



SEWARD PENINSULA  
SUBSISTENCE REGIONAL  
ADVISORY COUNCIL

Meeting Materials

*March 11 - 12, 2020*

*Nome*





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*On the cover...*

Smelt, Koyuk, Alaska



Photo by R. Nanouk

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**SEWARD PENINSULA SUBSISTENCE REGIONAL ADVISORY COUNCIL**

Mini Convention Center  
Nome

March 11-12, 2020  
convening at 9:00 a.m. daily

**TELECONFERENCE:** call the toll free number: 1-866-820-9854, then when prompted enter the passcode: 4801802.

**PUBLIC COMMENTS:** Public comments are welcome for each agenda item and for regional concerns not included on the agenda. The Council appreciates hearing your concerns and knowledge. Please fill out a comment form to be recognized by the Council chair. Time limits may be set to provide opportunity for all to testify and keep the meeting on schedule.

**PLEASE NOTE:** These are estimated times and the agenda is subject to change. Contact staff for the current schedule. Evening sessions are at the call of the chair.

**AGENDA**

\*Asterisk identifies action item.

- 1. Invocation**
- 2. Call to Order** (*Chair*)
- 3. Roll Call and Establish Quorum** (*Secretary*)..... 3
- 4. Welcome and Introductions** (*Chair*)
- 5. Review and Adopt Agenda\*** (*Chair*) ..... 1
- 6. Election of Officers \***
  - Chair (*DFO*)
  - Vice-Chair (*New Chair*)
  - Secretary (*New Chair*)
- 7. Review and Approve Previous Meeting Minutes\*** (*Chair*) ..... 4
- 8. Reports**
  - Council Member Reports
  - Chair’s Report
- 9. Public and Tribal Comment on Non-Agenda Items** (available each morning)

**10. Old Business (Chair)**

- a. Alaska Board of Game Proposal Results ..... 12

**11. New Business (Chair)**

- a. Fisheries Program Information Update
- b. Call for Federal Fish and Shellfish Proposals\* ..... 17
- c. FY2019 Annual Report\*

**12. Agency Reports**

(Time limit of 15 minutes unless approved in advance)

- Tribal Governments
- Native Organizations
- National Park Service
- Bureau of Land Management
- Alaska Department of Fish and Game
- Office of Subsistence Management

**12. Future Meeting Dates\***

- Confirm Fall 2020 meeting date and location .....36
- Select Winter 2021 meeting date and location .....37

**13. Closing Comments**

**14. Adjourn (Chair)**

**To teleconference** into the meeting, call the toll free number: 1-866-820-9854, then when prompted enter the passcode: 4801802.

*Reasonable Accommodations*

The Federal Subsistence Board is committed to providing access to this meeting for all participants. Please direct all requests for sign language interpreting services, closed captioning, or other accommodation needs to Karen Deatherage, 907-474-2270 or karen\_deatherage@fws.gov or 800-877-8339 (TTY), by close of business on February 18, 2020.

**REGION 7**  
**Seward Peninsula Subsistence Regional Advisory Council**

<b>Seat</b>	<b>Year Appointed Term Expires</b>	<b>Member Name and Community</b>
<b>1</b>	2018 <b>2021</b>	<b>Lloyd S. Kiyutelluk</b> Shishmaref
<b>2</b>	<b>2019</b>	<b>VACANT</b>
<b>3</b>	2010 <b>2022</b>	<b>Louis H. Green, Jr.</b> Nome <span style="float: right;"><b>Chair</b></span>
<b>4</b>	2003 <b>2022</b>	<b>Thomas L. Gray</b> Nome <span style="float: right;"><b>Vice Chair</b></span>
<b>5</b>	2017 <b>2020</b>	<b>Deahl Katchatag</b> Unalakleet
<b>6</b>	2016 <b>2020</b>	<b>Leland H. Oyoumick</b> Unalakleet
<b>7</b>	<b>2020</b>	<b>VACANT</b>
<b>8</b>	1994 <b>2021</b>	<b>Elmer K. Seetot Jr.</b> Brevig Mission <span style="float: right;"><b>Secretary</b></span>
<b>9</b>	2012 <b>2021</b>	<b>Charles Franklin Saccheus</b> Elim
<b>10</b>	2015 <b>2021</b>	<b>Ronald D. Kirk</b> Stebbins

## SEWARD PENINSULA SUBSISTENCE REGIONAL ADVISORY COUNCIL

### Meeting Minutes

Mini Convention Center  
Nome, Alaska  
October 22-23, 2019

#### Call to Order, Roll Call and Quorum Establishment:

The meeting was called to order on Tuesday, October 22, 2019, at 9:00 a.m. Council members Louis Green Jr., Elmer Seetot Jr., Charles Saccheus, Deahl Katchatag, and Leland Oyoumick were present in person. Ronald Kirk participated telephonically. Tom Gray and Lloyd Kiyutelluk were not present and were excused. Brandon Ahmasuk was not present and was unexcused. A quorum was established with 6 of 9 seated Council members present or participating by phone. The Council has one vacant seat.

