

HB

89

<TARGET><BILL>HB 89</BILL><SUBJECT>HB
89</SUBJECT><COMM>HRES27</COMM></TARGET>

REPRESENTATIVE PAUL SEATON

SESSION ADDRESS

State Capitol Building
Juneau, Alaska 99801-1182
(907) 465-2689
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ALASKA STATE LEGISLATURE
House District 35

HB 89

Sponsor Statement

Weather related disasters have cost the State of Alaska \$106,474,936 over the past twenty years according to the Department of Military and Veterans Affairs. One of the most persistent and costly problems for Alaska communities is the regular flooding of rivers. In many regions this flooding is caused by an accumulation of gravel in the river bed, and the severity of the flooding could be decreased by removal of the gravel.

HB 89 provides commercial operators with a financially achievable way to remove gravel and other material in a riverbed prone to flooding. Statute currently requires that the state receive fair market value for sales of its gravel. The Department of Natural Resources assesses fair market value of gravel statewide and charges an up-front per yard fee for gravel removed from state land. This includes all gravel below a river that is determined to be navigable. The current pricing for gravel varies statewide from \$5.00 per yard in Cordova, to \$3.25 per yard on the Kenai Peninsula, \$3.00 in the Mat-Su Borough, and \$2.50 in the Aleutian Islands. This fee inhibits commercial removal of gravel from rivers with regular flooding issues.

HB 89 allows the Department of Natural Resources to consider mitigation of state disaster expenses as part of the fair market value calculation, and to receive a percent of the profit that a private contractor receives for the sale of the gravel they have extracted. HB 89 establishes this level at 12.5% of profits, mirroring the royalty share that the state receives for its oil and gas resources. The percent of profit paid to the state is calculated after the cost of extraction, loading and transportation are subtracted.

CS FOR HOUSE BILL NO. 89(RES)

IN THE LEGISLATURE OF THE STATE OF ALASKA

TWENTY-SEVENTH LEGISLATURE - FIRST SESSION

BY THE HOUSE RESOURCES COMMITTEE

**Offered:
Referred:**

Sponsor(s): REPRESENTATIVE SEATON

A BILL

FOR AN ACT ENTITLED

1 **"An Act relating to the disposal of certain bedload material in conjunction with a flood**
2 **mitigation plan."**

3 **BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:**

4 *** Section 1.** AS 38.05.872 is amended by adding new subsections to read:

5 (b) The commissioner may offer for disposal bedload material from an area
6 subject to a site-specific flood mitigation plan approved by the commissioner under
7 the terms in (d) of this section after making a finding that

8 (1) removal of the bedload gravel will offset future costs to the state
9 that are attributable to flood damage;

10 (2) the sale of the bedload gravel under (b) - (e) of this section at a cost
11 that may be below fair market value is in the best interests of the state; and

12 (3) removal of the bedload gravel will enhance the effectiveness of the
13 flood mitigation plan in preventing a flood or minimizing flood damage.

14 (c) The commissioner may request a professional engineer with relevant

1 experience to review the plans for bedload material extraction.

2 (d) A person, other than the state or federal government or a political
3 subdivision of the state, acquiring bedload material under a disposal authorized by the
4 commissioner under this section shall comply with the terms and conditions
5 established by the commissioner and pay to the department a royalty of not less than
6 12.5 percent of pretax profit calculated by subtracting from the value of the bedload
7 material the actual direct costs of extricating, loading, and transporting the material to
8 market, if applicable. The commissioner may adopt regulations that identify the
9 method and means for determining the value of the bedload material and the costs that
10 may be deducted for the purpose of calculating the amount to be paid to the state. In
11 this subsection, "value" means the sales price of the material in a bona fide arm's-
12 length transaction between unaffiliated parties or the sales price of the material had the
13 material been sold in a bona fide arm's-length transaction between unaffiliated parties.

14 (e) In this section, "bedload material" means gravel, rock, and other material
15 located below the plane of the ordinary high water mark or the mean high water mark
16 of a river, lake, stream, or other coastal water.

17 * **Sec. 2.** The uncodified law of the State of Alaska is amended by adding a new section to
18 read:

19 REVISOR'S INSTRUCTION. The revisor of statutes shall change the catch line of
20 AS 38.05.872 from "Disposition of state land for flood control projects" to "Disposition of
21 state land and material for flood mitigation."

AMENDMENT (conceptual)

adopted
3-14-11
HRES

OFFERED IN THE HOUSE

BY REPRESENTATIVE SEATON

TO: CSHB 89 v.B

Page 2 line 8 after "state." insert "The commissioner may request the plans for bed load material extraction to be reviewed by a professional engineer specializing in river hydrology."

with relevant experience

FISCAL NOTE

STATE OF ALASKA
2011 LEGISLATIVE SESSION

Fiscal Note Number _____
Bill Version HB089
() Publish Date _____

Identifier (file name) HB089-DNR-MLD-03-14-11
Title EXTRACTION OF BEDLOAD MATERIAL
Dept. Affected Natural Resources
Appropriation Resource Development
Allocation Mining and Land Development
Sponsor Rep. Seaton
Requester House RES
OMB Component Number 2460

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

	Appropriation Required	Information						
		FY 2012	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
OPERATING EXPENDITURES								
Personal Services	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Travel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Services	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Commodities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Capital Outlay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Grants	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Miscellaneous	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL OPERATING	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

CAPITAL EXPENDITURES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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CHANGE IN REVENUES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts	0	0	0	0	0	0	0	0
1003 GF Match	0	0	0	0	0	0	0	0
1004 GF	0	0	0	0	0	0	0	0
1005 GF/Program Receipts	0	0	0	0	0	0	0	0
1037 GF/Mental Health	0	0	0	0	0	0	0	0
Other (please identify)	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0

Estimate of any current year (FY2011) cost _____

POSITIONS

Full-time	0	0	0	0	0	0	0	0
Part-time	0	0	0	0	0	0	0	0
Temporary	0	0	0	0	0	0	0	0

Why this fiscal note differs from previous version (if initial version, please note as such)

Not applicable, initial version

Prepared by Wyn Menefee, Acting Director
Division Mining, Land & Water
Approved by Daniel S. Sullivan
Department of Natural Resources

Phone 269-8501
Date/Time 3/11/11 1:00 PM
Date 3/14/2011

FISCAL NOTE

STATE OF ALASKA
2011 LEGISLATIVE SESSION

BILL NO. HB089

Analysis

HB 89 allows the Commissioner of the Department of Natural Resources (DNR) to offer for disposal bedload material within a river, lake, stream or coastal water (gravel, rock, and other material) at below fair market value if disposal of that material enhances the effectiveness of a flood control project.

The Department already routinely sells bedload material at fair market value through its authority under AS 38.05.120. This bill would change the current fixed-fee structure (\$/cubic yard) to a percent of profit royalty structure (not less than 12.5%) for the disposal of bedload material that enhances the effectiveness of a flood control project.

DNR anticipates that these changes would not significantly reduce revenue generated from the disposal of bedload material and that the workload associated with adoption of regulations and preparing and noticing the required best interest finding could be absorbed by existing staff and resources.

STATE OF ALASKA

FRANK H. MURKOWSKI
GOVERNOR

DEPARTMENT OF NATURAL RESOURCES

DIVISION OF MINING, LAND AND WATER
SOUTHCENTRAL REGION LAND OFFICE

550 W. 7TH AVE., SUITE 900C
ANCHORAGE, ALASKA 99501-3577

August 1, 2006

Honored Customers

Re: **Unit Pricing Change for Purchase of Sand, Gravel and Rock Materials**
Material Sale Contracts on State-owned Land – Southcentral Region

Dear Customer:

The Department of Natural Resources, Division of Mining, Land and Water has conducted a telephone market survey of current prices for sand, gravel and rock materials in various geographic locations in Southcentral Alaska where the State offers materials for sale. The purpose was to determine current fair market value.

Per 11 AAC 71.090 (c), ADNR is expected to “periodically establish representative sales prices for materials that are an estimate of the material’s fair market value.” The new prices determined will be used as the fair market value unit price per cubic yard of materials in the material sale contracts issued for the right to extract sand, gravel or rock for all contracts and permits, per AS 38.05.110 through 38.05.120.

Fair Market Value – Fair market value is defined in 11 AAC 71.090 as the “highest price described in terms of money, which timber or material would bring if offered for sale for a reasonable time in the open market by a seller willing, but not forced, to sell to a buyer willing, but not forced, to buy, both being fully informed of the purposes for which the timber or material is best suited.”

We have determined the current unit price schedule for purchase of materials throughout the Southcentral Region. The price list is attached as “Cost per Cubic Yard of Sand, Gravel and Rock Information Sheet – 2007.” These prices will be effective beginning January 1, 2007.

These prices will remain in effect until updated through a similar price analysis. If you have any questions please contact Susan Browne at 907-269-8560 or Susan_G_Browne@dnr.state.ak.us.

Sincerely,



Michael Sullivan
Acting Regional Manager

Encl: Cost per Cubic Yard of Sand, Gravel and Rock Information Sheet - 2007

“Develop, Conserve and Enhance Natural Resources for Present and Future Alaskans”

Cost per Cubic Yard of Sand, Gravel and Rock Information Sheet – 2007
11 AAC 71.090

Parks Highway	\$3.00	MP 52 - Big Lake to MP 210 - Cantwell
Glenn Highway	\$3.00	MP 61 - Sutton to MP 189 - Glennallen
Mat-Su Borough	\$3.00	Areas Within the Political Boundary
Kenai Peninsula – South of Portage Creek (Except those listed below)	\$3.25	Entire Peninsula
Seldovia & English Bay	\$2.50	City Areas
Valdez	\$1.50	City Limits to Richardson Hwy MP 19
Richardson Highway	\$1.50	MP 19 - Valdez to MP 205 Gakona
Kodiak	\$3.00	Entire Island
Lake Clark Shorelands (Port Aisworth)	\$1.50	Lake Clark Area
Bristol Bay Area	\$1.50	Entire Bay Area to False Pass
Aleutians	\$2.50	Aleutian Islands beyond False Pass
Kuskokwin \ Yukon Area	\$1.50	All River Corridors
Cordova	\$5.00	Cordova Area
Rock – For All of the Southcentral Region	\$3.00	All Southcentral Region

Fact Sheet

Title: Material Sales in Alaska



Alaska Department of
**NATURAL
RESOURCES**

Division of Mining, Land & Water
February 2009

What is "Materials"?

Materials are sand, gravel, riprap, rock, limestone, slate, peat, and any other substances from the ground that are not applied for through the location system for mining claims (e.g. gold, silver, and other metals). Materials are measured and sold in cubic yards.

Where can I find materials on state land?

You can find information on material sites at the Department of Natural Resources (DNR) Public Information Center (PIC) offices listed at the end of this fact sheet. Often, sites that have already been used for extracting materials will be shown on state status plat maps. You may also do your own research to find new areas where you can extract materials. To get started, find the area in which you want to extract the materials. Use a USGS topographic map to determine what township, range and section your selected site is in. To determine if the site is on state-owned land, visit or contact the PIC.

How do I buy material on state land?

Determine the quantity of material you require from the site you have identified and request an application from the PIC.

Are there different types of state material sales?

Yes, there are three types of material sales.

- The first and smallest is a "limited" material sale which cannot be for more than 200 cubic yards per 12 month period per person. This is a revocable, nonexclusive contract for personal or commercial use.
- The second type is the "negotiated" sale, which generally cannot exceed 25,000 cubic yards per year per person or company. Material purchased under this type of sale can be sold or used for commercial purposes. The term of the sale is generally one year, but can be longer depending on circumstances.
- The third and largest is the "competitive" sale. The sale contract can be issued for an unlimited amount of material to be taken over many years. Award will be determined

by public auction if there are multiple bidders for the same location. If no competitive interest is expressed during the public notification period, no auction is necessary and the sale can proceed to contract upon completion of the decision making process. Material purchased through competitive sale can be sold or used for commercial purposes.

What are the procedures for material sales?

If the material is located in an approved site, a limited material sale (200 cubic yards or less) can usually be issued over-the-counter at the Public Information Center.

For a negotiated material contract at an approved material site, the applicant must submit the following:

- A negotiated material sale application, environmental risk questionnaire, development plan, reclamation plan and a \$100 application fee.
- Bonding deposit and insurance are requirements of a negotiated material sale contract. If approved the Division of Mining, Land & Water will then issue a contract to the applicant.

If a negotiated material or competitive contract is requested from a "new undeveloped site", a more involved public interest process must be followed. The process begins with agency review and a Coastal Zone Review if the project is within a coastal district.

Preliminary and final findings must be written and public notice given. The applicant is responsible for the cost of the public notice. These additional procedures take several months to process, depending on the complexity of issues and agency/public comments that must be addressed. Plan ahead; apply several months before you need to extract material.

What are the costs involved?

No filing or application fee is charged for a limited material permit, but negotiated and competitive sales contracts require a filing fee of \$100.

The price charged for "limited" and small "negotiated" sales is set by the DNR, typically based on the fair market sales price of material in the area.

The amount charged for larger "negotiated" and "competitive" material sales (sales of more than 25,000 cubic yards) is generally based on a site-specific appraisal or an abbreviated appraisal called an "opinion of value". A "competitive" sale price is initially set by an appraisal, but may be raised during an auction if more than one person or company competes for the material.

NOTE: State regulations require the DNR to set a minimum "base price" which covers the cost of processing the contract. In no event can the amount charged for materials be less than this "base price".

USEFUL FACTS

- A full size pickup bed can hold approximately one cubic yard.
- A standard dump truck has a capacity of 10-12 cubic yards.
- The standard capacity of a belly dump is approximately 18-20 cubic yards.
- One Cubic Yard = 1.5 Tons (approximate)

Most negotiated material sales and all competitive sales require a business license, proof of insurance and a performance/reclamation bond. The bond will be refunded if all the terms of the sale contract are observed.

What happens when the material sale expires?

If you have met all the terms of the material sale contract, any bond will be refunded. If terms of the contract have been violated, penalties may be assessed against you. If you need to purchase more material, a new application must be submitted and processed by DNR in order to issue a new material sale contract.

Authority:

The applicable State statute and regulations include, but are not limited to: AS 38.05.110-120 and 11 AAC 71.

Where do I apply?

Material sale applications are available from and may be submitted to any of the DNR offices listed below.

DNR Public Information Center
550 West 7th Avenue, Suite 1260
Anchorage, AK 99501-3557
Phone: 907-269-8400
Fax: 907-269-8901

DNR Public Information Center
3700 Airport Way
Fairbanks, AK 99709-4699
Phone: 907-451-2700
Fax: 907-451-2706

DNR Public Information Office
400 Willoughby Street, 4th Floor
Juneau, AK 99801
Phone: 907-465-3400
Fax: 907-586-2954

Helpful Hints to Speed Processing

- Plan ahead; apply several months before you need to extract your material.
- If you have selected an existing material site used by the Department of Transportation and Public Facilities, obtain a written letter of non-objection from them and attach it to your application.
- If you will be applying for an extraction site within a wetland, river or stream you will need to contact the U.S. Army Corps of Engineers and the Department of Fish & Game Office of Habitat Management & Permitting (OHMP)

U.S. Army Corps of Engineers
Anchorage - 907-753-2712
Outside Anchorage - 1-800-478-2712
Fairbanks - 907-474-2166
Juneau - 907-790-4490

DF&G - OHMP

<http://www.habitat.adfg.alaska.gov>
Anchorage - 907-267-2342
Fairbanks - 907-459-7289
Juneau - 907-465-4105

27-LS0334B
Bullock
3/11/11

CS FOR HOUSE BILL NO. 89()
IN THE LEGISLATURE OF THE STATE OF ALASKA
TWENTY-SEVENTH LEGISLATURE - FIRST SESSION

BY

Offered:
Referred:

Sponsor(s): REPRESENTATIVE SEATON

A BILL
FOR AN ACT ENTITLED

1 **"An Act relating to the disposal of certain bedload material in conjunction with a flood**
2 **mitigation plan."**

3 **BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:**

4 *** Section 1.** AS 38.05.872 is amended by adding new subsections to read:

5 (b) The commissioner may offer for disposal bedload material from an area
6 subject to a site-specific flood mitigation plan approved by the commissioner under
7 the terms in (c) of this section after making a finding that

8 (1) removal of the bedload gravel will offset future costs to the state
9 that are attributable to flood damage;

10 (2) the sale of the bedload gravel under (b) - (d) of this section at a cost
11 that may be below fair market value is in the best interests of the state; and

12 (3) removal of the bedload gravel will enhance the effectiveness of the
13 flood mitigation plan in preventing a flood or minimizing flood damage.

