREMBO ISLAND	WRANGELL/PETERSBURG	SEALASKA CORP.

APPENDIX I: POPULATION OVERVIEW

ALASKA'S POPULATION

Population estimates used in this report are provided by the Alaska Department of Labor, Research and Analysis Section, Demographics Unit.

In February 1999, the Department of Labor revised population estimates back to 1991. Changes in estimates affect rates which are based on population. Revised estimates for 1997 through 1999 are also included in this appendix.

TABLE I.1 ESTIMATED POPULATION OF ALASKA BY AGE, SEX AND RACE, JULY 1999

AGE GROUP	ALL RACES			WHITE			NATIVE		
	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE
00-04	51,111	26,288	24,823	34,463	17,670	16,793	11,453	5,951	5,502
05-09	55,574	28,287	27,287	36,816	18,820	17,996	13,098	6,628	6,470
10-14	56,006	28,818	27,188	38,840	20,105	18,735	12,167	6,231	5,936
15-19	48,793	25,323	23,470	33,907	17,620	16,287	10,336	5,271	5,065
20-24	35,299	17,957	17,342	22,743	11,128	11,615	7,883	4,100	3,783
25-29	36,868	19,440	17,428	24,320	12,393	11,927	6,708	3,511	3,197
30-34	47,652	25,771	21,881	35,124	19,102	16,022	6,951	3,611	3,340
35-39	58,395	30,660	27,735	45,798	24,432	21,366	7,699	3,745	3,954
40-44	60,728	31,137	29,591	48,508	25,310	23,198	7,257	3,425	3,832
45-49	54,050	28,734	25,316	44,066	23,707	20,359	5,902	2,972	2,930
50-54	40,446	21,973	18,473	33,750	18,709	15,041	4,049	1,919	2,130
55-59	26,447	14,220	12,227	21,746	12,011	9,735	3,121	1,434	1,687
60-64	16,990	9,110	7,880	13,268	7,400	5,868	2,543	1,231	1,312
65-69	12,077	6,056	6,021	8,976	4,729	4,247	2,101	967	1,134
70-74	9,426	4,669	4,757	7,251	3,752	3,499	1,355	587	768
75-79	6,571	3,004	3,567	4,918	2,345	2,573	1,062	451	611
80-84	3,448	1,418	2,030	2,687	1,147	1,540	559	204	355
85+	2,119	821	1,298	1,481	556	925	501	181	320
TOTAL	622,000	323,686	298,314	458,662	240,936	217,726	104,745	52,419	52,326