#### Attendees:

##### *In person:*

Karen Deatherage, Fairbanks, Office of Subsistence Management (OSM)  
Suzanne Worker, Anchorage, OSM  
Megan Klosterman, Anchorage, OSM  
Hannah Voorhees, Anchorage, OSM  
Jarred Stone, Anchorage, OSM  
Ken Adkisson, Nome, Bering Land Bridge National Park and Preserve (BELA)  
Nicole Braem, Nome, BELA  
Letty Hughes, Nome, BELA  
Rosalie Debenham, Juneau, Bureau of Indian Affairs

Tom Sparks, Nome, Bureau of Land Management (BLM)  
Walker Gusse, Fairbanks, BLM  
Bill Dunker, Nome, Alaska Department of Fish and Game (ADF&G)  
Sarah Germain, Nome, ADF&G  
Tony Gorn, Kotzebue, ADF&G  
Luke Henslee, Fairbanks, ADF&G

##### *Via teleconference:*

Robbin La Vine, Anchorage, OSM  
Dan Sharp, Anchorage, BLM  
Mark Burch, Palmer, ADF&G  
Tyler Lewis, Anchorage, ADF&G

#### Review and Adopt Agenda:

Motion #1 made by Mr. Seetot, seconded by Mr. Katchatag, to adopt the agenda as read with the following changes:

- Add Fisheries and Partners Program under New Business, OSM
- Add Comprehensive Unit 22 Muskox Report under Agency Reports, NPS, ADF&G, BLM
- Add Emperor Goose Satellite Telemetry under Agency Reports, ADF&G

Motion #1 passed on a unanimous vote.



### **Review and Approve Previous Meeting Minutes:**

Motion #2 by Mr. Seetot, seconded by Mr. Katchatag, to approve the winter 2019 meeting minutes.

Motion #2 passed on a unanimous vote.

### **Council Member and Chair Reports:**

Charles Saccheus of Elim reported that the moose season was normal and everyone was satisfied with their catch. There were no caribou up north but lots of bears. Mr. Saccheus believes a bear took his nephew who was walking to Elim. His nephew was never found. There are lots of berries and fish in the area, and a lot of beluga whale from Cape Darby to Isaac Springs. Belugas feed on tomcod and shrimp as their main diet. Fishing was also very good in the area.

Leland Oyoumick of Unalakleet reported that subsistence activities were good this year and everyone got King Salmon. There were lots of Chum, Silver and Red Salmon. Lots of fish going belly-up on the river though and dead animals found along the coast from the top of the food chain down to the bottom. Mr. Oyoumick heard from scientists that it is caused by the warming of the waters due to climate change. Mr. Oyoumick also thinks it might be caused by radiation from Chernobyl or Fukushima. The local quota of 34 moose was met, and hunters are still seeing bulls up the river.

Elmer Seetot Jr., of Brevig Mission reported that the ice went out in the Bering Sea so hunters were not able to get their walrus. They were able to get bearded seal for oil and blubber. The salmon came in early because of the ice going out. Mr. Seetot also shared that the weather has been too wet for berries. Beluga whales were caught at Cape Dirk during the spring harvest season for the first time since Mr. Seetot could remember. They had been feeding above Wales on cod. Mr. Seetot is very concerned about radioactive particles in the air coming from Russia.

Deahl Katchatag of Unalakleet reported that during the summer there were a lot of birds, seals, and *oogrik* washing up to shore from the ocean, and floating fish coming down the river. He said scientists believe it is due to the warm water, but they don't share information about the pollution in Norton Sound or the plastic from trash. Mr. Katchatag reported only one moose was caught during the August season due to really hot weather. There are lots of bears, and the moose are still up in the hills. Climate change is causing lots of subsistence issues, and there is concern over what will come out of the melting ice, as things have been trapped in there for millions of years. There are no seals or *oogrik* in Unalakleet, so local hunters have to go towards Elim to hunt. Mr. Katchatag shared that there was no ice near Unalakleet but high water in November and January. This has not been seen before in Unalakleet. Mr. Katchatag stated that the community was not getting any help, and would have to learn to live with the changes in order to survive.