14 (c) A person, other than the state or federal government or a political

1 subdivision of the state, acquiring bedload material under a disposal authorized by the
2 commissioner under this section shall comply with the terms and conditions
3 established by the commissioner and pay to the department a royalty of not less than
4 12.5 percent of pretax profit calculated by subtracting from the value of the bedload
5 material the actual direct costs of extricating, loading, and transporting the material to
6 market, if applicable. The commissioner may adopt regulations that identify the
7 method and means for determining the value of the bedload material and the costs that
8 may be deducted for the purpose of calculating the amount to be paid to the state. In
9 this subsection, "value" means the sales price of the material in a bona fide arm's-
10 length transaction between unaffiliated parties or the sales price of the material had the
11 material been sold in a bona fide arm's-length transaction between unaffiliated parties.

12 (d) In this section, "bedload material" means gravel, rock, and other material
13 located below the plane of the ordinary high water mark or the mean high water mark
14 of a river, lake, stream, or other coastal water.

15 * **Sec. 2.** The uncodified law of the State of Alaska is amended by adding a new section to
16 read:

17 REVISOR'S INSTRUCTION. The revisor of statutes shall change the catch line of
18 AS 38.05.872 from "Disposition of state land for flood control projects" to "Disposition of
19 state land and material for flood mitigation."



Municipality of Skagway

GATEWAY TO THE KLONDIKE

P.O. BOX 415 SKAGWAY, ALASKA 99840

(PHONE) 907-983-2297 – Fax 907-983-2151

WWW.SKAGWAY.ORG

March 14, 2011

The Municipality of Skagway is in support of House Bill 89. This legislation is of vital importance to the river and coastal communities throughout the state of Alaska. Flood control is a Municipal responsibility and this legislation will allow communities to protect their infrastructure and in turn save money for the State.

Sincerely,

Thomas D. Cochran
Mayor
Municipality of Skagway, Alaska



City of Seward

P.O. Box 167
Seward, Alaska 99664-0167

Main Office (907) 224-4050
Facsimile (907) 224-4038

City of Seward, Alaska
1963 1965 2005



February 7, 2011

The Honorable Paul Seaton
Alaska Legislature
State Capitol
Juneau, AK 99801-1182

Re: House Bill 89

Dear Representative Seaton,

This letter is written in support of House Bill 89, an Act authorizing the Commissioner of Natural Resources to offer bedload material for disposal for flood control purposes in exchange for a percentage of the profit from the sale of that material. On behalf of the City of Seward, please accept our thanks for your sponsorship of this important legislation.

As you are aware, removal of gravel from alluvial streams is essential for successful flood mitigation efforts. In many cases, however, the removal of bedload material does not occur because of the cost of removing gravel. This is a cost that increases when we remove bedload gravel from navigable streams. In those instances, our community pays twice; we pay a contractor to remove the gravel and then we also pay a royalty to the State for the gravel.

Your legislation makes it more affordable for a community to remove gravel from navigable streams for flood mitigation purposes. This is because contractors have an opportunity to profit from sale of the gravel thus reducing or eliminating the amount we would pay to the contractor. House Bill 89 also provides superior value to the State for its gravel resources. The value to the State is from better flood protection for its citizens and the receipt of 12.5% of the pretax profit when the gravel is sold or used by the local government or contractor. Arguably, this is greater value than that offered by the current policy of a set royalty for each cubic yard of gravel.

Please make our support of House Bill 89 a matter of the official record. Let us know if you need additional testimony to support this important legislation.

Sincerely,

A handwritten signature in cursive script, appearing to read "Willard E. Dunham".

Willard E. Dunham
Mayor
City of Seward

A handwritten signature in cursive script, appearing to read "Phillip E. Oates".

Phillip E. Oates, DBA
City Manager
City of Seward

Introduced by: Mayor
Date: 02/15/11
Action: Adopted
Vote: 9 Yes, 0 No, 0 Absent

**KENAI PENINSULA BOROUGH
RESOLUTION 2011-010**

**A RESOLUTION SUPPORTING ENACTMENT OF HOUSE BILL 89 AUTHORIZING
THE DEPARTMENT OF NATURAL RESOURCES COMMISSIONER TO OFFER
BEDLOAD MATERIAL FOR FLOOD CONTROL PURPOSES IN EXCHANGE FOR A
PERCENTAGE OF THE PROFIT FROM THE SALE OF THAT MATERIAL**

WHEREAS, flooding is a serious problem in the Seward-Bear Creek area, where at least six major flooding events have occurred since 1986, causing millions of dollars in damage to private and public properties and infrastructure; and

WHEREAS, the Seward-Bear Creek area is subject to alluvial fan flooding hazards including high velocity floodwaters which can cause tremendous erosion, and carry large amounts of sediment and debris which fill stream beds and allow floodwaters to spread widely, threatening development over a broad area; and

WHEREAS, one problem encountered in mitigating losses from flooding that the borough, the City of Seward and the Seward-Bear Creek Flood Service Area ("SBCFSA") have attempted to address is the charge imposed by the State for gravel removed from stream beds under navigable water which rendered the level of removal needed infeasible due to the horrendous cost; and

WHEREAS, following the work of the flood plain task force established by the assembly in resolution 2009-005 a summit was held during October 2010 in Seward to bring the various involved parties together including the Department of Natural Resources ("DNR"), the City of Seward, the borough administration, the SBCFSA representatives, representatives from the Matanuska-Susitna Borough, the Corps of Engineers and other agencies; and

WHEREAS, one proposal presented at that summit was to support revisions to state statutes that would give the DNR commissioner the discretion to offer bedload material for disposal for flood control purposes in exchange for a percentage of profit from the sale of the material instead of a fixed permit fee; and

WHEREAS, Representative Seaton is sponsoring House Bill no. 89 which would amend AS 38.05.872 to grant such discretion to the commissioner; and

WHEREAS, support of House Bill 89 is consistent with the short term mitigation measures and goals of the SBCFSA Flood Hazard Mitigation Plan (May 2010); and

WHEREAS, support of House Bill 89 is consistent with section 2.12 Flood Mitigation Strategy 4 of Chapter 2.0 of the KPB All Hazard Mitigation Plan;

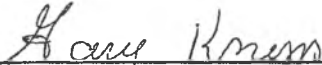
NOW, THEREFORE, BE IT RESOLVED BY THE ASSEMBLY OF THE KENAI PENINSULA BOROUGH:

SECTION 1. That the assembly supports HB 89 in its current form, which would grant the Department of Natural Resources Commissioner the discretionary authority to sell bedload material for flood control purposes from state land in exchange for a royalty based on a percentage of the pretax profit derived from the sale of such material.

SECTION 2. That copies of this resolution shall be forwarded to the Borough's Legislative Delegation Senators Cathy Giessel, Al Kookesh, Thomas Wagoner, and Gary Stevens, and Representatives Alan Dick, Mike Hawker, Kurt Olson, Mike Chenault, and Paul Seaton.

SECTION 3. That this resolution takes effect immediately upon its adoption.

ADOPTED BY THE ASSEMBLY OF THE KENAI PENINSULA BOROUGH THIS 15TH DAY OF FEBRUARY, 2011.



Gary Knopp, Assembly President

ATTEST:

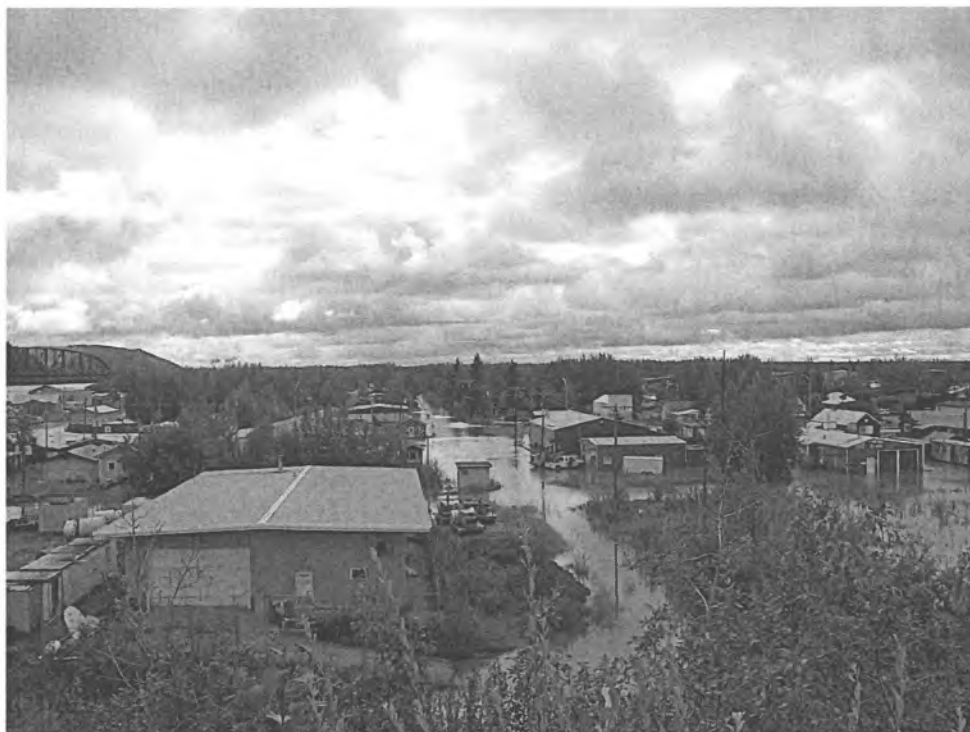


Johni Blankenship, Borough Clerk



Yes: Haggerty, Johnson, McClure, Murphy, Pierce, Smalley, Smith, Tauriainen, Knopp
No: None
Absent: None

ALASKA
Weather-Related Disasters
1978 – 2008



State of Alaska
Department of Military and Veteran Affairs

Prepared by

**Division of Homeland Security
& Emergency Management**

December 2008

**STATE OF ALASKA
WEATHER-RELATED DISASTERS
1978-2008**

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Figure 1 2006 Bering Strait Storm

Introduction

The purpose of this paper is to provide the reader with an overview of the weather-related disasters that have affected Alaska between 1978 and 2008, and provide a basis for long term analysis of costs and affected areas. It does not provide a scientific basis of the underlying causes of the disasters, merely time periods in which they have occurred and the geographical locations.

The purpose of the Disaster Cost Index is to establish a summary of State funds expended on disaster relief since the creation by the Alaska legislature of the Division of Emergency Services (DES). Much of the information found in the index is available through other sources. The intention of this index is to bring this information together into a single resource in order to provide the user with an immediate and ready reference regarding the cost of disasters in Alaska.

From 1978 to 2008 there have been two hundred and twenty six declared disasters in the State of Alaska. One hundred and forty-six of those have been weather-related, representing 65% of all disasters. Total costs as of this date are \$284,993,192.00. The state costs have been \$106,474,936.00 and Federal Emergency Management Agency (FEMA) costs have totaled \$178,518,256.00, or 63 percent.

The following is a summary of each of the weather-related disasters with a brief narrative explaining the circumstances leading to the Declaration. The cost identified in each disaster is based on the financial data found in Disaster Cost Index worksheet (DCI) maintained by the Department of Military and Veterans Affairs (MVA), Division of Homeland Security Emergency Management section (DHS & EM). Other costs may have been incurred by other departments within the State, non-State agencies, local, federal or volunteer agencies, but may not have been reported and are not included in the DCI data.

Information identified in the narratives has been compiled from the DCI, borough and State disaster declarations, numerous papers and other analysis prepared by the Individual Assistance, Public Assistance (IA/PA) and Operations sections of the Homeland Security Division, Alaska Department of Transportation, Department of Natural Resources and a variety of other sources.

Section I

Weather-related Disasters, 1978 – 2008

78-01. Village of Karluk, January 21, 1978

As a result of a winter storm which struck Kodiak Island, wind driven waves broke over the top of a spit in Karluk and ultimately cut a channel through the spit. The storm destroyed a bridge connecting the mainland portion of the village with the spit, and thus isolated the only store and the post office from the rest of the community. The waves also washed away a 10,000 gallon fuel storage tank which provided the village's only fuel supply, and destroyed all but about 1,500 gallons of fuel. Loss of electric power destroyed frozen food stocks in the store and the owner subsequently went out of business. The loss of the bridge prevented some school children from walking from their homes to school, and in addition the new channel formed by the storm undercut the bank and threatened the village's community hall and an RCA antenna, as well as two private residences. In response to this disaster emergency, the State provided public assistance to restore the bridge and replace the village's fuel storage facility. A number of threatened houses were moved to safer locations. The Corps of Engineers (COE) conducted bank stabilization operations which alleviated the threat to the community hall and RCA antenna. Total State costs were \$171,573.00.

78-02. Campbell Creek (Anchorage), February 10, 1978

On this occasion the Governor proclaimed a disaster emergency as a result of flooding and glaciations in the south fork of Campbell Creek in Anchorage which affected an area bounded by East 80th Avenue, Spruce Avenue, Lake Otis Parkway, and Abbott Loop Road, threatening a number of homes in the area with water and ice, and contamination of surface and subsurface water. Public assistance was provided through private contractors and resources of the Alaska Department of Transportation (DOT) in order to thaw the stream bed and allow the water to flow and to remove the ice which had overflowed the creek's bank. Most of the property owners in the area were insured, and thus no form of assistance to individuals and families was necessary. Total State costs were \$10,811.00.

78-03. Wrangell/Craig, November 6, 1978

The governor declared a disaster due to an intense storm that occurred in the Wrangell/Craig area in southeastern Alaska. The storm generated high winds, torrential rains and heavy sea waves. The storm caused considerable damage to both private and public property in the two communities. Subsequent to the Governor's Proclamation of Disaster Emergency, Department of Emergency Services (DES) provided both public assistance and assistance to individuals and families to assist the communities in recovering from the disaster. The US Small Business

Administration (SBA) made disaster loans available to affected businesses and homeowners. Total State costs were \$392,000.00.

79-04. Matanuska-Susitna Borough, February 9, 1979

As a result of a winter storm generating high winds and drifting snow, many roads in the Matanuska-Susitna Borough were rendered impassable to all traffic, including emergency vehicles. DOT was tasked by DES and public assistance was provided to clear the roads. The Alaska National Guard conducted rescue operations to provide assistance to isolated and stranded individuals. Subsequent to the governor's request, the SBA made disaster loans available to some 44 residents and 24 businesses which suffered damage as a result of the storm. The State did not make any direct grants to individuals or families. Total State costs were \$50,000.00.

80-06. West Coast Storm, November 23, 1979

A major sea storm on the west coast of Alaska caused extensive damage in 14 villages in the area. The governor proclaimed a disaster emergency effective from Sheldon Point to Togiak. At the request of the Governor, the SBA authorized disaster loans to affected individuals and businesses, and the State provided grants to individuals and families as well as some public assistance related to a fuel spill at Togiak. Total State costs were \$121,352.00.

80-07. Willow Creek, December 20, 1979

Abnormal weather conditions, caused by a combination of extreme debris jams, abnormal temperature variations and glaciations caused flooding of Willow Creek in the Matanuska-Susitna Borough, rendering roads in the area impassable and threatening homes. Total State costs were \$20,118.00.

80-08. Kodiak Island, February 5, 1980

The governor proclaimed a disaster emergency subsequent to an intense winter storm which caused extensive damage to public and private properties on Kodiak Island during January and February of 1980. The storm caused damage to port facilities, docks and shoreline roadways in Kodiak, harbor facilities at Port Lions and Ouzinkie, and breakwaters at Old Harbor and Akhiok. On the day of his proclamation, the governor requested that the president declare a major disaster in the area, but after an onsite inspection by officials of FEMA, this request was denied. The State provided disaster assistance for repair of the damaged public facilities. No grant assistance was provided to individuals and families. Total State costs were \$171,771.00.

80-09. Anchorage Windstorm, April 4, 1980

The governor proclaimed a disaster emergency subsequent to a hurricane force windstorm which caused damage to over 5,000 residences and businesses in the Anchorage area and parts of the Matanuska-Susitna Borough. Though most of the residents were insured against their losses, the State provided a number of

Individual and Family Grants and temporary housing, as well as public assistance to the Municipality. In addition, the SBA made disaster loans available to affected individuals. Total State costs were \$461,448.00.

81-10. Bristol Bay, September 2, 1980

Following a storm which generated high winds and heavy sea waves causing damage to the equipment of numerous commercial fishermen, canneries and approximately 15 to 20 private houses, the governor proclaimed a disaster emergency extending from Dillingham to Port Heiden. The State provided both public assistance to communities and grants to individuals and families while the SBA provided disaster loans to residents of the area. In addition, the State provided temporary housing assistance to one resident who was forced to relocate due to damage to his home. Total State costs were \$113,083.00.

81-11. Copper Center, December 11, 1980

A disaster emergency was proclaimed as a result of flooding of the Klutina River at Copper Center due to extreme cold temperatures combined with lack of snow insulation and a high volume of water flow in the river. All structures in the area were threatened, including the Fire Hall. Public assistance was provided by DES to alleviate the situation and prevent damage. Major portions of the Disaster Relief Funds were provided to the DOT for the purpose of conducting drainage operations and performing the work necessary to recommence the normal operations. Total State costs were \$13,168.00.