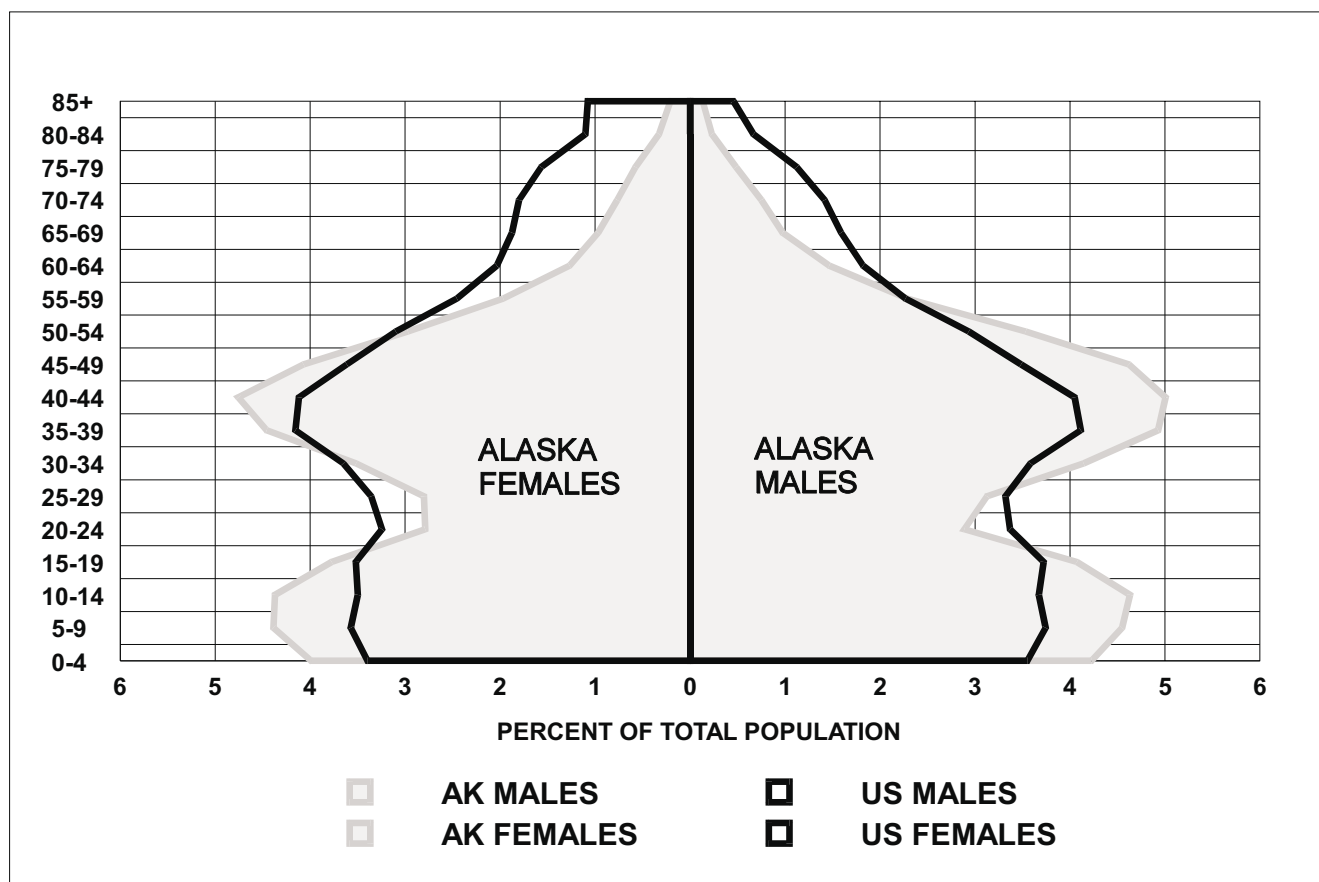
TABLE I.2 ESTIMATED POPULATION OF ALASKA BY AGE, SEX AND RACE, JULY 1998

AGE GROUP	ALL RACES			WHITE			NATIVE		
	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE
00-04	51,876	26,467	25,409	35,066	17,856	17,210	11,554	5,941	5,613
05-09	56,847	29,124	27,723	37,892	19,529	18,363	13,301	6,760	6,541
10-14	54,905	28,149	26,756	38,205	19,660	18,545	11,865	6,070	5,795
15-19	47,633	24,867	22,766	33,292	17,369	15,923	9,899	5,075	4,824
20-24	34,181	17,242	16,939	21,921	10,611	11,310	7,634	3,947	3,687
25-29	39,380	21,243	18,137	26,679	14,077	12,602	6,605	3,451	3,154
30-34	49,064	26,309	22,755	36,351	19,646	16,705	7,404	3,839	3,565
35-39	59,803	31,144	28,659	47,221	25,008	22,213	7,656	3,655	4,001
40-44	60,515	31,213	29,302	48,519	25,408	23,111	7,123	3,431	3,692
45-49	52,315	27,939	24,376	42,856	23,165	19,691	5,613	2,834	2,779
50-54	37,298	20,288	17,010	31,103	17,293	13,810	3,819	1,792	2,027
55-59	24,904	13,348	11,556	20,417	11,256	9,161	3,001	1,372	1,629
60-64	16,073	8,555	7,518	12,391	6,874	5,517	2,553	1,235	1,318
65-69	11,808	5,951	5,857	8,875	4,683	4,192	1,961	900	1,061
70-74	9,113	4,453	4,660	6,950	3,518	3,432	1,364	613	751
75-79	6,202	2,822	3,380	4,669	2,227	2,442	999	410	589
80-84	3,238	1,347	1,891	2,544	1,098	1,446	531	189	342
85+	1,927	723	1,204	1,320	459	861	479	188	291
TOTAL	617,082	321,184	295,898	456,271	239,737	216,534	103,361	51,702	51,659

TABLE I.3 ESTIMATED POPULATION OF ALASKA BY AGE, SEX AND RACE, JULY 1997

AGE GROUP	ALL RACES			WHITE			NATIVE		
	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE
00-04	51,970	26,478	25,492	34,904	17,698	17,206	11,764	6,061	5,703
05-09	57,185	29,242	27,943	38,465	19,808	18,657	13,270	6,709	6,561
10-14	54,375	27,884	26,491	38,071	19,590	18,481	11,586	5,921	5,665
15-19	45,790	23,913	21,877	32,235	16,798	15,437	9,355	4,814	4,541
20-24	33,330	16,807	16,523	21,449	10,394	11,055	7,459	3,853	3,606
25-29	41,078	22,457	18,621	28,507	15,335	13,172	6,489	3,391	3,098
30-34	51,509	27,399	24,110	38,630	20,738	17,892	7,793	4,017	3,776
35-39	60,363	31,247	29,116	47,915	25,223	22,692	7,598	3,575	4,023
40-44	59,804	31,002	28,802	48,178	25,311	22,867	6,917	3,388	3,529
45-49	49,967	26,803	23,164	41,153	22,347	18,806	5,262	2,653	2,609
50-54	35,215	19,121	16,094	29,453	16,369	13,084	3,630	1,689	1,941
55-59	22,684	12,195	10,489	18,400	10,150	8,250	2,923	1,377	1,546
60-64	15,351	8,128	7,223	11,727	6,498	5,229	2,541	1,221	1,320
65-69	11,583	5,821	5,762	8,788	4,597	4,191	1,875	860	1,015
70-74	8,814	4,301	4,513	6,651	3,361	3,290	1,395	638	757
75-79	5,797	2,641	3,156	4,445	2,126	2,319	905	359	546
80-84	3,004	1,239	1,765	2,311	986	1,325	537	192	345
85+	1,836	680	1,156	1,265	421	844	452	187	265
TOTAL	609,655	317,358	292,297	452,547	237,750	214,797	101,751	50,905	50,846

FIGURE I.1 POPULATION DISTRIBUTION BY AGE GROUP AND SEX, ALASKA¹ AND THE U.S.²: 1999



¹ Alaska 1999 population estimates provided by the Alaska Department of Labor and Workforce Development, Research and Analysis Section.

² U.S. Bureau of Census. July 1, 1999 population estimates.