Ron Kirk of Stebbins reported that it was a good fishing season but climate change affects are happening in Stebbins with seal and fish carcasses on the shoreline between Stebbins and the Yukon River. There was a good successful moose hunt and good berry picking in the area. Mr. Kirk stated that subsistence users are going to have to adapt and live with climate change. He shared concerns over the impacts on moose and caribou from melting permafrost.

Louis Green of Nome delivered the Chair's report. He stated that moose season in the area was only 6 days, and the season in Unit 22D was only 4 days. Mr. Green was happy to share that his 11 year-old son got his first moose. Sockeye Salmon are continuing to produce on the Pilgrim River but there are still way too many Pink Salmon. There are lots of bears and many complaints. Mr. Green observed that when there are bears there are no moose, so predation must be an issue. Mr. Green reported that there were lots of swans and geese in Safety Sound but further away from the coast than usual. It was a very wet summer and difficult to dry fish. He said that there were lots of seal in the Nome area, particularly in the Snake River. Moose season went really well in Teller, Brevig Mission, and Shaktoolik, and people were happy.

### **Public and Tribal Comments on Non-Agenda Items:**

There were no public or Tribal comments on non-agenda items.

### **Old Business:**

- Lisa Maas, OSM, provided updates on Wildlife Closure Reviews
- Karen Deatherage, OSM, presented the 805c Report from the Federal Subsistence Board

### **New Business:**

#### ***Wildlife Proposals:***

#### **Regional Proposals:**

*WP20-39: Revise harvest limit for winter season for moose in Unit 22D, remainder.*

Motion #3 by Mr. Kirk, seconded by Mr. Seetot, to support WP20-39. The Council voted unanimously to Take no Action on WP20-39 due to action taken on WP20-38, which provided a comprehensive approach to moose management in Unit 22D, remainder, which would both protect the population and allow for subsistence use.

The Council took no action on Motion #3.

*WP20-40: Close Federal public lands to non-Federally qualified users for moose in Unit 22D, remainder.*

Motion #4 by Mr. Seetot, seconded by Mr. Katchatag, to support WP20-40.

The Council had submitted this proposal to protect the moose population in Unit 22D, remainder, by eliminating non-local harvest while still allowing for harvest by Federally qualified users in the region. The moose density is very low in Unit 22D, remainder, and harvest should be limited to local subsistence users who need the meat. The Council noted that all subunits in Unit 22D, except Unit 22D, remainder, are currently closed to non-Federally qualified users.

Motion #5 for WP20-40 passed on a unanimous vote.

*WP20-38: Revise seasons, harvest limits and permit requirements for moose in Unit 22D, remainder.*

Motion #5 by Mr. Katchatag, seconded by Mr. Kirk, to support WP20-38 as amended.

The Council voted unanimously to support WP20-38 with amendment to modify the harvest limit for the December 1 - January 31 season to 1 antlered bull in Unit 22D, remainder. The Council believes a may-be-announced system for a winter hunt would work best to protect the low moose population in Unit 22D, remainder, and allow for additional harvest during December-January only if the harvest quota was not met in the fall.

The Council was reluctant to eliminate the October 1 - November 30 season but believed that some sacrifice was necessary on behalf of subsistence hunters to protect breeding bulls during the rut. Subsistence users will still have the opportunity to harvest moose during the August - September season (which is generally preferred due to meat condition) and possibly during a may-be-announced December-January season if the harvest quota was not met. The Council determined that a requirement for an antlered bull only during the December and January season was necessary to protect cow moose in Unit 22D, remainder. The Council also agreed that a registration permit is needed to capture actual moose harvest in Unit 22D, remainder.

Motion #5 for WP20-38 as *amended* passed on a unanimous vote.

*WP20-41: Rescind closure to non-Federally qualified users for moose in northern portion of Unit 22A.*

Motion #6 by Mr. Oyoumick, seconded by Mr. Kirk, to support WP20-41.

There continues to be minimal or extrapolated information on moose populations in portions of Unit 22A. Easy access by non-local or guided airplane hunters to moose could negatively impact subsistence users. Some Council members stated that habitat where moose populations go for protection from harvest are frequently accessed by non-locals in aircraft. Harvest in these areas could impair the herd's opportunity to grow.