82-13. South Central Alaska Rainstorm, July 22, 1981

A torrential rainstorm resulted in widespread flooding, stream overflow and damage to bridges and culverts in south central Alaska. This condition made travel hazardous throughout the region and in some cases roads were impassable to all traffic, including emergency vehicles. The governor's proclamation of a disaster emergency enabled DES to provide the affected communities with immediate recovery assistance, resulting in the restoration of the area's transportation system. No direct assistance was provided to individuals and families. Total State costs were \$275,013.00.

82-15. Fort Yukon, May 17, 1982

In May of 1982, ice jams, excessive stream flow and abnormal temperature variations resulted in flooding in the community of Ft. Yukon located at the juncture of the Porcupine and Yukon Rivers. The flood resulted in extensive damage to public and private property and forced the temporary dislocation of several hundred residents. The governor's proclamation of a disaster emergency enabled DES to draw on the Disaster Relief Fund to provide both public assistance and grants to individuals and families. In addition to State assistance, SBA made disaster loans in the area and the American Red Cross provided assistance using the organizations' Disaster Relief Fund. Total State costs were \$811,323.00.

83-16. Russian Mission, October 1, 1982

During September of 1982, severe windstorms generating high waves caused extensive damage in the villages of Russian Mission, Akiak and Akiachak. The governor proclaimed a disaster emergency to exist in the three villages which allowed the State, through DES, to provide both public assistance and grants to individuals and families in the affected villages. Total State costs were \$141,324.00.

83-18. Kipnuk, April 1, 1983

During the winter of 1982, the bridge connecting the village of Kipnuk with the community school was damaged by high water and ice flows, and thus rendered unsafe for use. The governor's proclamation of disaster emergency enabled the State to provide public assistance in order to replace the bridge. At the time the DOT was able to provide a bridge that was surplus to its needs. Disaster Relief Funds were used to reimburse the Alaska National Guard for expenses incurred in transporting the bridge to the village. Total State costs were \$905.00.

83-19. Aniak, June 15, 1983

Flooding during spring breakup caused by ice jams and excessive stream flow resulted in damage to a public roadway and a number of public buildings in Aniak. Several families were forced to temporarily relocate due to high water. The governor's proclamation of a disaster emergency provided public assistance for the purpose of restoring the roadway to its pre-disaster condition. No assistance was provided for individuals and families. Total State costs were \$75,614.00.

84-21. Cordova, September 16, 1983

The governor proclaimed a disaster emergency after a flash flood generated by heavy rainfall destroyed portions of a pipeline system which provides the City of Cordova with approximately 60% of its water supply. Public assistance was provided for the purpose of repairing the city's water system. Total State costs were \$125,777.00.

84-23. Unalakleet, March 5, 1984

Extreme cold for a period of six to seven weeks caused a drastic reduction in the city water supply and eventual freezing of a major loop on the city's water system. Public assistance was granted to repair and replace portions of the water system. Total State costs were \$726,865.00.

84-24. Mountain Village, March 8, 1984

The circumstances were about the same as that in Unalakleet. Public assistance granted to repair and replace one loop of the city water system. Total State costs were \$986,427.00.

84-25. Elim, March 9, 1984

A reduction in water from the village source resulted in freezing and rupture in portions of the water and sewer system. Public assistance was granted to replace frozen portions of the water system and to assist in repairing service lines. Total State costs were \$384,588.00.

84-26. Kotzebue, April 30, 1984

The governor declared a disaster emergency after prolonged cold weather caused freezing and ruptures in the city water system. A public assistance categorical grant was awarded to replace damaged portions of the system. Total State costs were \$673,101.00.

84-28. Alakanuk, June 13, 1984

Flooding caused by an ice jam created extensive damage to the village road system. Subsequent to the governor's proclamation, the State awarded a categorical grant to the city to repair the roads. Total State costs were \$277,544.00.

84-29. Emmonak, June 15, 1984

The city requested disaster assistance to repair minor flood damage to a road. The State's categorical grant covered the cost of material to repair the road. The village provided manpower and equipment. Total State costs were \$22,884.00.

85-32. Southeast Alaska, November 26, 1984

A hurricane force windstorm and wind driven tides caused extensive damage to public and private property in five Southeastern Alaskan communities: Juneau, Sitka, Kake, Angoon and Tenakee Springs. The State provided public and individual assistance grants and temporary housing. SBA provided disaster loan assistance and the American Red Cross made grants to meet immediate needs of victims. The governor's request for a Presidential declaration was denied. Total State costs were \$958,519.00.

85-33. Haines, January 25, 1985

After prolonged and excessive rainstorms caused permanent damage to the city's sewer system, the governor proclaimed a disaster emergency to provide funds to repair the system through a categorical public assistance grant. Total State costs were \$1,581,506.00.

85-34. Savoonga, February 26, 1985

The Governor proclaimed a Disaster Emergency to repair damage caused by freezing to the village water and sewer system in Savoonga. A categorical grant provided funds to repair the system. Total State costs were \$255,954.00.

85-36. Buckland, May 30, 1985

Flooding of the Buckland River caused damage to public roads, plus public and private buildings in Buckland. The governor's declaration provided a State grant to repair public property. American Red Cross disaster relief programs gave assistance to individuals and families. Total State costs were \$83,585.00.

85-37. Kobuk, May 30, 1985

Ice moving through the village when the Kobuk River overflowed its banks caused damage to the city owned fuel storage and distribution center. The governor's declaration resulted in a categorical public assistance grant to repair the facility and replace lost fuel. Total State costs were \$17,979.00.

85-38. Anvik, June 5, 1985

Flooding of the Yukon River caused damage to city roads and private property. The governor's declaration provided a categorical grant to repair the roads. American Red Cross granted assistance to individuals and families. Total State costs were \$17,878.00.

85-39. Emmonak, June 11, 1985

The governor declared a disaster emergency after flooding caused damage to city roads. A categorical grant provided funds to assist in repairing the roads. Total State costs were \$72,832.00.

85-40. Pilot Station, June 18, 1985

Flooding of the Yukon River damaged several city owned buildings: a lodge, day care center, television station and warehouse. Subsequent to the governor's declaration, the State provided a categorical grant to repair these facilities. American Red Cross provided assistance for individuals and families. Total State costs were \$34,736.00.

85-41. Upper Kuskokwim River, June 18, 1985

The governor signed a combined declaration to assist the communities of McGrath, Sleetmute and Red Devil in repairing flood damage to roads. In McGrath and Sleetmute, categorical grants assisted in restoring the roads to pre-disaster condition. The community of Red Devil elected to utilize a flexible funding option to construct an alternate road in a less hazardous location. Total State costs were \$56,826.00.

86-42. Pitka's Point, July 9, 1985

Pans of river ice moving with flood waters destroyed the sewer leach field serving the village's safe water facility and elementary school. A public assistance grant provided funds to replace the leach field. Total State costs were \$12,740.00.

86-43. Bethel, July 10, 1985

High water accompanying breakup of the Kuskokwim River caused erosion damage at the city's petroleum dock and washout of fill at the end of the seawall.

Undercutting of river bank also threatened eight private residences. The governor's proclamation of a disaster emergency provided public assistance to replace fill at the petroleum dock and seawall end. The State also provided funds to relocate the endangered homes, with provision that the City of Bethel guarantee that the threatened property remain undeveloped. Total State costs were \$475,507.00.

86-45. Cordova, October 31, 1985

After heavy rains, a landslide destroyed water lines between Heney Creek catchment basin and the city. Disaster public assistance supported repair by the city. Total State costs were \$16,462.00.

86-47. Thorne Bay, December 5, 1985

Cold weather precipitated catastrophic failure of the city water system. The governor's declaration of disaster provided emergency assistance to restore water service and long term recovery assistance. Total State costs were \$258,512.00.

86-48. Metlakatla, December 10, 1985

Lack of rainfall in the generally rainy village reduced water levels to the point that the hydroelectric system could not generate sufficient power. Public disaster assistance provided supplemental generating capability with diesel generators. Total State costs were \$90,547.00.

86-49. Unalaska, December 13, 1985

A severe windstorm caused mudslides, road and port damage, and damage to public buildings. Public disaster assistance supplemented insurance settlements to assist in recovery. Total State costs were \$181,937.00.

86-52. Pelican, March 19, 1986

A windstorm destroyed the roof of the Pelican public school. DES provided emergency assistance to repair the roof. After the city received an insurance settlement, it reimbursed the State for the insured portion of the costs. Total State costs were \$18,024.00.

86-54. Napakiak, May 15, 1986

Severe bank erosion of the Kuskokwim River had reached a point where homes in Napakiak were in danger of falling in the river. The governor's disaster declaration provided funds to move seven houses to a safe location. Total State costs were \$15,000.00.

87-55. Arctic North Slope, September 25, 1986

FEMA also declared (DR-0781) on October 27, 1986. After an intense windstorm, generating wind driven tides and flooding, caused extensive damage to public property, the president declared a major disaster to assist the State and local

governments in recovering. Disaster totals were \$3,791,026.00. Total State costs were \$1,538,408.00. FEMA costs were \$2,252,618.00.

87-56. South Central Alaska Flood, October 12, 1986

FEMA also declared (DR-0782) on October 27, 1986. Record rainfall in South Central Alaska caused widespread flooding in Seward, Matanuska-Susitna Borough and Cordova. The president declared a major disaster implementing all public and individual assistance programs, including SBA disaster loans and disaster unemployment insurance benefits. Disaster totals were \$8,642,440.00. Total State costs were \$3,266,898.00. FEMA costs were \$5,375,542.00.

87-59. Kotzebue, February 5, 1987

Freezing of the municipal water system reduced supplies to a level that posed a threat to public health and safety, motivating the city to declare a local disaster. The corresponding State declaration allocated public assistance from the Disaster Relief Fund to repair the system. Total State costs were \$1,231,610.00.

87-60. Sleetmute/Red Devil, May 28, 1987

Ice jams caused flooding that inundating the Red Devil electric plant and tank farm, also causing damage to heavy equipment and power poles stored in Red Devil by the City of Sleetmute. The disaster declaration provided funds to repair or replace these items and to implement mitigation measures designed to prevent damage in future years. Total State costs were \$51,602.00.

87-62. Aniak, May 29, 1987

Flooding during breakup of the Kuskokwim River caused damage to the city dike, road system, waste dump and sewage lagoon. The city repaired these items using funds authorized by the governor's declaration of disaster emergency. Total State costs were \$993,861.00.

87-63. Buckland, June 16, 1987

Flooding damaged city roads and a number of private homes. Individual and family assistance was provided. Since flooding is frequent in Buckland, the State disaster declaration included funds to mitigate the impact of future events. Total State costs were \$203,548.00.

88-64. Richardson Highway, July 24, 1987

The governor declared a disaster after heavy rains washed out parts of the Richardson Highway. The declaration was required to obtain federal funds to repair the highway. No State funding was necessary. Cost data is archived at State of Alaska DOT.

88-70. Haines, February 29, 1988

The city experienced severe damage to streets from flooding and runoff triggered by extremely heavy rainfall. The State made available \$150,000.00 in disaster funds to assist in the repair of the city streets. Total State costs were \$78,590.00.

88-76. Crooked Creek, May 12, 1988

After flooding of the Kuskokwim River caused extensive damage to village roads, utilities, and homes, the governor declared a disaster providing public and individual assistance. Total State costs were \$133,230.00.

88-77. Napakiak/Napaskiak, May 24, 1988

Flood damage to roads in Napakiak and both roads and boardwalks in Napaskiak resulted in a declaration of disaster emergency. Total State costs were \$125,292.00.

88-78. Kaltag, May 26, 1988

Flooding of the Yukon River and tributaries washed out an essential bridge in the community of Kaltag. State disaster assistance provided funding to replace the bridge. Total States cost were \$28,883.00.

89-80. Shishmaref, August 5, 1988

In late July and early August a series of intense windstorms with sea surges caused extensive damage to the seawall and the erosion protection structure in the village of Shishmaref, leaving a number of critical public and private buildings subject to imminent damage. State disaster assistance provided funding to repair the damage. Total State costs were \$318,072.00.

89-83. Omega Block, January 28, 1989

The governor declared a Statewide disaster to provide emergency relief to communities suffering adverse effects of a record-breaking cold spell, with temperatures as low as -85 degrees. FEMA also declared (DR-0826) on May 10, 1989. The State conducted a wide variety of emergency actions which included: emergency repairs to maintain & prevent damage to water, sewer & electrical systems, emergency resupply of essential fuels & food, & DOT/PF support in maintaining access to isolated communities. Disaster totals were \$1,319,656.00. Total States costs were \$438,368.00. FEMA costs were \$881,288.00.

89-84. Northwest Arctic Borough, February 1, 1989

FEMA declaration (DR-0826) signed May 10, 1989. During the Omega Block cold spell, the City of Kotzebue and five other villages in the Northwest Arctic Borough suffered extensive permanent damage to water & sewer systems. The City of Buckland suffered a total loss of its electrical system. The governor declared a disaster to assist the Borough in making permanent repairs to these facilities. Disaster totals were \$4,974,908.00. Total State costs were \$1,301,941.00. FEMA costs were \$3,672,967.00.

89-85. St. George, February 9, 1989

A severe windstorm caused sinking of a landing barge used as a dock by the City of St. George. The incident resulted in a blockage of the port and a loss of the capability to offload essential supplies. The governor declared a disaster to provide assistance in recovering the barge. Disaster totals were \$229,853.00. Total State costs were \$59,255.00. FEMA costs were \$170,598.00.

89-86. Sand Point, February 27, 1989

After the Omega Block cold spell caused permanent damage to the water main serving the Sand Point boat harbor, the governor declared a disaster to provide assistance in repairing the line and restoring services. Disaster totals were \$23,062.00. Total State costs were \$6,888.00. FEMA costs were \$16,174.00.

89-87. Ahkiok, March 2, 1989

The governor declared a disaster to assist the village of Ahkiok in replacing its electrical power generating plant, which had experienced irreparable damage caused by prolonged cold weather. Disaster totals were \$45,937.00. Total State costs were \$14,006.00. FEMA costs were \$31,931.00.

89-88. North Slope Borough, March 8, 1989

On February 24-28, 1989, a severe winter storm caused extensive damage to public and private property in North Slope Borough villages. The governor's declaration of disaster authorized public, individual & family assistance in recovering. Total State costs were \$113,364.00.

89-90. Galena, April 20, 1989

Declared as a result of the Omega Block Cold Spell (temperatures to -85 in Galena), which caused extensive damage to water and sewer utilities in Galena. Disaster totals were \$175,124.00. Total State costs were \$45,859.00. FEMA costs were \$129,265.00.

89-91. Glennallen, May 6, 1989

Ice damaged a bridge across Moose Creek, preventing access to the community sewage lagoon and a small subdivision. The declaration of disaster funded replacement of the bridge. Total State costs were \$15,000.00.

89-92. Circle, May 6, 1989

Flooding of the Yukon River in Circle during Spring Breakup of 1989 caused damage to public and private property. The disaster was eventually included in the presidential declaration. Total State costs were \$196,657.00.

89-93. Ft. Yukon, May 6, 1989

Flooding of the Yukon River, occurred one day after the Circle flood, was also included in the presidential declaration. Total State costs were \$194,812.00.

89-94. Spring Floods, June 10, 1989

Presidential declaration of major disaster (FEMA, DR-0832) incorporated sixteen local declarations and applied to all communities on Yukon, Kuskokwim and Kobuk rivers and their tributaries. It provided public and individual assistance to repair damage. Disaster totals were \$4,739,881.00. Total State costs were \$1,507,050.00. FEMA costs were \$3,232,831.00.

90-95. Klawock, June 19, 1989

A heavy fall rainstorm washed substantial materials into the city's water reservoir. This reduced capacity to the extent that during the following summer water shortages threatened health and safety and economic losses due to closure of a local fish hatchery. The disaster declaration funded restoration of the reservoir to its original, pre-disaster capacity. Total State costs were \$9,927.00.

90-96. Fairbanks North Star Borough, August 1, 1989

Flash flooding along the Tanana River in the borough caused damage to public and private property. The governor's declaration authorized public and individual disaster assistance. Total State costs were \$65,640.00.

90-97. Mat-Su Borough, August 4, 1989

The governor declared a disaster to mitigate a flood threat caused by high water in the Matanuska River and placed the Old Glenn Highway and private residences along the river at risk. Funding was applied towards construction of an earthen and gravel dike. Total State costs were \$358,772.00.

90-98. Whittier, August 8, 1989

Disaster was declared to provide funding to DOT/PF to repair the breakwater to the small boat harbor in Whittier, which was at risk of imminent collapse, threatening damage to the harbor itself and large numbers of privately owned boats. Total State costs were \$634,103.00.

90-99. Municipality of Anchorage, August 30, 1989

The Declaration addressed widespread damage caused by heavy flooding along the drainage systems within the municipality. State assistance was limited to public property damage, although the federal SBA implemented its Disaster Loan Programs for businesses and homeowners. Total State costs were \$2,261,615.00.