Motion #6 for WP20-41 failed on a unanimous vote.

*WP20-42: Rescind closure to non-Federally qualified users for moose in Unit 22A, remainder.*

Motion #7 by Mr. Seetot, seconded by Mr. Katchatag, to support WP20-42.

Moose density in this area is unclear and it is not currently known how additional harvest could impact moose populations. The Council also agrees with the OSM conclusion that this proposal would only benefit non-local hunters and could negatively affect subsistence users.

Motion #7 for WP20-42 failed on a unanimous vote.

Crossover Proposals:

*WP20-43/44/45/46: Eliminate bull closure and prohibition on calf harvest for caribou in Unit 23.*

Motion #8 by Mr. Oyoumick, seconded by Mr. Kirk, to support WP20-43/44/45/46.

The Council voted unanimously to support WP20-46 and take no action on WP20-43/44/45. These actions were consistent with the OSM conclusion. The Council agreed with OSM that adopting WP20-46 “increases harvest opportunity for Federally qualified subsistence users. Eliminating the bull closure may help grow the Western Arctic Caribou Herd by reducing harvest pressure on cows. As most people do not target calves, calf harvest is expected to be very low and should not affect the conservation of the herd. Additionally, allowing calf harvest may reduce wanton waste by allowing mistakenly shot calves to be legally salvaged, and would permit harvest of orphaned calves.”

Motion #8 for WP20-46 passed on a unanimous vote. The Council took no action on WP20-43/44/45.

Statewide Proposals:

*WP20-08: Require traps or snares to be marked with name or State identification number for all furbearers in all units.*

Motion #9 by Mr. Oyoumick, seconded by Mr. Seetot, to support WP20-08. Council members did not believe this proposal would have any beneficial effect on trapping in the Seward Peninsula region. Some Council members thought tagging traps might deter animals and therefore be injurious to subsistence opportunity.

Motion #9 for WP20-08 failed on a unanimous vote.

*WP20-34: Extend trapping season for mink and weasel in Unit 18.*

Motion #10 by Mr. Seetot, seconded by Mr. Katchatag to support WP20-34. The opportunity to trap weasel during the proposed dates currently exists under State regulations. Therefore, no additional harvest is expected. This proposal would also reduce confusion by aligning Federal and State regulations.

Motion #10 for WP20-34 passed on a unanimous vote.

***2020 Fisheries Resource Monitoring Program:***

Council members discussed areas of concern, including the Pilgrim River salmon escapement, the impacts of increasing beaver dams, warm and shallow water, dead fresh salmon on the riverbanks, and increased algae blooms. Mr. Kirk asked that monitoring of the Píkmíktalik and Niukluk Rivers be considered as Priority Information Needs for the Council.

***Identify Issues for FY2019 Annual Report:***

The Council did not identify any items for the draft FY2019 Annual Report.

**Agency Reports:**

- Comprehensive Muskox Report for the Seward Peninsula presented by Letty Hughes, BELA, Tom Sparks, BLM, and Bill Dunker, ADF&G.
- Unit 22 Wildlife Population and Status Update presented by Bill Dunker, ADF&G and Tony Gorn, ADF&G.
- Emperor Goose Update presented by Tyler Lewis, ADF&G.
- National Park Service BELA Update presented by Nicole Braem, BELA and Letty Hughes, BELA.
- BLM Update presented by Tom Sparks.
- ADF&G Fisheries Update presented by Luke Henslee.
- Board of Game Proposals presented by Bill Dunker, ADF&G, and Sarah Germain, ADF&G.
  - The Council heard but did not move to take action on Proposals 31, 32, 35, 36, 37, 38, 43.
  - *Proposal 30: Include muskox on the list of species that can be taken under a proxy permit in Unit 22.* Motion #11 by Mr. Seetot, seconded by Mr. Oyoumick, to support Proposal 30. Council members highlighted that muskox hunters in the region are well known and very proficient. It is a traditional practice for those with the means and hunting expertise to help those who are in need. Muskox should not be treated any differently than other species that are shared with those community members who are either physically or economically unable to participate in this important subsistence activity. Motion #11 for Proposal 30 passed on a unanimous vote.
  - *Proposal 33: Modify hunting seasons and require a registration permit for moose hunting in Unit 22D Remainder.* Motion #12 by Mr. Kirk, seconded by Mr. Oyoumick, to support Proposal 33. The Council believes this proposal is similar in nature to WP20-38 and will help to conserve moose in Unit 22D, remainder, while still allowing for a subsistence harvest. Motion #12 for Proposal 33 passed by a unanimous vote.
  - *Proposal 34: Open a nonresident drawing hunt for moose in Unit 22D Remainder.* Motion #13 by Mr. Seetot, seconded by Mr. Oyoumick, to support Proposal 34. Council

members discussed the low-density moose population in Unit 22D Remainder. Opening up non-resident hunt in this region would negatively impact subsistence uses and threaten an already low density moose population. Motion #13 for Proposal 34 failed on a unanimous vote.

- *Proposal 39: Extend the hunting season for brown bear in Unit 22D and 22E, and increase the resident bag limit.* Motion #14 by Mr. Oyoumick, seconded by Mr. Seetot, to support Proposal 39. Council members heard from ADF&G that they are continuing to monitor the impacts of previous regulatory changes in these units, but are neutral on this proposal. The Council, however, supports giving hunters more opportunity to take bears and does not believe it will negatively impact the population. The Council also believes that hunters would take two versus one bear if given the opportunity. Motion #14 for Proposal 39 passed by a unanimous vote.
- *Proposal 40: Require a registration permit for brown bear hunting in Unit 22C.* Motion #15 by Mr. Katchatag, seconded by Mr. Oyoumick, to support Proposal 40. The Council believes requiring a registration permit would be burdensome to hunters in an area where local subsistence users believe the brown bear population is high and resulting in unsustainable predation on moose and conflicts at fish camps. Motion #15 for Proposal #40 passed by unanimous vote.
- *Proposal 41: Extend the season date for brown bear hunting in Unit 22B and 22C.* Motion #16 by Mr. Kirk, seconded by Mr. Seetot, to support Proposal 41. Council members support extending and aligning the season closing dates in Units 22B and 22C with the closing dates in the adjacent Unit of 22A. This would reduce regulatory complexity and provide additional opportunities to hunt brown bears in the region. Motion #16 for Proposal 41 passed by a unanimous vote.
- *Proposal 42: Allow the use of snowmachines to position brown bears for harvest in Unit 22.* Motion #17 by Mr. Kirk, seconded by Mr. Oyoumick, to support Proposal 42. Council members noted that the use of snowmachines to position caribou, wolves, or wolverine is currently permitted in Unit 22. These species may also be shot from a stationary snowmachine. Therefore, allowing the use of snowmachines to position bears would be consistent with current methods and means in the region. Permitting the use of snowmachines to position brown bears would be especially helpful during the spring months when access is difficult. Motion #17 for Proposal 42 passed by a unanimous vote.

**Future Meeting Dates:**

March 11-12, 2020 in Nome, Alaska

October 28-29, 2020 in Nome, Alaska

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Karen Deatherage, DFO  
USFWS Office of Subsistence Management

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Louis Green, Jr., Chair  
Seward Peninsula Subsistence Regional Advisory Council

These minutes will be formally considered by the Seward Peninsula Subsistence Regional Advisory Council at its March 11-12, 2020 meeting in Nome, Alaska, and any corrections or notations will be incorporated in the minutes at that meeting.

A more detailed report of this meeting, copies of the transcript and meeting handouts are available upon request. Call Karen Deatherage at 907-474-2270, email [karen\\_deatherage@fws.gov](mailto:karen_deatherage@fws.gov).

DRAFT

Seward Peninsula Subsistence Regional Advisory Council  
c/o Office of Subsistence Management  
1011 East Tudor Road MS 121  
Anchorage, Alaska 99503-6199  
Phone: (907) 787-3888, Fax: (907) 786-3898  
Toll Free: 1-800-478-1456

RAC/SP 19050.KD

Ted Spraker  
Chair  
Alaska Board of Game  
P.O. Box 115526  
Juneau, Alaska 99811-5526

Re: Comments for Board of Game **Proposals 30, 33, 34, 39, 40, 41, and 42**

Dear Chairman Spraker:

I am writing to you on behalf of the Seward Peninsula Subsistence Regional Advisory Council (Council) to provide comments on **Proposals 30, 33, 34, 39, 40, 41 and 42** coming before the Alaska Board of Game (BOG) at its Western Arctic/Western Region meeting scheduled for January 17 - 20, 2020, in Nome.