90-100. Seward/Kenai Peninsula Borough, August 30, 1989

This declaration relates to the same storm and flooding incident that affected Anchorage. Primary area of damage was in the City of Seward. As in Anchorage,

State disaster assistance was limited to public property damage, with SBA loans available for individuals and businesses. Total State costs were \$529,552.00.

90-101. Richardson Highway, September 13, 1989

The same torrential rains that impacted Anchorage and the Kenai Peninsula Borough caused extensive damage to the Richardson and Copper River Highways. The governor's declaration enabled DOT/PF to apply for and receive emergency assistance through the Federal Dept. of Transportation. No State disaster funds were expended as a result of this declaration. Cost data archived with State DOT.

90-108. Moose Feeding Project, March 28, 1990

Record snow depths in interior Alaska resulted in a situation where moose, unable to walk to areas of their natural feeding, were starving to death or browsing along the cleared railway, where they were killed by trains. To prevent catastrophic loss of the moose population, the Governor declared a disaster. Funding provided under the declaration supported the clearing of trails and provision of alternative supplies of food. Total State costs were \$196,522.00.

90-111. '89 Spring Floods Hazard Mitigation, April 14, 1990

The Major Disaster Declaration by the President in response to Statewide flooding in the spring of 1989 authorized the commitment of federal funds to projects designed to mitigate flood damage in future years. Since the federal funding required a State matching share, the governor declared a disaster to provide these funds and authorize their expenditure. Disaster totals were \$619,828.00. Total State costs were \$291,356.00. FEMA costs were \$328,472.00.

90-112. Snow & Ice Removal, 1990

Because of record snowfalls in south central Alaska, the legislature appropriated a special grant to local governments affected in order to supplement normal snow and ice removal budgets. The legislature directed that funds be managed by the Division of Emergency Services. No Disaster Declaration occurred. Total State costs were \$2,000,000.00.

90-113. McGrath, May 16, 1990

Ice jam flooding washed out an extensive section of Cranberry Ridge Road. The disaster declaration provided funds for repair of the road and for mitigation to prevent a recurrence of the same event in the future. Total State costs were \$39,409.00.

90-114. Kobuk, May 17, 1990

Ice jam flooding threatened the City of Kobuk to the extent that the local government requested State assistance in evacuating the community. The governor's declaration of disaster authorized this assistance. Total State costs were \$6,153.00.

90-117. Bethel, July 2, 1990

Abnormally high water in the Kuskokwim River during breakup and continuing for an extended period after breakup resulted in scouring of toe material along the Bethel bulkhead, dislocation of the pipe pilings that form the bulkhead, and loss of material behind these pilings. The disaster declaration supported repair of the bulkhead and placement of riprap material along the toe of affected sections. Total State costs were \$600,176.00.

91-119. Cold Weather Hazard Mitigation, 1990

The Presidential Declaration of Major Disaster for the Omega Block cold spell of January and February 1989 authorized federal funds for mitigation of cold weather damage in future events. The governor's declaration of disaster provided the State matching funds required for obtaining and using this federal money. Disaster totals were \$556,754.00. Total State costs were \$291,769.00. FEMA costs were \$264,985.00.

91-120. Lower Kuskokwim, September 4, 1990

A severe storm compounded by high tides caused extensive flooding in coastal communities of the Kuskokwim and Bristol Bay areas and along the lower Kuskokwim River. The flooding caused damage to both public and private property. The disaster declaration authorized assistance to local governments, individuals and families affected by the flooding. Total State costs were \$835,297.00.

91-121. Kotzebue, September 4, 1990

An unseasonable storm and wind driven tides damaged public and private property in Kotzebue and surrounding traditional use areas. The governor's declaration of disaster provided assistance to the City of Kotzebue and to individuals and families. Total State costs were \$328,845.00.

91-122. Nome, September 10, 1990

An unseasonable sea storm caused the sinking and destruction of a transfer barge owned by the City. As a result the City was unable to receive essential goods that are customarily transported by sea. In addition the debris presented a hazard jeopardizing the structural integrity of the Nome causeway. Total State costs were \$105,000.00.

91-123. Teller, September 10, 1990

A storm on the Bering Sea caused major damage to the wood cribbing/gabion breakwater. Total State costs were \$173,723.00.

91-125. Diomedes, November 21, 1990

A severe early winter storm with waves up to 25 feet destroyed several fuel storage facilities. The resultant loss of critically needed petroleum products along with other equipment required the declaration of disaster. Total State costs were \$622,594.00.

91-127. Togiak, February 8, 1991

An electrical failure lasting four days, combined with extreme cold temperatures, caused damage to the municipal water system. Plumbing and heating systems of public buildings were also damaged. Disaster assistance supported emergency work and permanent repair work. Total State costs were \$51,384.00.

91-128. Larsen Bay, February 14, 1991

Abnormal freezing conditions affected the City's water system, interrupting service to approximately fifty percent of the residents. The governor's declaration of disaster enabled the City to obtain equipment and labor needed to restore service. Total State costs were \$20,000.00.

91-132. Fairbanks/North Star Borough, May 30, 1991

Governor declared May 3-23, 1991 and FEMA declared May 30, 1991 due to flooding. Record snowfalls in the interior combined with sudden spring melt, caused flooding all along the Yukon and Kuskokwim River systems. Numerous State Declarations were combined into a single presidential declaration of major disaster (FEMA-0909-AK) that authorized assistance for repair of public property only. State Disaster Relief Funds were used to implement the Individual and Family Grant Program in all of the communities included in the federal declaration. Disaster totals were \$1,664,378.00. Total State costs were \$1,001,092.00. FEMA costs were \$663,286.00.

91-133. Aniak, May 30, 1991

Governor declared May 3-23, 1991; and FEMA declared May 30, 1991. Record snowfalls in the interior combined with sudden spring melt caused flooding all along the Yukon and Kuskokwim River systems. Numerous State declarations were combined into a single presidential declaration of a major disaster (FEMA-0909-AK) that authorized assistance for repair of public property only. State Disaster Relief Funds were used to implement the Individual and Family Grant Program in all of the communities included in the federal declaration. Disaster totals were \$550,089.00: Total State costs were \$319,423.00; FEMA costs were \$230,666.00.

91-134. McGrath, May 30, 1991

Governor declared May 3-23, 1991; and FEMA declared May 30, 1991. Record snowfalls in the interior combined with sudden spring melt caused flooding all along the Yukon

and Kuskokwim River systems. Numerous State declarations were combined into a single presidential declaration of major Disaster (FEMA-0909-AK) that authorized assistance for repair of public property only. State Disaster Relief Funds were used to implement the Individual and Family Grant Program in all of the communities included in the federal declaration. Disaster totals were \$608,391.00. Total State costs were \$310,320.00. FEMA costs were \$298,071.00.

91-135. Red Devil, May 30, 1991

Governor declared May 3-23, 1991; and FEMA declared May 30, 1991. Record snowfalls in the interior combined with sudden spring melt caused flooding all along the Yukon and Kuskokwim River systems. Numerous State Declarations were combined into a single Presidential Declaration of Major Disaster (FEMA-0909-AK) that authorized assistance for repair of public property only. State Disaster Relief Funds were used to implement the Individual and Family Grant Program in all of the communities included in the federal declaration. Disaster totals were \$239,953.00. Total State costs were \$109,574.00. FEMA costs were \$130,379.00.

91-136. Anvik, May 30, 1991

Governor declared May 3-23, 1991; and FEMA declared May 30, 1991.. Record snowfalls in the interior combined with sudden spring melt caused flooding all along the Yukon and Kuskokwim River systems. Numerous State declarations were combined into a single presidential declaration of major disaster (FEMA-0909-AK) that authorized assistance for repair of public property only. State Disaster Relief Funds were used to implement the Individual and Family Grant Program in all of the communities included in the federal declaration. Disaster totals were \$181,700.00. Total State costs were \$139,729.00. FEMA costs were \$41,971.00.

91-137. Grayling, May 30, 1991

Governor declared May 3-23, 1991; and FEMA declared May 30, 1991. Record snowfalls in the interior combined with sudden spring melt caused flooding all along the Yukon and Kuskokwim River systems. Numerous State declarations were combined into a single presidential declaration of major disaster (FEMA-0909-AK) that authorized assistance for repair of public property only. State Disaster Relief Funds were used to implement the Individual and Family Grant Program in all of the communities included in the federal declaration. Disaster totals were \$78,630.00. Total State costs were \$75,061.00. FEMA costs were \$3,569.00.

91-138. Emmonak, May 30, 1991

Governor declared May 3-23, 1991; and FEMA declared May 30, 1991. Record snowfalls in the interior combined with sudden spring melt caused flooding all along the Yukon and Kuskokwim River systems. Numerous State declarations were combined into a single presidential declaration of a major disaster (FEMA-0909-AK) that authorized assistance for repair of public property only. State Disaster Relief Funds were used to implement the Individual and Family Grant Program in all of the communities included

in the federal declaration. Disaster totals were \$398,246.00: Total State costs were \$206,702.00. FEMA costs were \$191,544.00.

91-139. Holy Cross, May 30, 1991

Governor declared May 3-23, 1991; and FEMA declared May 30, 1991. Record snowfalls in the interior combined with sudden spring melt caused flooding all along the Yukon and Kuskokwim River systems. Numerous State declarations were combined into a single presidential declaration of a major disaster (FEMA-0909-AK) that authorized assistance for repair of public property only. State Disaster Relief Funds were used to implement the Individual and Family Grant Program in all of the communities included in the federal declaration. Total State costs were \$20,265.00.

91-140. Alakanuk, May 30, 1991

Governor declared May 3-23, 1991; and FEMA declared May 30, 1991. Record snowfalls in the interior combined with sudden spring melt caused flooding all along the Yukon and Kuskokwim River systems. Numerous State declarations were combined into a single presidential declaration of major disaster (FEMA-0909-AK) that authorized assistance for repair of public property only. State Disaster Relief Funds were used to implement the Individual and Family Grant Program in all of the communities included in the federal declaration. Disaster totals were \$210,506.00. Total State costs were \$155,472.00. FEMA costs were \$55,034.00.

91-141. Shageluk, May 30, 1991

Governor declared May 3-23, 1991; and FEMA declared May 30, 1991. Record snowfalls in the interior combined with sudden spring melt caused flooding all along the Yukon and Kuskokwim River systems. Numerous State declarations were combined into a single presidential declaration of a major disaster (FEMA-0909-AK) that authorized assistance for repair of public property only. State Disaster Relief Funds were used to implement the Individual and Family Grant Program in all of the communities included in the federal declaration. Disaster totals were \$57,867.00. Total State costs were \$48,546.00. FEMA costs were \$9,321.00.

91-142. Galena, May 30, 1991

Governor declared May 3-23, 1991; and FEMA declared May 30, 1991. Record snowfalls in the interior combined with sudden spring melt caused flooding all along the Yukon and Kuskokwim River systems. Numerous State declarations were combined into a single presidential declaration of major disaster (FEMA-0909-AK) that authorized assistance for repair of public property only. State Disaster Relief Funds were used to implement the Individual and Family Grant Program in all of the communities included in the federal declaration. Total State costs were \$67,061.00.

91-144. Mat-Su Borough, July 18, 1991

Severe bank erosion near the Circle View Subdivision area along the Matanuska River destroyed one home and threatened several others, causing

the Mat-Su Borough to support either construction of emergency bank protection measures or relocation of homes. The governor's declaration authorized a loan of up to \$500,000.00 dollars to the Mat-Su Borough. The following year the legislature converted this loan to a grant. Total State costs were \$515,900.00.

92-149. New Koliganek, October 14, 1991

The village of New Koliganek sustained flooding which resulted in damage to a bridge and severe threat to public safety of residents. Immediate repair of the bridge was necessary in order to allow residents and school children to safely transit within the village. Total State costs were \$67,526.00.

92-150. Kodiak, November 2, 1991

Commencing on October 31, 1991, the City of Kodiak sustained severe damage and threats to life and property from heavy rains, flooding and landslides. The rains caused severe damage to the City's roads and buildings; and caused damage to homes, businesses and loss of personal property. Total State costs were \$1,564,957.00.

92-153. Eagle City, May 19, 1992

On May 13, 1992, the ice jam precipitating the Eagle Village flood moved down to the City of Eagle flooding some private property and destroying an erosion control structure along the river front street. Both the public assistance and individual assistance programs were implemented as well as the SBA disaster loan program. Total State costs were \$183,729.00.

92-154. Eagle Village, May 19, 1992

On May 12 through 13, the Native Village of Eagle was inundated by ice jam flooding causing the entire town to be evacuated to local high ground. Flood waters caused damage to a majority of the homes, eroded the river front street and caused damage to the clinic, Laundromat and tank farm. Both the public assistance and individual assistance programs were implemented as well as the SBA disaster loan program. Total State costs were \$61,147.00.

92-155. Galena, May 26-29, 1992

From May 26 through 29, 1992, both down town and up town Galena were flooded as a result of an ice jam at Bishop Rock several miles down stream of Galena. This was the third worst flood in recorded history for the community. Extensive damage to State road systems, City streets, electrical distribution system, sewage lagoon and the majority of homes in down town area resulted. Both the public assistance and individual assistance programs were implemented as well as the SBA disaster loan program. Total State costs were \$442,615.00. SBA data is archived and not available.

92-156. Flood Response, June 9, 1992

The Upper Yukon River drainage was experiencing the third worst snow melt flooding in recorded history according to the National Weather Service. The Declaration provided \$100,000.00 from the Disaster Relief Fund to cover DES expenses that began to occur as a result of the need to provide response activities and surveillance. A Reimbursement Service Agreement (RSA) was established with the Division of Environmental Quality, DEC to respond to and test for environmental contamination for assurance of public health. Total State costs were \$22,059.00.

92-157. Yukon River, June 17, 1992

A very late spring combined with above average snow packs in the Canadian and U.S. portions of the Yukon drainage resulted in post-breakup (snow melt) flooding of the Yukon River and its tributaries from Fort Yukon to Rampart. Flood waters rose slowly over a period of days and receded gradually. The North Pole area was also included in this declaration due to effects from the Chena drainage causing the ground water to rise. The high ground water was exacerbated by the activation of the Moose Creek Diversion Dam (COE). Major damage was sustained by both public and private property. The IFG program was implemented in Fort Yukon, Beaver, Stevens Village and North Pole. No Public Assistance was implemented for the North Pole area. Rampart received only public damage assistance. The Small Business Administration declared for the same geographic area and provided disaster loans. Total State costs were \$1,167,796.00. SBA costs are archived and not available.

93-160. Haines Highway, August 14, 1992

This disaster was declared in order for the State DOT/PF to request \$1.8 million in Federal Highway Administration emergency funds (under Title 23 U.S.C., Section 125) to repair damages relating to flooding of the Klehini River 30 miles north of Haines. No expenditure of state disaster relief funds was required. Total cost data maintained by Alaska DOT.

93-162. Nome Highway, October 5, 1992

On October 5, 1992, a major Bering Sea Storm with gale force winds impacted the Norton Sound Coast of the Seward Peninsula in Western Alaska, producing an unusually high storm surge tide and very large waves, particularly in the Nome area. The high tidal waves severely damaged two federal aide highways, isolating the mining community of Council and endangering the traveling public in the Nome area. DOT/PF requested emergency relief funds from the Federal Highway Administration. Total cost data maintained by Alaska DOT.

94-167. Prince of Wales Island, October 29, 1993

On October 29, 1993, funds were made available through emergency highway funding assistance to all roads on Prince of Wales Island eligible under the Department of Transportation Intermodal Surface Transportation Efficiency Act of 1991 (ICTEA)

provision due to heavy rains and numerous mud slides. Total cost data maintained by Alaska DOT.

94-168. Hazard Mitigation AK- 909, June 15, 1994

This is a pilot program in Ft. Yukon designed to confirm the need for long-range flood mitigation measures to prevent flooding. Disaster totals were \$356,765.00. Total State costs were \$190,765.00. FEMA costs were \$166,000.00.

94-169. McGrath, May 23, 1994

On May 23, 1994, a disaster declaration was signed for the City of McGrath due to flood damages to approximately 1,147 linear feet of Cranberry Ridge Road. This road provides access to three subdivisions consisting of two family homes, the community rifle range, the rock quarry, and the emergency air strip. Total State costs were \$170,999.00.

94-170. Galena, May 10, 1994

On May 10, 1994, the City of Galena sustained losses and threats to life and property resulting from flooding due to breakup. As a result of this disaster, roads and revetments suffered significant damage, and the sewer lagoon was breached. Total State cost was \$614,005.00.

95-171. Delta Junction, July 13, 1994

On July 13, 1994, Cummings Road was severely damaged by an overflow of waters from the Gerstle River. As a result of this disaster, families were isolated, which constituted a significant threat to the lives and safety of those individuals. Total State costs were \$38,810.00.

95-172. Matanuska River Erosion, July 1, 1994

On July 1, 1994, Matanuska-Susitna Borough sustained serious damage and threats to life and property resulting from erosion of the Matanuska River, in the vicinity of Circle View Estates. As a result of this disaster authority was granted under Alaska Statutes, Section 26.23.020 to loan \$500,000.00 from the Disaster Relief Fund to the Matanuska-Susitna Borough.