The Council represents subsistence harvesters of fish and wildlife resources on Federal public lands and waters in the Seward Peninsula Region. It was established by the authority in Title VIII of the Alaska National Interest Lands Conservation Act (ANILCA) and is chartered under the Federal Advisory Committee Act. Section 805 of ANILCA and the Council's charter establishes the Council's authority to initiate, review and evaluate proposals for regulations, policies, management plans, and other matters related to subsistence uses of fish and wildlife within the region. The Council also reviews resource management actions occurring outside their regions that may impact subsistence resources critical to communities served by the Council. The Council provides a forum for the expression of opinions and recommendations regarding any matter related to the subsistence uses of fish and wildlife within the region.

The Council held a public meeting on October 22-23, 2019 in Nome. Among the agenda items discussed were several BOG proposals that would affect subsistence users and resources in the Seward Peninsula Region. The Council discussed and voted to submit the following comments to the BOG for consideration as it deliberates these proposals:



Spraker

2

**Proposal 30:** 5 AAC 5 AAC 92.011(k). Taking of game by proxy.

Include muskox on the list of species that can be taken under a proxy permit in Unit 22.

Council recommendation: The Council voted unanimously to **SUPPORT** this proposal.

Council comments: Council members highlighted that muskox hunters in the region are well known and very proficient. It is a traditional practice for those with the means and hunting expertise to help those who are in need. Muskox should not be treated any differently than other species that are shared with community members who are either physically or economically unable to participate in this subsistence activity.

**Proposal 33:** 5 AAC 85.045. Hunting seasons and bag limits for moose.

Modify hunting seasons and require a registration permit for moose hunting in Unit 22D Remainder.

Council recommendation: The Council voted unanimously to **SUPPORT** this proposal.

Council comments: This proposal is similar to Federal Wildlife Proposal WP20-38, which was recently supported *with modification* by the Council at its October 22 - 23, 2019 meeting in Nome. The Council would like to align Federal and State regulations and therefore supports Proposal 33, which requests: 1) a to-be-announced Dec. 1 - Jan. 31 season for one antlered bull in Unit 22D Remainder, 2) the elimination of the Oct. 1 - Nov. 30 season, and 3) a registration permit system. The Council believes a to-be-announced system for a winter hunt would protect the low density moose population in Unit 22D Remainder, and allow for additional harvest during December and January if the harvest quota was not met in the fall. The Council determined that a harvest limit of one antlered bull during the December and January season is necessary to protect cow moose. The Council also agrees with the elimination of the Oct. 1 - Nov. 30 season in order to protect breeding bulls during the rut. (The Council proposed to eliminate the Oct. 1 - Nov. 30 season under Federal subsistence regulations through WP20-38 as well.) Users will still have the opportunity to harvest moose during the August and September, which is generally preferred due to the quality of meat, and possibly during a to-be-announced December and January season, if the harvest quota was not met in the fall. Finally, the Council believes that a registration permit is needed to document moose harvest in Unit 22D Remainder.

**Proposal 34:** 5 AAC 85.045. Hunting seasons and bag limits for moose. Open a nonresident drawing hunt for moose in Unit 22D Remainder.

Council recommendation: The Council voted unanimously to **OPPOSE** this proposal.

Spraker

3

Council comments: Council members discussed the low-density moose population in Unit 22D Remainder. Opening up a non-resident hunt in this region would negatively impact subsistence users and threaten an already low density moose population.

**Proposal 39:** 5 AAC 85.020. Hunting seasons and bag limits for brown bear. 5 AAC 92.132. Bag limit for brown bears. Extend the hunting season for brown bear in Unit 22D and 22E, and increase the resident harvest limit.

Council recommendation: The Council voted unanimously to **SUPPORT** this proposal.

Council comments: Council members heard from the Alaska Department of Fish and Game that they are continuing to monitor the impacts of previous regulatory changes in these units and are neutral on this proposal. The Council, however, supports giving hunters more opportunity to take bears and does not believe it will negatively impact the population. The Council also believes that hunters would take two versus one bear if given the opportunity.

**Proposal 40:** 5 AAC 85.020. Hunting seasons and harvest limits for brown bear. Require a registration permit for brown bear hunting in Unit 22C.

Council recommendation: The Council voted unanimously to **OPPOSE** this proposal.

Council comments: The Council believes requiring a registration permit would be burdensome to hunters in an area where local subsistence users believe the brown bear population is high, and predation on moose and conflicts at fish camps are a problem.

**Proposal 41:** 5 AAC 85.020. Hunting seasons and harvest limits for brown bear. Extend the season date for brown bear hunting in Unit 22B and 22C.