95-173. 1994 Fall Floods, August 26, 1994

Governor Hickle declared on August 26, 1994; with FEMA declaring (DR-1039) on September 12, 1994. The governor declared disaster emergencies for the communities of Kobuk, Kiana, and Kotzebue as a result of flood damage. As a result of this disaster, the conditions continue to create unprecedented losses of personal and public properties. The communities of Allakaket and Alatna had to be evacuated under emergency life-threatening conditions on Sunday, August 28, 1994; Hughes was also evacuated several days later. Active duty military assets (CH-47 Chinook helicopters) were used to evacuate Allakaket and Alatna. Guard assets were used to evacuate Hughes. Also affected by this disaster were the communities of Bettles and

Wiseman. Disaster totals, including flood mitigation and temporary housing, were \$72,621,533.00. Total State costs were \$11,175,573.00. FEMA costs were \$61,445,960.00.

95-174. Metlakatla, November 10, 1994

On November 10, 1994, the governor declared that a condition of disaster existed in Metlakatla as a result of high tides and storm-driven waves that threatened coastal sections. The Metlakatla Community Senior Citizens Center and a nearby drainage culvert under the public right-of-way were put at risk. Total State costs were \$31,863.00.

95-176. Yukon-Kuskokwim Delta, June 5, 1995

On June 5, 1995, the Governor declared a condition of disaster emergency existed in the Cities of Akiak, Kwethluk, Napaskiak, Emmonak, and Alakanuk, as a result of inundation. As a result of this disaster, roads, boardwalks, and other public works essential to vital community services were damaged. Total State costs were \$207,852.00.

95-177. Aniak, June 5 1995

On June 5, 1995, the Governor declared that a condition of disaster emergency existed in the City of Aniak, as a result of ice jam flooding of the Kuskokwim River and Aniak Slough. As a result of this disaster sections of Birch Road, Airport Boulevard, and the landfill access road were severely damaged. Total State costs were \$210,214.00.

95-178. Bethel Sinkhole Erosion, June 5, 1995

On June 5, 1995, the governor declared that a condition of disaster emergency existed in the City of Bethel, as a result of erosion during spring breakup. As a result of this disaster the face of the protective sea wall was damaged causing erosion under the city dock. This created and expanded sinkholes on the dock. Total State costs were \$128,861.00.

96-180. South Central Fall Floods, September 21, 1995

Governor Knowles declared on September 21, 1995; and FEMA declared (DR-1072) on October 13, 1996. The Governor declared a disaster as a result of heavy rainfall in south central Alaska and as a result the Kenai Peninsula Borough, Matanuska-Susitna Borough, and the Municipality of Anchorage were initially affected. On September 29, 1995, the governor amended the original declaration to include Chugach, and the Copper River Regional Education Attendance areas, including the communities of Whittier and Cordova and the Richardson, Copper River and Edgerton Highway areas. The areas suffered severe damage to numerous personal residences, flooding, eroding of public roadways, destruction and significant damage to bridges, flood control dikes and levees, water and sewer facilities, power and harbor facilities. On October 13, 1995, the president declared this event a major

disaster (AK-1072-DR) under the Robert T. Stafford Disaster Relief and Emergency Assistance Act. The total cost for this disaster is \$10,256,962.00. Total State costs were \$3,012,464.00. FEMA costs were \$7,244,498.00.

97-182. Southeast Storm (Pelican / Elfin Cove), September 25, 1996

On Wednesday, September 25, 1996 a severe storm struck Southeast Alaska causing severe damage to some of the communities in the area. The community of Pelican sustained erosion damage to temporary construction (sandbags) placed to curtail erosion on Pelican Creek. The storm also caused additional erosion around the bridge that crosses the creek. In Elfin Cove the landslide damaged electrical distribution lines to homes, disrupted telephone service to 12 homes and caused remaining telephones to operate off battery power. Two homes sustained damage. Also the trail which provided the only means of access between the two sides of town was damaged causing residents to commute from one side of town to the other by boat. The governor declared the area a disaster on November 1, 1996 due to the threat to life and property. The State total for this disaster is \$528,180.00.

98-185. Tanana/Copper River, June 19, 1997

Continuing heavy rains, glacial melt due to warm temperatures and glacial dam dumping in the Eastern Tanana and Northern Copper River Valleys produced unusually high volume of runoff. This caused severe flooding along the Taylor Highway, Alaska Highway, Nebesna Road, Tok Cutoff, Richardson Highway, Copper River Highway, and Northway Road. The Village of Northway was evacuated and several families remained in emergency housing for an extended period. All along these drainages, homes were flooded and public property was damaged. The total for this disaster is \$946,144.00.

98-186. Shishmaref Sea Storm, October 6, 1997

On October 6, 1997, under authority granted by the Alaska Statutes, Section 26.23.020, the governor declared a condition existed in the City of Shishmaref to warrant a disaster declaration in order to provide for assistance. An unusually early sea storm caused severe damage resulting in homes being eroded into tidewater and being destroyed. Additional federal assistance under the Federal Emergency Management Agencies Flood Mitigation Assistance Grant was provided to complete the move of additional damaged structures. In addition the Alaska Housing Finance Corporation provided housing assistance for the match to the federal assistance. The total for this disaster is \$1,462,788.00. Total State costs were \$662,788.00. FEMA costs were \$800,000.00.

98-188. Endicott Mountains Flood , June 18, 1998

On June 18, 1998, under the authority granted by the Alaska Statutes, Section 26.23.020, the governor declared a disaster existed in the cities of Allakaket and Huslia, the communities of Wiseman and Evansville and along the Dalton Highway between Coldfoot and Atigun Pass. Acute erosion and flash flooding caused damaged

to public infrastructures, fuel tank farms, private property, dikes and bridge abutment revetments. Only Public Assistance was granted. The total for this disaster is \$667,906.00.

98-190. Southeastern Storm, October 27, 1998

On October 27, 1998, the governor declared a disaster to exist in the communities of Haines and the City and Borough of Juneau for the purposes of accessing federal highway administration funds after the worst two-day rainfall in fifty years occurred in Southeast Alaska on October 19-20, 1998. Over 6 inches of rain fell within a 48-hour period. As a result, extensive damage to many road systems, public, private and non-profit properties was caused from mudslides and water erosion. On November 24, 1998, under the authority granted by Alaska Statute 26.23.020, the governor amended his declaration of disaster in the City and Borough of Juneau, the City and Borough of Haines, to include the Chilkat Indian Village (Community of Klukwan) in order for public (infrastructure) assistance to public property and individual and family grant assistance. The governor also requested that the SBA declare an administrative declaration for physical disaster damages to provide low interest loans to businesses and private property owners. The State total for this disaster is \$1,119,927.00.

00-191. Central Gulf Coast Storm, February 4, 2000

The disaster was declared February 4, 2000 by Governor Murkowski, followed by FEMA making declaration (DR-1316) on February 17, 2000. On Feb 4, 2000, the governor declared a disaster due to high impact weather events throughout an extensive area of the State. The State had been responding to the incident since December 21, 1999. The declaration was expanded on February 8, to include City of Whittier, City of Valdez, Kenai Peninsula Borough, Matanuska-Susitna Borough and the Municipality of Anchorage. On February 17, 2000, President Bill Clinton declared the event a disaster and warranted a major disaster declaration under the Robert T. Stafford Disaster Relief and Emergency Assistance Act, P.L. 93-288 as amended ("the Stafford Act"). On March 17, 2000, the governor again expanded the disaster area and declared that a condition of disaster exists in Aleutians East, Bristol Bay, Denali, Fairbanks North Star, Kodiak Island, and Lake and Peninsula Boroughs and the census areas of Dillingham, Bethel, Wade Hampton, and Southeast Fairbanks. Effective on April 4, 2000, Amendment No. 2 to the Notice of a Major Disaster Declaration, the Director of FEMA included the expanded area in the presidential declaration. The total for this disaster is \$15,661,340.00. Total State costs were \$3,269,479.00. FEMA costs were \$12,391,861.00.

01-196. Middle Yukon Flood, May 24, 2001

On May 31, 2001 Governor Knowles declared a disaster for the communities of Koyukuk and Nulato due to ice jams on the Yukon River. On May 24, 2001, ice jams at Last Chance and Nine-Mile Island caused flooding in Nulato and Koyukuk. The ice jam persisted for several days and floodwaters continued to rise until there was

little or no dry ground in the village of Koyukuk. Weather conditions were unseasonably cold, and windy. Both snow and rain showers exacerbated the human misery. As a precautionary measure to avoid attempting a crisis response on a long holiday weekend, 35 high-risk individuals were transported to Galena via helicopter. Able-bodied adults remained in town to minimize losses. Flooding occurred in the village of Nulato on the Yukon River. Homes sustained water damages inside of the structures. City-owned fuel tanks at the tank farm were unstable. Fuel intake heads were inundated and sustained damages. Water overtopped the public landfill. The State totals for this disaster were \$445,287.00.

02-198. Shishmaref Erosion, October 27, 2001

Winds and high tides combined to strike the Shishmaref coastline from October 5 through 7, 2001 and eroded inward as much as 50 feet. Some sections of the sand scarp were undercut as much as 16 to 20 feet due to the surf melting the underlying permafrost. In order to prevent further destruction of the coastline due to storms prior to tidewater freeze up, Governor Knowles issued Administrative Order No. 194 on October 27, 2001 which was not to exceed \$110K (including DES administrative costs). These Public Assistance funds were to be used to establish a sacrificial sandbag revetment to last through the storm season. The total State cost for this incident was \$87,859.00

02-200. '02 Interior Floods, May 29, 2002

Governor Knowles declared May 29 and FEMA Declared (DR-1423) June 26 2002. Flooding occurred in various interior and western Alaska river drainages including the Tanana, Kuskokwim, Nushagak, Susitna and Yukon River drainages beginning on April 27, 2002 and continuing. The floods caused widespread damage to and loss of property in the Fairbanks North Star Borough (Tanana River drainage); in McGrath, Lime Village, Sleetmute, Red Devil, Crooked Creek, Aniak and Kwethluk (Kuskokwim River drainage); Ekwok and New Stuyahok (Nushagak River drainage); in the Susitna River drainage from Chase to Montana Creek; and in Emmonak (Yukon River drainage). The following conditions existed as a result of this disaster: widespread damage to public facilities and infrastructure, including damage to public airports, roads, and buildings; to public utilities, including water, sewer, and electrical utilities; to personal residences, in some areas requiring evacuation and sheltering of residents; to commercial operations; and to other public and private real and personal property. Public and individual assistance was provided as well as the 404 Mitigation Program. Added: Date amended July 12, 2002 added Alakanuk to the State Declaration. Declaration date July 12, 2002 was also made for DOTPF to access Federal Highway Administration (FHWA) Emergency Relief Funds for damages to roads in the State. The total for this disaster is \$5,099,254.00. Total State costs were \$1,298,936.00. FEMA costs were \$3,800,318.00.

03-201. Northwest Fall Sea Storm, October 23, 2002

Coastal storm surge flooding occurred in communities on the Northwestern coast of Alaska commencing on October, 8, 2002. A fall sea storm with 18-20 foot seas, extremely high winds, and strong tidal action caused severe damage. This storm was caused by a low pressure system moving down from the Arctic Ocean and settling over the Chuckchi Sea and the Kotzebue Sound resulting in widespread damage and coastal flooding, including damage to public roads and other public real property. The Governor declared a disaster for the cities of Kotzebue and Kivalina in the Northwest Arctic Borough. On November 6, 2002, an amendment was made to the original declaration to include the community of Shishmaref. The Northwest Arctic Borough (NWAB) provided funds to the City of Kotzebue (\$10,000.00) and the City of Kivalina (\$5,000.00). NWAB was provided a grant to reimburse funds given to those communities. Shishmaref did not have any eligible damage or expenses. The total for this disaster was \$382,000.00.

03-202. Kenai Peninsula Borough, November 6, 2002

Disaster declared by Governor Knowles. Then FEMA declared December 4, 2002. FEMA amended the Declaration to extend the incident period to December 20th. Starting October 23, 2002 through November 12, 2002, heavy rains (from three inches to fifteen inches) caused widespread damage, school closures, road washouts and stranded residents and hunters throughout the Kenai Peninsula Borough, the Kodiak Borough and the Chignik Bay area, including Chignik Lake and Chignik Lagoon. The driving rain continued for an extended time frame with multiple storm fronts. Although damages were widespread, the Kenai Peninsula Borough received the most damages. Damages in the Kenai Peninsula Borough consisted of road washouts, culvert damages, bridge damage at several locations, and private home damages caused by overflowing rivers and streams. The Kodiak Borough damages included road washouts, culvert damages, river spike damage, and damages to a pier caused by sea surge. The Four Dam Pool Power Agency received damages to their facility. The Chignik Bay area, including Chignik Lake and Chignik Lagoon damage consisted of sea surge damage to docks and piers, damage to a fuel off-loading facility and dump truck, damage to a bridge in Chignik, and damage to the Department of Transportation, Chignik Lagoon Airport. The Kodiak Borough and Chignik Bay area also experienced private home damages. Federal Disaster Assistance for Individual Assistance, Debris Removal, Emergency Protective Measures and all categories of Permanent Work were provided under the Public Assistance Program. The total for this disaster is \$19,218,359.00. Total State costs were \$4,082,012.00. FEMA costs were \$15,136,347.00.

03-204. South Central Windstorm, March 28, 2003

Disaster declared by Governor Murkowski. Then FEMA declared April 26, 2003: A major windstorm with sustained and severe winds that exceeded 100 mph occurred between March 6 and March 14, 2003. The windstorm affected the Matanuska-Susitna Borough, the Municipality of Anchorage, and the Kenai Peninsula Borough. Severe damage occurred to numerous personal residences and local businesses; extensive

damage occurred to public facilities (i.e. schools, libraries, community centers, airports, buildings and utilities) in the Matanuska-Susitna Borough, Municipality of Anchorage and the Kenai Peninsula Borough. Although damages were widespread, Anchorage facilities received the most damages. Federal Disaster Assistance for Debris Removal, Emergency Protective Measures and all Permanent Work categories were approved under the Public Assistance Program. The total for this disaster is \$2,845,239.00. Total State costs were \$730,785.00. FEMA costs were \$2,114,454.00.

03-205. Salcha Flood, May 21, 2003

Disaster declared by Governor Murkowski. Warm temperatures in central Alaska triggered an ice blockage on the Tanana River. The subsequent flooding in the unincorporated community of Salcha impacted 100 homes and caused the evacuation of approximately 40 residents. Salcha is located in the jurisdictional boundaries of the Fairbanks North Star Borough (FNSB). Flooding began on April 29, 2003. Flood water continued to rise and fall through May 7, 2003 as the water volume changed and ice jams dislodged and reformed. An emergency shelter was opened by the American Red Cross at the Salcha School. The shelter was never used because displaced residents chose to stay with family and friends. The FNSB Emergency Manager requested assistance from the State; an Emergency Management Specialist was dispatched to assist. The Civil Air Patrol was used to gather reconnaissance photos of the ice blockages and flooded area. During the incident period, a community meeting was held to listen to residents' concerns. Participants included the Commissioner for the Department of Transportation, the Commander for the Army Corps of Engineers, and the Division of Emergency Management. Damages included residential homes, roads (local and State), culverts (local and State) and damage to a dike. Disaster Assistance for Debris Removal, Emergency Protective Measures and Permanent Work category C were approved under the State Public Assistance Program. No Federal disaster assistance was requested. Total State costs were \$426,048.00.

04-206. Riverine Flooding, August 15, 2003

Administrative Order 212 issued by Governor Murkowski. Heavy flooding during the period July 14, 2003 through August 3, 2003 caused damage to Department of Transportation roads and bridges, local businesses and some residential homes. The Denali Borough declared a local disaster and requested assistance from the State. An Emergency Management Specialist and Assistant were sent to assess damages. The Division of Emergency Services procured and provided 2,000 sandbags and 24 potable water containers to the Denali Borough for emergency response. The Department of Transportation damages included areas on the Chena Hot Springs Road, the Elliot Hwy, and the Parks Hwy at Honolulu Creek and Carlo Creek. Several businesses in the affected area were damaged. The American Red Cross responded to the area but residents did not require services. The Small Business Administration provided financial counseling to local residents and businesses. The Denali Borough's request for State assistance, beyond what was provided for emergency response, was denied by the governor. Disaster Assistance for Debris Removal, Emergency Protective Measures and

Permanent Work category C were approved under the State Public Assistance Program. No Federal disaster assistance was requested. Total State costs for this disaster was \$339,842.00.