Council recommendation: The Council voted unanimously to **SUPPORT** this proposal.

Council comments: Council members support extending and aligning the season closing dates in Units 22B and 22C with the closing dates in adjacent Unit 22A. This would reduce regulatory complexity and provide additional opportunities to hunt brown bears in the region.

Spraker

4

**Proposal 42:** 5 AAC 92.080(4)(B)(i). Unlawful methods of taking game; exceptions.  
Allow the use of snowmachines to position brown bears for harvest in Unit 22.

Council recommendation: The Council voted unanimously to **SUPPORT** this proposal.

Council comments: Council members noted that the use of snowmachines to position caribou, wolves or wolverine is currently permitted in Unit 22. These species may also be shot from a stationary snowmachine. Therefore, allowing the use of snowmachines to position bears would be consistent with current methods and means in the region. Permitting the use of snowmachines to position brown bears would be especially helpful during the spring months when access is difficult.

The Council thanks the BOG for considering these comments, which reflect the importance of conserving healthy wildlife populations and providing for the continuation of subsistence uses in the Seward Peninsula region. We look forward to continuing discussions with the Alaska Department of Fish and Game and BOG on subsistence matters affecting the region. If you have questions about this letter, please contact me through Karen Deatherage, Subsistence Council Coordinator, with the Office of Subsistence Management, at (907) 474-2270 or karen\_deatherage@fws.gov.

Sincerely,



Louis Green, Jr.  
Chair

Cc: Federal Subsistence Board  
Thomas Doolittle, Acting Assistant Regional Director, Office of Subsistence Management  
Gregory Risdahl, Acting Deputy Assistant Regional Director, Office of Subsistence  
Management  
George Pappas, State Subsistence Liaison, Office of Subsistence Management

Suzanne Worker, Acting Subsistence Policy Coordinator, Office of Subsistence Management  
Chris McKee, Wildlife Division Supervisor, Office of Subsistence Management  
Pippa Kenner, Anthropologist, Office of Subsistence Management  
Tom Kron, Acting Council Coordination Division Supervisor, Office of Subsistence Management,  
Karen Deatherage, Subsistence Council Coordinator, Office of Subsistence Management  
Ben Mulligan, Assistant Commissioner, Alaska Department of Fish and Game  
Mark Burch, Special Projects Coordinator, Alaska Department of Fish and Game  
Janet Bavilla, Regional Coordinator, Western Region, Board Support Section  
Alaska Department of Fish and Game  
Seward Peninsula Subsistence Regional Advisory Council  
Interagency Staff Committee  
Administrative Record



U.S. Fish and Wildlife Service  
Bureau of Land Management  
National Park Service  
Bureau of Indian Affairs

## Federal Subsistence Board Informational Flyer



Forest Service

**Contact:** Regulatory Affairs Division Chief  
(907) 786-3888 or (800) 478-1456  
subsistence@fws.gov

### How to Submit a Proposal to Change Federal Subsistence Regulations

Alaska residents and subsistence users are an integral part of the Federal regulatory process. Any person or group can submit proposals to change Federal subsistence regulations, comment on proposals, or testify at meetings. By becoming involved in the process, subsistence users assist with effective management of subsistence activities and ensure consideration of traditional and local knowledge in subsistence management decisions. Subsistence users also provide valuable wildlife harvest information.

A call for proposals to change Federal subsistence fishing regulations is issued in January of even-numbered years and odd-numbered years for wildlife. The period during which proposals are accepted is no less than 30 calendar days. Proposals must be submitted in writing within this time frame.

You may propose changes to Federal subsistence season dates, harvest limits, methods and means of harvest, and customary and traditional use determinations.

#### **What your proposal should contain:**

*There is no form to submit your proposal to change Federal subsistence regulations. Include the following information in your proposal submission (you may submit as many as you like):*

- Your name and contact information (address, phone, fax, or E-mail address)
- Your organization (if applicable).
- What regulations you wish to change. Include management unit number and species. Quote the current regulation if known. If you are proposing a new regulation, please state, “new regulation.”
- Write the regulation the way you would like to see it written in the regulations.
- Explain why this regulation change should be made.
- You should provide any additional information that you believe will help the Federal Subsistence Board (Board) in evaluating the proposed change.