04-207. '03 KPB Fall Flood, November 3, 2003

Disaster declared by Governor Murkowski. Unseasonable amount of rain during the period of September 26 through October 3, 2003 caused heavy flooding in the Lake and Peninsula Borough, the Kenai Borough and the Kodiak Island Borough. The Lake and Peninsula Borough declared a local disaster emergency. The Kenai Borough did not declare a disaster emergency but extended a letter of support for the Lake and Peninsula Borough declaration. The heavy rains resulted in localized flash flooding and some general flooding. The Department of Transportation experienced extensive damage on the Chiniak Hwy. in Kodiak and to multiple locations on the Williamsport-Pile Bay road in the Lake & Peninsula Borough and the Kenai Borough. The Department of Transportation requested emergency repair funds for the Chiniak Hwy; they used Statewide Transportation Improvement Program funds for the permanent repair. Other damage to Department of Transportation facilities included damage at Pedro Bay and South Naknek airports. The Department of Transportation used in-house and deferred maintenance funds to make repairs to the damages at the airports. The Tanalian Electric Cooperative in Port Alsworth experienced damage to overhead power lines resulting in power failures. Disaster Assistance for Emergency Protective Measures and Permanent Work category C were approved under the State Public Assistance Program. No Federal disaster assistance was requested. Total State costs for this disaster was \$240,310.00.

04-209. '03 Fall Sea Storm, January 29, 2004

Disaster declared by Governor Murkowski. A series of sea storms with high winds and tidal surge during the period of November 1 to November 24, 2003 caused damages in the communities of Unalakleet, Diomede, and Port Heiden. Damage was also reported by the Department of Transportation. The City of Unalakleet and Port Heiden declared local emergencies and Diomede requested assistance in a letter to the Division of Emergency Services. The Department of Transportation reported damages in Nome on the Nome-Counsel Road (MP 22 and 23.8) and at the Unalakleet airport. The City of Unalakleet had a large quantity of debris deposited throughout the road system. Damages to a gabion protection wall, roads and exposure of a water line were also experienced. Port Heiden experienced tidal erosion that exposed two grave sites, a power line and endangered a road. The US Air Force, under the coordination of the Division of Homeland Security and Emergency Management, addressed the issue of the two grave sites. Disaster Assistance for Emergency Protective Measures and Permanent Work category C for the City of Port Heiden, the Department of Transportation and Unalakleet, category F for Port Heiden and debris removal for Unalakleet were approved under the State Public Assistance Program. No Federal disaster assistance was requested. The total State cost for this disaster was \$526,966.00.

05-211. Bering Strait Sea Storm, October 28, 2004

Disaster declared by Governor Murkowski. FEMA declared (DR-1571) on November 15, 2004. Declaration amended to extend incident to October 24, 2004. Between October 18 and 20, 2004, a severe winter storm with strong winds and extreme tidal surges occurred along the Western Alaska coastline. Storms resulted in severe damage and threat to life and property, specifically in the Bering Strait Regional Educational Attendance Area (REAA), including Elim, Nome, Koyuk, Shaktoolik, Unalakleet, and other communities; in the Northwest Arctic Borough, including Kivalina, Kotzebue, and other communities; and in the City of Mekoryuk, with potentially unidentified damages in adjacent areas, and additional storm surges likely from continuing weather patterns in this area of Alaska. Conditions that existed in the coastal communities of the Northwest Arctic Borough as a result of this disaster included: severe damage to roadways, power distribution systems, and drain fields. Conditions that existed in the coastal communities of the Bering Strait REAA as a result of this disaster included: severe damage to gabions (used to protect shoreline), major damage to coastal highways and roads, damage to water and septic systems, damage to a bridge, damage to power distribution systems, damage to fuel storage tanks, fuel spills, and property damage. Conditions that existed in the City of Mekoryuk as a result of this disaster included: major damage to sea wall and damage to roadways. On November 16, 2004, the declaration was amended to reflect a more accurate timeframe of the disaster. The City of St. George appealed the denial of funding decision for the breakwater. The appeal was granted, which increased the original estimate for total funding of this disaster by more than \$3 million. The dates of the severe storm were changed to October 18 through October 24, 2004. The total costs for this disaster were \$19,848,326.00. Total State costs were \$5,738,503.00. FEMA costs were \$14,109,823.00.

05-212. Kaktovik Winter Storm, January 15, 2005

Disaster declared by Governor Murkowski. FEMA declared (DR-1584) on March 14, 2005. Over a week-long period beginning on January 7, 2005, a severe winter storm with extremely low temperatures, 60-knot winds, and blizzard conditions enveloped the coastal city of Kaktovik, Alaska. The high winds blew down several power lines and caused the backload and subsequent shut down of the main electrical grid and generators. On January 8, 2005, approximately 60% of the city was without power. Attempts to restore power at the main power plant continued over the next day with intermittent success; however, power was lost to the entire city, including 107 homes, and the airport by late afternoon on January 9, 2005. At 1700 hours, the North Slope Borough (NSB), which provides all public utilities for the city, notified the State Emergency Coordination Center (SECC) and Division of Homeland Security & Emergency Management (DHS&EM) that the city was in danger of city-wide freezing damage to water and sewer transmission pipelines, and requested emergency transportation of life safety repair technicians and repair equipment to the city of Kaktovik. The total costs for this disaster were \$6,749,559.00. Total State costs were \$1,597,848.00. FEMA costs were \$5,151,711.00.

05-213. '05 Spring Floods, July 20, 2005

Disaster declared by Governor Murkowski. Beginning May 13, 2005, a large ice jam blocked the mouth of the Lower Yukon River and caused widespread flooding to the cities of Emmonak and Alakanuk. In both cities, several roads were inundated and eroded by the floodwaters. Floodwaters also inundated city infrastructure to include the above-ground circulating water and vacuum sewage systems which were displaced and/or knocked off their mounting supports. Both cities have submitted local disaster declarations requesting State assistance. There were no life safety issues during this event. Floodwaters subsequently subsided to normal levels within the river banks on or about May 18, 2005. Additionally, in the City of McGrath, beginning on May 3, 2005, ice jam flooding eroded several local roads, including Takotna Avenue and Cranberry Ridge Road, and unusually high water levels threatened city infrastructure and private homes, in the City of McGrath. The city infrastructure at risk included the city office building which housed the water plant, health clinic, fire station, laundromat, and State Trooper office; the utility corridor containing power and water lines; two marine fuel headers and associated tank farms; and Federal and State offices and housing. Several private homes were cut off from emergency services due to impassable roads. Takotna Avenue is a main transportation avenue in town. The road also serves as a levee against rising river water that if breeched, would threaten a large portion of the City of McGrath. The City of McGrath signed a local disaster declaration and requested State assistance on May 13, 2005. The high water levels at McGrath receded slowly from May 14 to 18, 2005. The State total cost for this disaster was \$1,293,025.00.

05-214. Bristol Bay Storm, August 23, 2005

Disaster declared by Governor Murkowski. On August 23, 2005, a strong storm with high winds combined with high tides produced storm surges of 2 - 3 feet above the high tide levels and caused widespread coastal flooding in the upper Bristol Bay area. Public infrastructure, commercial property, and personal property damages were reported in the City of Clark's Point, the nearby unincorporated community of Ekuuk, and the City of Togiak. Damages were also reported in Lake and Peninsula Borough, Bristol Bay Borough and the City of Dillingham. Lake and Peninsula Borough, Bristol Bay Borough and the City of Dillingham elected not to declare local disasters and did not seek assistance. Clark's Point and Togiak had each signed local disaster declarations and asked for State Individual Assistance and Public Assistance in response and recovery from this storm. The State total cost for this disaster is \$375,815.00.

06-215. '05 West Coast Storm, October 24, 2005

Disaster declared by Governor Murkowski. FEMA declared (DR-1618) on December 9, 2005. Beginning on September 22, 2005 and continuing through September 26, 2005, a powerful fall sea storm produced high winds combined with wind-driven tidal surges resulting in severe and widespread coastal flooding and a threat to life and property in the Northwest Arctic Borough, and numerous communities within the Bering Strait (REAA 7), the Kashunamiut (REAA 55), the Lower Yukon (REAA 32)

and the Lower Kuskokwim (REAA 31) Rural Education Attendance Areas including the cities of Nome, Kivalina, Unalakleet, Golovin, Tununak, Hooper Bay, Chevak, Mekoryuk and Napakiak. As a result of this disaster severe damage occurred to personal residences requiring evacuation and sheltering of the residents; to businesses; to drinking water systems, electrical distribution systems, local road systems, airports, seawalls, and other public infrastructure. Individuals' personal and real property was damaged, necessitating emergency protective measures, temporary and permanent repairs. On October 25, 2005, a request for a federal time extension was submitted. On December 9, 2005 a presidential disaster was declared (DR-1618) for Public Assistance for the Northwest Arctic Borough, Bering Strait REAA, Kashunamiut REAA (Chevak) and the Lower Kuskokwim REAA however they failed to include the Lower Yukon REAA in the federal declaration. The State wrote Project Worksheets for the Lower Yukon REAA under the State Public Assistance Declaration. The total cost for disaster was \$5,332,539.00. Total State costs were \$2,264,723.00. FEMA costs were \$3,067,816.00.

06-216. '05 Southeast Storm, December 23, 2005

Beginning on November 18, 2005 and continuing through November 26, 2005, a strong winter storm with high winds and record rainfall occurred in the City/Borough of Juneau, the City/Borough of Haines, the City/Borough of Sitka, the City of Pelican, the City of Hoonah, and the City of Skagway which resulted in widespread coastal flooding, landslides, and severe damage and threat to life and property, with the potential for further damage. The following conditions existed as a result of this disaster: severe damage to personal residences requiring evacuation and relocation of residents; to individuals' personal and real property; to businesses; and to a marine highway system dock, the road systems eroded and blocked by heavy debris that prohibited access to communities and residents, and other public infrastructures, necessitating emergency protective measures and temporary and permanent repairs. The total cost to date, of State assistance, is approximately \$1,867,898.00.

06-217. '06 South Central Storm, March 13, 2006

Disaster declared by Governor Murkowski. Beginning on February 5, 2006 and continuing through February 11, 2006, a series of strong winter storms with high winds, heavy snow, and freezing rain occurred in the City of Seward and surrounding areas of the Kenai Peninsula Borough in South Central Alaska, causing avalanches that severely damaged power lines and other infrastructures, blocked roads, and threatened further damages. As a result of the disaster, there was severe damage to power transmission and distribution lines supplying the City of Seward and surrounding areas; disruption of normal power supply requiring the prolonged use of emergency backup generators with extraordinary expensive operation costs; and damage and threat to public and private property as a result of power disruption. The Governor decided not to seek Federal assistance. Total State costs to date are \$1,465,321.00.

06-218. '06 Spring Floods, June 27, 2006

Disaster declared by Governor Murkowski. FEMA declared (DR-1657) on August 04, 2006. Beginning May 5, 2006 continuing through May 30, 2006, the National Weather Service (NWS) issued flooding warnings and watches across the State as excessive snowmelt and ice jams caused flooding along the Yukon, Kuskokwim, and Koyukuk river drainages. The most serious impacts were reported in the communities of Hughes, Koyukuk, Kwethluk, Alakanuk, and Emmonak, along with substantial damage to State-maintained airports, roads, and highways. In each community, large portions of the village, city infrastructure, and several roads were inundated and eroded by the floodwaters. Total costs to date for this disaster are \$2,916,952.00. Total State costs are \$1,869,499.00. FEMA costs are \$1,047,453.00.

07-220. '06 South Central Flood, August 29, 2006

Disaster declared by Governor Murkowski. FEMA declared (DR-1663) on October 16, 2006. Beginning on August 18, 2006 and continuing through August 24, 2006, a strong weather system developed causing severe flooding resulting in severe damage and threats to life and property in the South Central part of the State including the Matanuska-Susitna Borough, the City of Cordova and the Copper River Highway area in the Chugach Rural Education Attendance Area (REAA), the Richardson Highway area in the Copper River REAA and Delta/Greely REAA, the Denali Highway area, and the Alaska Railroad and Parks Highway areas in the Matanuska-Susitna Borough and the Denali Borough. Damage was primarily to roads, bridges and rail lines. Total cost to date is \$18,253,129.00. Total State costs are \$6,118,361.00. FEMA costs are \$12,134,768.00.

07-221. Southern Alaska Storm, October 14, 2006

Disaster declared by Governor Murkowski. FEMA declared (DR-1669) on December 8, 2006. Beginning on October 8, 2006 and continuing through October 13, 2006, a strong, large area of low pressure that developed in the Northern Pacific and moved into the Southwest area of the State, produced hurricane force winds throughout much of the State and heavy rains in the South-central and Northern Gulf coast areas. The storm resulted in severe flooding, wind damage, and threats to life in the Southern part of the State, to include the Kenai Peninsula Borough, the cities of Seward and Seldovia; the Chugach Rural Education Area including the City of Cordova and the City of Valdez; and the Copper River Rural Education Area including the Richardson Highway to Glenallen, and roadways and drainages in the McCarthy area. Total cost to date for this disaster is \$17,924,741.00. Total State costs are \$6,463,117.00. FEMA costs are \$11,461,624.00.

07-222. Kivalina Storm, November 19, 2006

Disaster declared by Governor Murkowski. Beginning October 11, 2006 through October 13, 2006 a fall sea storm with sustained high surf and storm surge caused severe wave damage and coastal erosion in the City of Kivalina. Through local declarations on October 19, 2006 the Northwest Arctic Borough and the City of Kivalina

requested assistance to repair the seawall and protect community infrastructure. The Alaska Village Electric Cooperative also requested State emergency disaster assistance. In accordance with AS 26.23.020(h) assistance from the disaster relief fund was found appropriate by Governor Murkowski to cover eligible emergency response costs and emergency protective measures. Permanent repairs to or replacement of the seawall were not found to be appropriate for funding. The amount of funding was not to exceed \$235,000.00 including administrative fees. Governor Murkowski also directed the Department of Commerce, Community, and Economic Development (consistent with AO#175) to coordinate with other State and Federal agencies to propose long-term solutions to the ongoing erosion issues in Kivalina and other coastal communities in the State of Alaska. Total State costs are \$233,747.00.

07-223. Kenai Ice Jam Flood, March 2, 2007

Disaster Declared by Governor Sarah Palin. Beginning on January 25 and continuing through February 4, 2007, Skilak glacier-dammed lake breached releasing a four-foot high surge of water into the Kenai River that ultimately dislodged river ice, moved the ice rafts downriver and created ice jams at various points along the river. These ice rafts, some up to 4 feet thick and weighing several tons, destroyed or damaged public and private riverbank fishing platforms, stairs, and elevated walkways as they moved downriver. Where ice jams formed, the water and ice rafts overtopped the riverbanks (some up to 15 feet high) and flooded several public campgrounds, fishing parks, and residential homes from the community of Sterling to the City of Soldotna, within the Kenai Peninsula Borough. Approximately 150 homes and riverside businesses in the City of Soldotna and in the Big Eddy, Poacher's Cove, and River Quest portions of the Kenai Borough reported damage to their buildings, fishing structures, and/or docks; another 775 home properties within the Borough were also impacted by floodwaters or ice. Some of the damaged fishing platforms were specially designed for handicap access. A voluntary evacuation program was instituted in several areas. Some roads were inundated and impassable due to high water. Ice jams also threatened the temporary highway bridge at Soldotna when the water level rose to 20 feet; however, the water dropped before damage could occur to the bridge or embankment. Preceding the flooding, the National Weather Service issued flood warnings, watches and advisories.

Confirmed damages occurred along the Kenai River in the Kenai Peninsula Borough, especially in the area of the City of Soldotna. Public infrastructure, commercial property, and personal property damages were reported in the metropolitan areas and the borough. The Division of Homeland Security and Emergency Management (DHS&EM) received local disaster declarations from the City of Soldotna through the Kenai Peninsula Borough, requesting State disaster assistance; and from the Kenai Peninsula Borough, dated February 13, 2007, expanding the event date through February 5 and expanding the impacted area to include from Skilak Lake to the mouth of the Kenai River into the Cook Inlet. Due to the severity of the initial damage reports, the Governor inspected the flooding damage on February 3, 2007.

Estimated cost (disaster is still open) is expected to reach \$17,906,625.00. As of December 2008, total State expenditures of \$1,746,800.00 have been incurred.

08-225. Northwest Storm, January 22, 2008

Disaster declaration signed by Governor Palin on 22 January 2008. During the period September 12, 2007, through September 14, 2007 a fall sea storm with sustained high surf and storm surge caused severe damage to the seawall (1,000 ft of the 1,600 ft of the wall failed), and coastal erosion in the City of Kivalina within the Northwest Arctic Borough. Total State costs to date are \$433,920.00.

09-226. '08 Tanana Basin Flood, August 4, 2008

Disaster declared by Governor Palin. Beginning on July 27, and continuing through mid-August, 2008, a large, strong area of low pressure developed in the Beaufort Sea near the northern border of the State, bringing a series of storms that moved from the northwest coast of the State into the interior, causing severe flooding, landslides, wind damage, and threats to life throughout much of the northern part of the State to include Fairbanks North Star Borough; the village of Wainwright and the City of Kaktovik in the North Slope Borough; the City of Nenana in the Yukon-Koyukuk Regional Education Attendance Area; and the Denali Borough. This disaster is still open, therefore, costs to date not available at this time. However, the current total estimated costs for this disaster are \$15,496,357.00. Total State costs are estimated at \$5,031,246.00 and FEMA contributions are currently estimated at \$10,465,111.00



Figure 2 2008 Tanana Basin Flood

SECTION II

COST PER DISASTER

DISASTER	DSTR #	State	FED REVENUE	TOTAL	FED %
Village of Karluk	78-01	171,573.00	0.00	171,573.00	0%
Campbell Creek, Anchorage	78-02	10,811.00	0.00	10,811.00	0%
Wrangell/Craig	78-03	392,000.00	0.00	392,000.00	0%
Matanuska-Susitna Borough	79-04	50,000.00	0.00	50,000.00	0%
West Coast Storm	80-06	121,352.00	0.00	121,352.00	0%
Willow Creek	80-07	20,118.00	0.00	20,118.00	0%
Kodiak Island	80-08	171,771.00	0.00	171,771.00	0%
Anchorage Windstorm	80-09	461,448.00	0.00	461,448.00	0%
Bristol Bay	81-10	113,083.00	0.00	113,083.00	0%
Copper Center	81-11	13,168.00	0.00	13,168.00	0%
South Central	82-13	275,013.00	0.00	275,013.00	0%
Fort Yukon	82-15	811,323.00	0.00	811,323.00	0%
Russian Mission	83-16	141,324.00	0.00	141,324.00	0%
Kipnuk	83-18	905.00	0.00	905.00	0%
Aniak	83-19	75,614.00	0.00	75,614.00	0%
Cordova	84-21	125,777.00	0.00	125,777.00	0%
Unalakleet	84-23	726,865.00	0.00	726,865.00	0%
Mountain Village	84-24	986,427.00	0.00	986,427.00	0%
Elim	84-25	384,588.00	0.00	384,588.00	0%
Kotzebue	84-26	673,101.00	0.00	673,101.00	0%
Alakanuk	84-28	277,544.00	0.00	277,544.00	0%
Emmonak	84-29	22,884.00	0.00	22,884.00	0%
Southeast Alaska	85-32	958,519.00	0.00	958,519.00	0%
Haines	85-33	1,581,506.00	0.00	1,581,506.00	0%
Savoonga	85-34	255,954.00	0.00	255,954.00	0%
Buckland	85-36	83,585.00	0.00	83,585.00	0%
Kobuk	85-37	17,979.00	0.00	17,979.00	0%
Anvik	85-38	17,878.00	0.00	17,878.00	0%
Emmonak	85-39	72,832.00	0.00	72,832.00	0%
Pilot Station	85-40	34,736.00	0.00	34,736.00	0%
Upper Kuskokwim River	85-41	56,826.00	0.00	56,826.00	0%
Pitka's Point	86-42	12,740.00	0.00	12,740.00	0%
Bethel	86-43	475,507.00	0.00	475,507.00	0%
Cordova	86-45	16,462.00	0.00	16,462.00	0%
Thorne Bay	86-47	258,512.00	0.00	258,512.00	0%
Metlakatla	86-48	90,547.00	0.00	90,547.00	0%

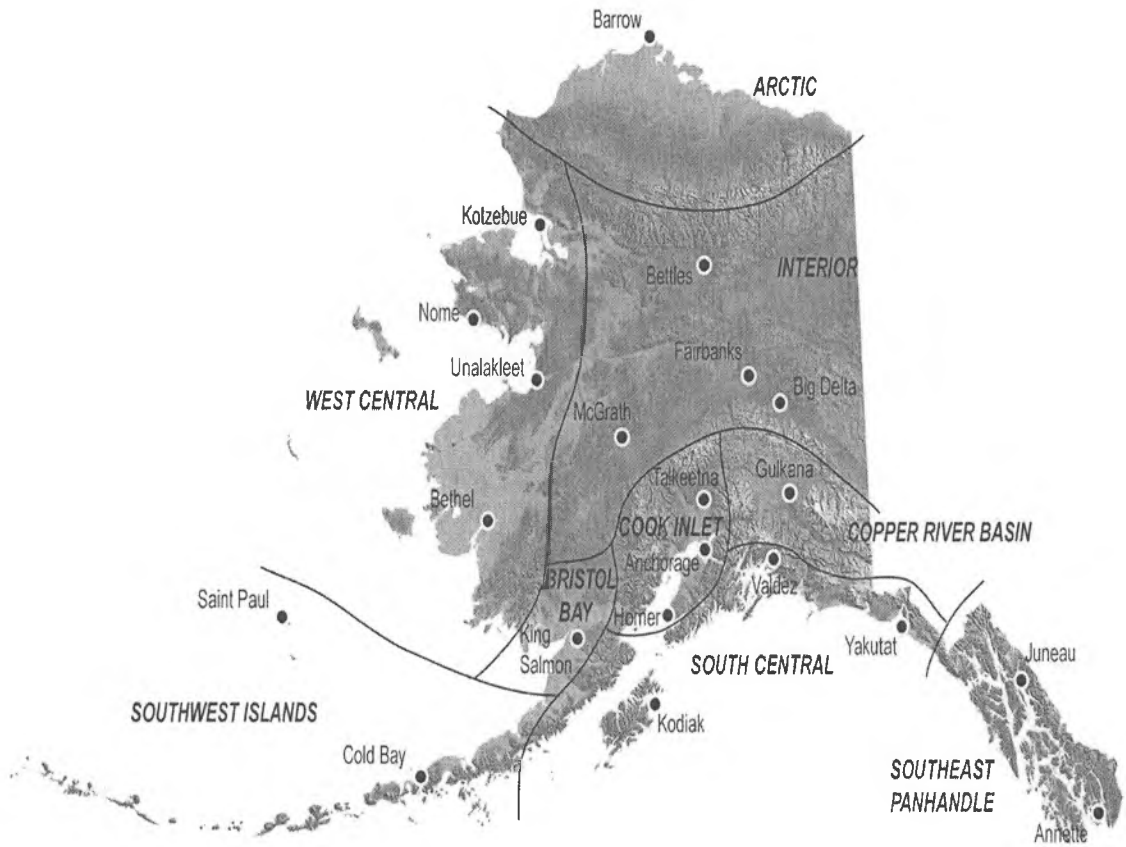
DISASTER	DSTR #	State	FED REVENUE	TOTAL	FED %
Unalaska	86-49	181,937.00	0.00	181,937.00	0%
Pelican	86-52	18,024.00	0.00	18,024.00	0%
Napakiaik	86-54	15,000.00	0.00	15,000.00	0%
Chukchi Sea Storm	87-55	1,538,408.00	2,252,618.00	3,791,026.00	59%
South Central AK Flood	87-56	3,266,898.00	5,375,542.00	8,642,440.00	62%
Kotzebue	87-59	1,231,610.00	0.00	1,231,610.00	0%
Sleetmute/Red Devil	87-60	51,602.00	0.00	51,602.00	0%
Aniak	87-62	993,861.00	0.00	993,861.00	0%
Buckland	87-63	203,548.00	0.00	203,548.00	0%
Richardson Highway	88-64	0.00	0.00	0.00	0%
Haines Flooding	88-70	78,590.00	0.00	78,590.00	0%
Crooked Creek	88-76	133,230.00	0.00	133,230.00	0%
Napakiaik/Napaskiak	88-77	125,292.00	0.00	125,292.00	0%
Kaltag	88-78	28,883.00	0.00	28,883.00	0%
Shishmaref	89-80	318,072.00	0.00	318,072.00	0%
Omega Block	89-83	438,368.00	881,288.00	1,319,656.00	67%
Northwest Arctic Borough	89-84	1,301,941.00	3,672,967.00	4,974,908.00	74%
St. George	89-85	59,255.00	170,598.00	229,853.00	74%
Sand Point	89-86	6,888.00	16,174.00	23,062.00	70%
Ahkiok	89-87	14,006.00	31,931.00	45,937.00	70%
North Slope Borough	89-88	113,364.00	0.00	113,364.00	0%
Galena	89-90	45,859.00	129,265.00	175,124.00	74%
Glennallen	89-91	15,000.00	0.00	15,000.00	0%
Circle	89-92	196,657.00	0.00	196,657.00	0%
Ft. Yukon	89-93	194,812.00	0.00	194,812.00	0%
Spring Floods	89-94	1,507,050.00	3,232,831.00	4,739,881.00	68%
Klawock	90-95	9,927.00	0.00	9,927.00	0%
Fairbanks North Star Borough	90-96	65,640.00	0.00	65,640.00	0%
Mat-Su Borough	90-97	358,772.00	0.00	358,772.00	0%
Whittier	90-98	634,103.00	0.00	634,103.00	0%
Municipality of Anchorage	90-99	2,261,615.00	0.00	2,261,615.00	0%
Seward/Kenai Peninsula	90-100	529,552.00	0.00	529,552.00	0%
Richardson Highway	90-101	0.00	0.00	0.00	0%
Moose Feeding	90-108	196,522.00	0.00	196,522.00	0%
'89 Spring Floods Haz. Mit.	90-111	291,356.00	328,472.00	619,828.00	53%
Snow and Ice Removal	90-112	2,000,000.00	0.00	2,000,000.00	0%
McGrath	90-113	39,409.00	0.00	39,409.00	0%
Kobuk	90-114	6,153.00	0.00	6,153.00	0%
Bethel	90-117	600,176.00	0.00	600,176.00	0%
Cold Weather Haz. Mitigation	91-119	291,769.00	264,985.00	556,754.00	48%
Lower Kuskokwim	91-120	835,297.00	0.00	835,297.00	0%
Kotzebue	91-121	328,845.00	0.00	328,845.00	0%

DISASTER	DSTR #	State	FED REVENUE	TOTAL	FED %
Nome	91-122	105,000.00	0.00	105,000.00	0%
Teller	91-123	173,723.00	0.00	173,723.00	0%
Diomedea	91-125	622,594.00	0.00	622,594.00	0%
Togiak	91-127	51,384.00	0.00	51,384.00	0%
Larsen Bay	91-128	20,000.00	0.00	20,000.00	0%
Fairbanks North Star Boro	91-132	1,001,092.00	663,286.00	1,664,378.00	40%
Aniak	91-133	319,423.00	230,666.00	550,089.00	42%
McGrath	91-134	310,320.00	298,071.00	608,391.00	49%
Red Devil	91-135	109,574.00	130,379.00	239,953.00	54%
Anvik	91-136	139,729.00	41,971.00	181,700.00	23%
Grayling	91-137	75,061.00	3,569.00	78,630.00	5%
Emmonak	91-138	206,702.00	191,544.00	398,246.00	48%
Holy Cross	91-139	20,265.00	0.00	20,265.00	0%
Alakanuk	91-140	155,472.00	55,034.00	210,506.00	26%
Shageluk	91-141	48,546.00	9,321.00	57,867.00	16%
Galena	91-142	67,061.00	0.00	67,061.00	0%
Mat-Su Borough	92-144	515,900.00	0.00	515,900.00	0%
New Koliganek	92-149	67,526.00	0.00	67,526.00	0%
Kodiak	92-150	1,564,957.00	0.00	1,564,957.00	0%
Eagle City Flood	92-153	183,729.00	0.00	183,729.00	0%
Eagle Village Flood	92-154	61,147.00	0.00	61,147.00	0%
Galena	92-155	442,615.00	0.00	442,615.00	0%
Flood Response/Upper Yukon	92-156	22,059.00	0.00	22,059.00	0%
Yukon River Flood	92-157	1,167,796.00	0.00	1,167,796.00	0%
Haines Highway Disaster	93-160	0.00	0.00	0.00	0%
Nome	93-162	0.00	0.00	0.00	0%
Prince of Wales Island	94-167	0.00	0.00	0.00	0%
Fort Yukon Haz Mit., AK-909	94-168	190,765.00	166,000.00	356,765.00	47%
McGrath Road Disaster	94-169	170,999.00	0.00	170,999.00	0%
Galena Flood	94-170	614,005.00	0.00	614,005.00	0%
Delta Junction	95-171	38,810.00	0.00	38,810.00	0%
Matanuska River Erosion	95-172	500,000.00	0.00	500,000.00	0%
1994 Falls Floods	95-173	11,175,573.00	61,445,960.00	72,621,533.00	85%
Metlakatla	95-174	31,863.00	0.00	31,863.00	0%
Yukon-Kuskokwim Delta	95-176	207,852.00	0.00	207,852.00	0%
Aniak	95-177	210,214.00	0.00	210,214.00	0%
Bethel Sinkhole Erosion	95-178	128,861.00	0.00	128,861.00	0%
South Central Fall Floods	96-180	3,012,464.00	7,244,498.00	10,256,962.00	71%
Southeast Storm	97-182	528,180.00	0.00	528,180.00	0%
Tanana/Copper River Flood	98-185	946,144.00	0.00	946,144.00	0%
Shishmaref Sea Storm	98-186	662,788.00	800,000.00	1,462,788.00	55%
Endicott Mountains Flood	98-188	667,906.00	0.00	667,906.00	0%

DISASTER	DSTR #	State	FED REVENUE	TOTAL	FED %
Southeastern Storm	98-190	1,119,927.00	0.00	1,119,927.00	0%
Central Gulf Coast Storm	00-191	3,269,479.00	12,391,861.00	15,661,340.00	79%
Middle Yukon	01-196	445,287.00	0.00	445,287.00	0%
Shishmaref Erosion	02-198	87,859.00	0.00	87,859.00	0%
'02 Interior Floods	02-200	1,298,936.00	3,800,318.00	5,099,254.00	75%
Northwest Fall Sea Storm	03-201	382,000.00	0.00	382,000.00	0%
KPB Flood	03-202	4,082,012.00	15,136,347.00	19,218,359.00	79%
South Central Windstorm	03-204	730,785.00	2,114,454.00	2,845,239.00	74%
Salcha Flood	03-205	426,048.00	0.00	426,048.00	0%
Riverine Flood	04-206	339,842.00	0.00	339,842.00	0%
'03 KPB Fall Flood	04-207	240,310.00	0.00	240,310.00	0%
'03 Fall Sea Storm	04-209	526,966.00	0.00	526,966.00	0%
Bering Strait Sea Storm	05-211	5,738,503.00	14,109,823.00	19,848,326.00	71%
Kaktovik Winter Storm	05-212	1,597,848.00	5,151,711.00	6,749,559.00	76%
'05 Spring Flood	05-213	1,293,025.00	0.00	1,293,025.00	0%
Bristol Bay Storm	05-214	375,815.00	0.00	375,815.00	0%
'05 West Coast Storm	06-215	2,264,723.00	3,067,816.00	5,332,539.00	58%
'05 Southeast Storm	06-216	1,867,898.00	0.00	1,867,898.00	0%
'06 South Central Storm	06-217	1,465,321.00	0.00	1,465,321.00	0%
'06 Spring Floods	06-218	1,869,499.00	1,047,453.00	2,916,952.00	36%
'06 South Central Flood	07-220	6,118,361.00	12,134,768.00	18,253,129.00	66%
Southern AK Storm	07-221	6,463,117.00	11,461,624.00	17,924,741.00	64%
Kivalina Seawall	07-222	233,747.00	0.00	233,747.00	0%
Kenai Ice Jam Flood	07-223	1,746,800.00	0.00	1,746,800.00	0%
Northwest Storm	08-225	433,920.00	0.00	433,920.00	0%
08 Tanana Basin Flood **	09-226	5,031,246.00	10,465,111.00	15,496,357.00	68%
** = estimated costs (inc. in totals)					
Total Cost		106,474,936.00	178,518,256.00	284,993,192.00	63%



Figure 3 2000 Central Gulf Storm Avalanche



Alaska Climate Research Center
 Geophysical Institute
 University of Alaska Fairbanks

Figure 4 Map of the Weather Regions in Alaska

Section III

Summary by Region, Community and Year

This summary includes only the communities and flooding events resulting in a state disaster declaration. The same event often affects several communities, sometimes widely separated. Flooding events result from:

- Rainfall
- Ice Jams
- Storm Surges
- Wind Driven Waves
- Snow Melt
- Rising Ground Water

Region	Communities	Flooding Events
Yukon	13	17
Koyukuk	6	7
Kuskokwim	11	32
Bristol Bay	5	7
Aleutians & Peninsula	4	7
West Coast	22	43
Northwest	10	20
North Slope	4	4
Interior	6	15
Southcentral	14	33
Kenai PB	6	11
Kodiak	2	7
Southeast	16	25
Total	119	228

Year	Flooding Events
1978	4
1979	15
1980	5
1981	1
1982	2
1983	3
1984	7
1985	15
1986	4
1987	3
1988	5
1989	8
1990	10
1991	14
1992	5
1993	1
1994	10
1995	14
1996	0
1997	4
1998	4
1999	0
2000	16
2001	2
2002	19
2003	6
2004	7
2005	23
2006	16
2007	0
2008	5
Total	228

Sorted by Region, Community and Year

Koyukuk River	
Alatna	1994
Allakaket	1994
Bettles	1994
Hughes	1994
Koyukok	2001
	2006
Wiseman	1994

Koyukuk River	
1994	Alatna Allakaket Bettles Hughes Wiseman
2001	Koyukok
2006	Koyukok

Yukon River	
Anvik	1985
	1991
Circle	1989
Eagle	1992
Eagle Village	1992
Fort Yukon	1982
	1989
Galena	1991
	1992
	1994
Grayling	1991
Holy Cross	1991
Kaltag	1988
Pilot Station	1985
Pitka's Point	1985
Russian Mission	1982
Shageluk (Innoko)	1991

Yukon River	
1982	Fort Yukon Russian Mission
1985	Anvik Pilot Station Pitka's Point
1988	Kaltag
1989	Circle Fort Yukon
1991	Anvik Grayling Holy Cross Shageluk Galena
1992	Eagle Village Eagle Galena
1994	Galena

Kuskokwim River	
Akiak	1995
Aniak	1983 1987 1991 1995 2002
Bethel	1985 1990 1995 2006
Crooked Creek	1985 1988 2002
Lime Village (Stony R)	2002
McGrath	1985 1990 1991 1993 2002 2005
Napakiak	1986 1988 1990 2005
Nunapitchuk	1990
Red Devil	1985 1991 2002
Sleetmute	1985 1987 2002
Tuntutuliak	1990

1983	Aniak
1985	Bethel Crooked Creek McGrath Red Devil Sleetmute
1986	Napakiak
1987	Sleetmute Aniak
1988	Crooked Creek Napakiak
1990	Bethel Mcgrath Napakiak Nunapitchuk Tuntutuliak
1991	Aniak McGrath Red Devil
1993	McGrath
1995	Akiak Aniak Bethel
2002	Aniak Crooked Crook Lime Village (Stony R) McGrath Red Devil Sleetmute
2005	McGrath Napakiak
2006	Bethel

Bristol Bay	
Bristol Bay Borough	2005
Clark's Point	2005
Dillingham	1980 2000 2005
Ekwok	2002
Koliganek	1991

Bristol Bay	
1980	Dillingham
1991	Koliganek
2000	Dillingham
2002	Ekwok
2005	Bristol Bay Borough Clark's Point Dillingham

Aleutians & Peninsula	
Chignik	2000 2002
Lake & Pen Borough	2000 2003 2005
Naknek	2003
Unalaska	1985

Aleutians & Peninsula	
1985	Unalaska
2000	Chignik Lake & Peninsula
2002	Chignik
2003	Lake & Peninsula Naknek
2005	Lake & Peninsula

Kenai Peninsula	
Homer	2000 2002
Kachemak Silo	2002
Kenai	1995 2000
Kenai Borough	1981 1986 2002 2006
Port Graham	2002
Willow Creek	1979

Kenai Peninsula	
1979	Willow Creek
1981	Kenai Borough
1986	Kenai Borough
1995	Kenai
2000	Homer Kenai
2002	Homer Kachemak Silo Kenai Borough Port Graham
2006	Kenai Borough

West Coast	
Alakanuk	1984 1991 1995 2002 2005 2006
Chefornak	1979
Chevak	2004
Emmonak	1984 1985 1991 1995 2002 2005 2006
Goodnews Bay	1979 2004
Hooper Bay	1979 2004
Kipnuk	1979 1983
Kongiganak	1979 2006
Kwethluk	1995 2002 2006
Kwigillingok	1979 1990
Napaskiak	1995
Newtok	1979 2005
Nunam Iqua	1979
Platinum	1979
Quinhagak	1979 2005
Scammon Bay	1979
Shaktoolik	2005
St. Michael	2005
Togiak	1979
Toksook Bay	1979
Tununak	1979
Unalakleet	2003 2005

West Coast	
1979	Chefornak Goodnews Bay Hooper Bay Kipnuk Kongiganak Kwigillingok Newtok Nunam Iqua Platinum Quinhagak Scammon Bay Togiak Toksook Bay Tununak
1983	Kipnuk
1984	Alakanuk Emmonak
1985	Emmonak
1990	Kwigillingok
1991	Alakanuk Emmonak
1995	Alakanuk Emmonak Kwethluk Napaskiak
2002	Alakanuk Emmonak Kwethluk
2003	Unalakleet
2004	Chevak Goodnews Bay Hooper Bay
2005	Alakanuk Emmonak Newtok Quinhagak St. Michael Shaktoolik Unalakleet
2006	Alakanut Emmonak Kongiganak Kwethluk

Northwest	
Buckland	1985 1987
Diomede	1990 2004
Elim	2004 2005
Golovin	2004 2005
Kivalina	2006
Kobuk	1985 1990
Kotzebue	1990
Nome	2003 2005
Shishmaref	1988 1997 2001 2002 2005
Teller	1990

Northwest	
1985	Buckland Kobuk
1987	Buckland
1988	Shishmaref
1990	Diomede Kobuk Kotzebue Teller
1997	Shishmaref
2001	Shishmaref
2002	Shishmaref
2003	Nome
2004	Diomede Elim Golovin
2005	Elim Golovin Nome Shishmaref
2006	Kivalina

North Slope	
Endicott Mountains	1998
Kaktovik	2008
North Slope Borough	1989
Wainwright	2008

North Slope	
1989	North Slope Borough
1998	Endicott Mountains
2008	Kaktovik Wainwright

Interior	
Delta Junction	1994 2000 2006
Denali Borough	2006
Fairbanks NSB	1989 1991 1992 1997 2000 2002 2008
Nenana	2008
Northway	1997
Salcha	2002 2008

Interior	
1989	North Star Borough
1991	North Star Borough
1992	North Star Borough
1994	Delta Junction
1997	North Star Borough Northway
2000	Delta Junction North Star Borough
2002	Salcha North Star Borough
2006	Delta Junction Denali Borough
2008	North Star Borough Nenana Salcha

South Central	
Anchorage	1978
	1980
	1989
	1995
	2000
Copper Center	1980
Copper River	1985
	1997
	2006
Cordova	1983
	1985
	1986
	1995
	2000
	2006
Eyak	2006
Glennallen	1989
Iliamna	2000
Mat Su Borough	1980
	1986
	1991
	1994
	1995
	2000
	2006
McCarthy	2006
Newhalen	2000
Pedro Bay	2003
Seward	1989
Whittier	1995
	2000
Valdez	2000
	2006

Kodiak	
Karluk	1978
Kodiak	1980
	1991
	1992
	2000
	2002
	2003

1978	Anchorage
1980	Anchorage Copper Center Mat Su Borough
1983	Cordova
1985	Copper River Kodiak Cordova
1978	Karluk
1980	Cordova
1980	Kodiak Mat Su Borough
1991	Kodiak
1991	Anchorage
1992	Kodiak Glennallen
2000	Kodiak Seward
2002	Kodiak
1994	Mat Su Borough
1994	Kodiak Mat Su Borough
1995	Anchorage Cordova Mat Su Borough Whittier
1997	Copper River
2000	Anchorage Cordova Iliamna Mat Su Borough Newhalen Valdez Whittier
2003	Pedro Bay
2006	Copper River Cordova Mat Su Borough Eyak McCarthy Valdez

Southeast	
1978	Craig Wrangell
1984	Angoon Juneau Kake Sitka Tenakee Springs
1985	Haines
1988	Haines
1989	Klawock
1994	Metlakatla Skagway
1995	Elfin Cove Pelican
1998	Chilkat Haines Juneau
2000	Kake
2004	Kasaan
2005	Haines Hoonah Juneau Pelican Sitka Skagway

Southeast	
Angoon	1984
Chilkat	1998
Craig	1978
Elfin Cove	1995
Haines	1985 1988 1998 2005
Hoonah	2005
Juneau	1984 1998 2005
Kake	1984 2000
Kasaan	2004
Klawock	1989
Metlakatla	1994
Pelican	1995 2005
Sitka	1984 2005
Skagway	1994 2005
Tenakee Springs	1984
Wrangell	1978

SECTION IV

Maps

The following maps show the geographical location of weather-related disasters. These maps only include specific communities identified in disaster declarations.

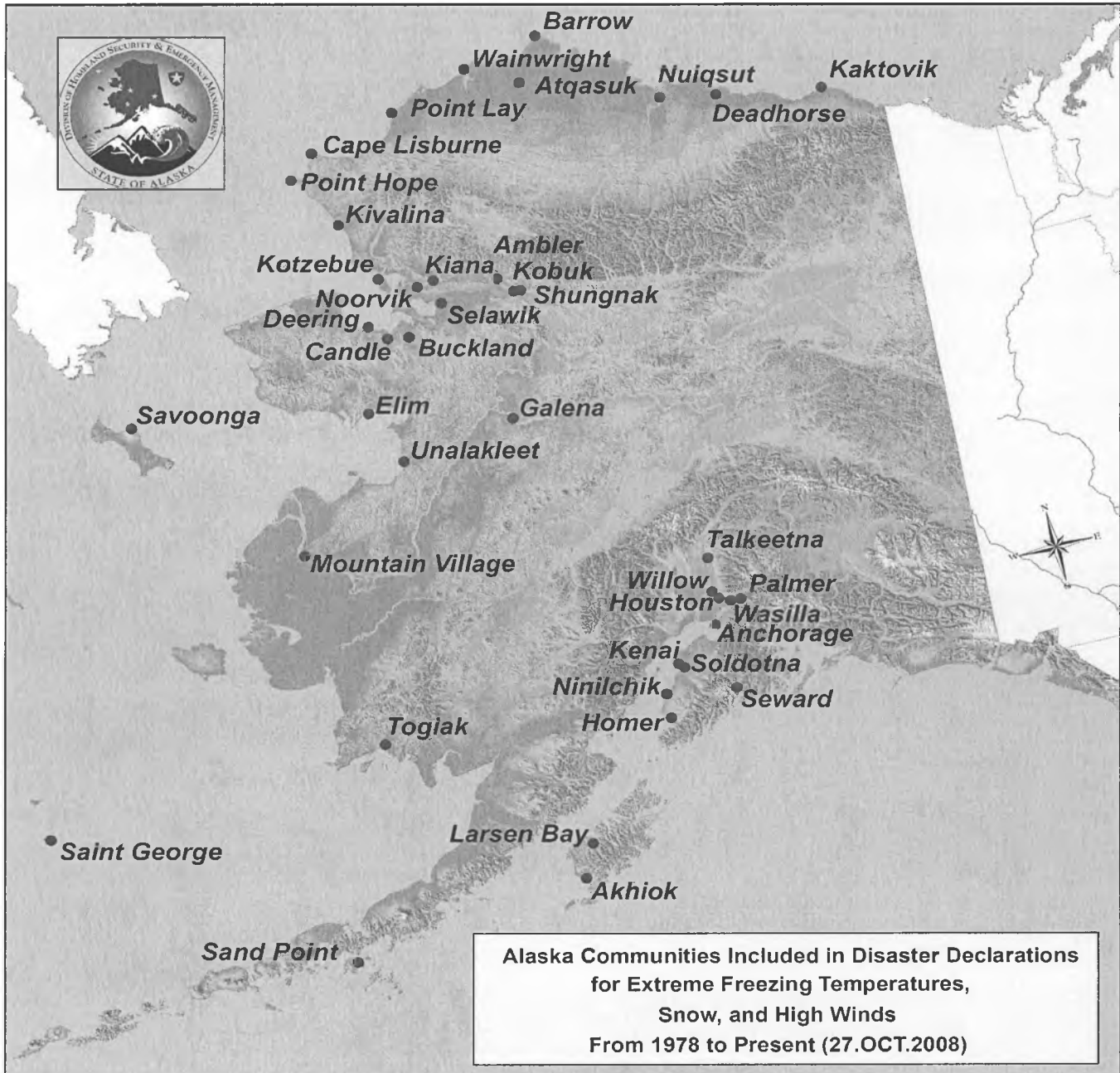


Figure 5 Extreme Cold, Snow and High Wind Declarations 1978 - 2008



Figure 6 Flood Declaration Areas 1978 - 2008

The following two maps indicate events and their location from 1953 to 2008 and show the correlation of repeat events.

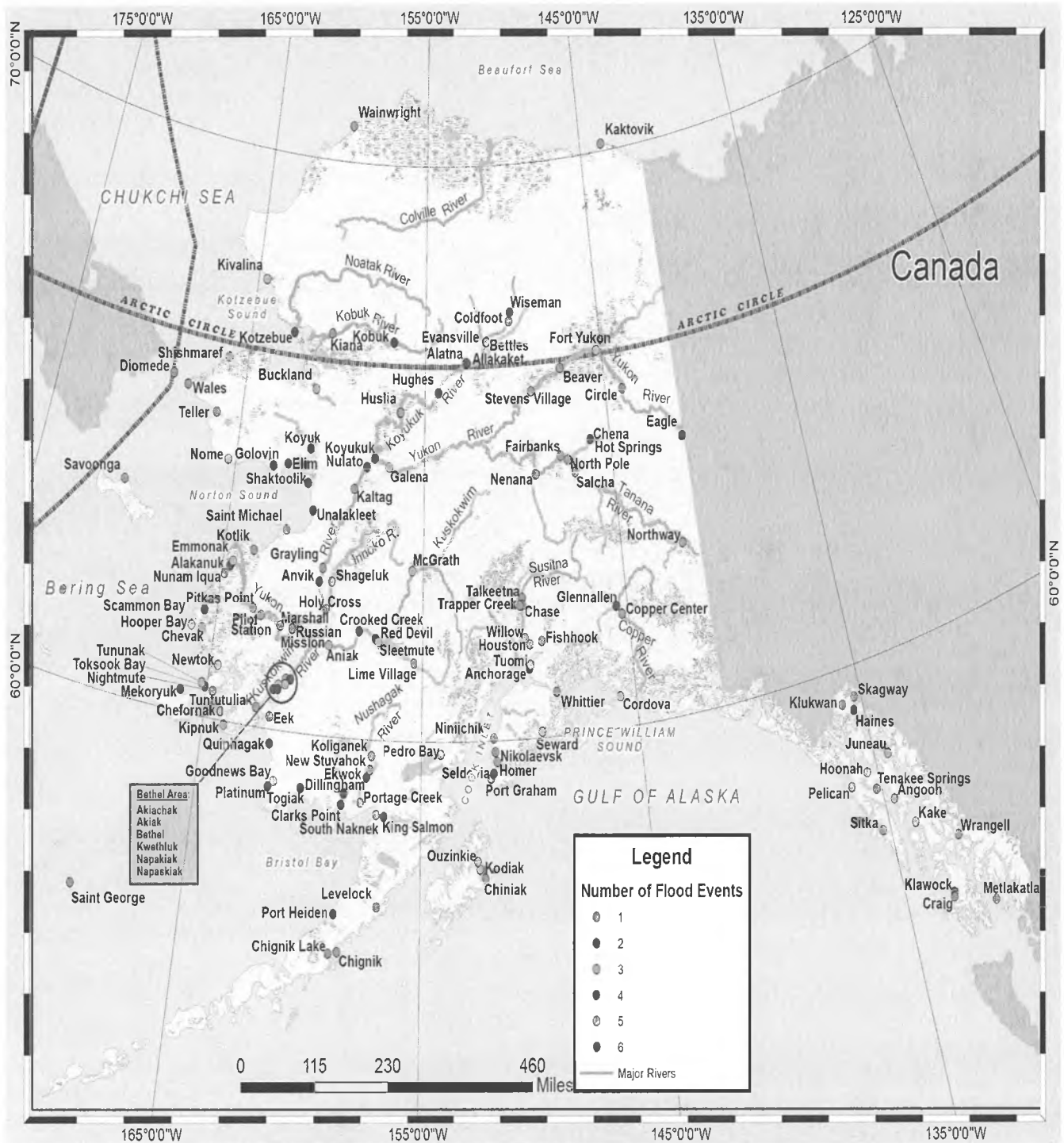


Figure 7 Number of events per community

Section V

Acronyms

COE	Corps of Engineers
DCI	Disaster Cost Index
DEC	Department of Environmental Conservation
DES	Division of Emergency Services
DHS	Division of Homeland Security
DHS&EM	Division of Homeland Security and Emergency Management
DMVA	Department of Military and Veterans Affairs
DNR	Department of Natural Resources
DOT	Department of Transportation
DOT&PF	Department of Transportation and Public Facilities
DSR	Damage Survey Report
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FNSB	Fairbanks North Star Borough
IA	Individual Assistance
ICTEA	Intermodal Surface Transportation Efficiency Act of 1991
IFG	Individual Family Grant
Mat·Su	Matanuska·Susitna
NSB	North Slope Borough
NWAB	Northwest Arctic Borough
NWS	National Weather Service
PA	Public Assistance
PW	Public Works
RCA	Recording Company of America
REAA	Regional Education Attendance Area
RSA	Reimbursement Service Agreement
SBA	Small Business Administration
SECC	State Emergency Coordination Center

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