**You may submit your proposals by:**

1. By mail or hand delivery to:  
Federal Subsistence Board  
Office of Subsistence Management  
Attn: Theo Matuskowitz  
1011 E. Tudor Rd., MS-121  
Anchorage, AK 99503
2. At any Federal Subsistence Regional Advisory Council meeting (A schedule will be published in the Federal Register and be announced statewide, bi-annually, prior to the meeting cycles)
3. On the Web at <http://www.regulations.gov>

Submit a separate proposal for each proposed change; however, do not submit the same proposal by different accepted methods listed above. To cite which regulation(s) you want to change, you may reference [50 CFR 100](#) or [36 CFR 242](#) or the proposed regulations published in the Federal Register: <http://www.gpoaccess.gov/fr/index.html>. All proposals and comments, including personal information, are posted on the Web at <http://www.regulations.gov>.

For the proposal processing timeline and additional information contact the Office of Subsistence Management at (800) 478-1456/ (907) 786-3888 or go to <http://www.doi.gov/subsistence/proposal/submit.cfm>.

**How a proposal to change Federal subsistence regulations is processed:**

1. Once a proposal to change Federal subsistence regulations is received by the Board, the U.S. Fish and Wildlife Service, Office of Subsistence Management (OSM) validates the proposal, assigns a proposal number and lead analyst.
2. The proposals are compiled into a book for statewide distribution and posted online at the Program website. The proposals are also sent out the applicable Councils and the Alaska Department of Fish and Game (ADF&G) and the Interagency Staff Committee (ISC) for review. The period during which comments are accepted is no less than 45 calendar days. Comments must be submitted within this time frame.
3. The lead analyst works with appropriate agencies and proponents to develop an analysis on the proposal.
4. The analysis is sent to the Councils, ADF&G and the ISC for comments and recommendations to the Board. The public is welcome and encouraged to provide comments directly to the Councils and the Board at their meetings. The final analysis contains all of the comments and recommendations received by interested/affected parties. This packet of information is then presented to the Board for action.
5. The decision to adopt, adopt with modification, defer or reject the proposal is then made by the Board. The public is provided the opportunity to provide comment directly to the Board prior to the Board's final decision.
6. The final rule is published in the Federal Register and a public regulations booklet is created and distributed statewide and on the Program's website.

**A step-by-step guide to submitting your proposal on [www.regulations.gov](http://www.regulations.gov):**

1. Connect to [www.regulations.gov](http://www.regulations.gov) – there is no password or username required.
2. In the white space provided in the large blue box, type in the document number listed in the news release or available on the program webpage, (for example: FWS-R7-SM2014-0062) and select the light blue “Search” button to the right.

3. Search results will populate and may have more than one result. Make sure the Proposed Rule you select is by the U.S. Fish and Wildlife Service (FWS) and **not** by the U.S. Forest Service (FS).
4. Select the proposed rule and in the upper right select the blue box that says, "Comment Now!"
5. Enter your comments in the "Comment" box.
6. Upload your files by selecting "Choose files" (this is optional).
7. Enter your first and last name in the spaces provided.
8. Select the appropriate checkbox stating whether or not you are providing the information directly or submitting on behalf of a third party.
9. Fill out the contact information in the drop down section as requested.
10. Select, "Continue." You will be given an opportunity to review your submission.
11. If everything appears correct, click the box at the bottom that states, "I read and understand the statement above," and select the box, "Submit Comment." A receipt will be provided to you. Keep this as proof of submission.
12. If everything does not appear as you would like it to, select, "Edit" to make any necessary changes and then go through the previous step again to "Submit Comment."

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**Missing out on the latest Federal subsistence issues?** If you'd like to receive emails and notifications on the Federal Subsistence Management Program you may subscribe for regular updates by emailing [fws-fsb-subsistence-request@lists.fws.gov](mailto:fws-fsb-subsistence-request@lists.fws.gov). Additional information on the Federal Subsistence Management Program may be found on the web at [www.doi.gov/subsistence/index.cfm](http://www.doi.gov/subsistence/index.cfm) or by visiting [www.facebook.com/subsistencealaska](http://www.facebook.com/subsistencealaska).

# ALASKA'S CHANGING ENVIRONMENT

Documenting Alaska's physical and biological changes through observations



Suggested citation:

Thoman, R. & J. E. Walsh. (2019). Alaska's changing environment: documenting Alaska's physical and biological changes through observations. H. R. McFarland, Ed. International Arctic Research Center, University of Alaska Fairbanks.



# WELCOME

Alaska has recently experienced profound environmental change related to extreme weather events and deviations from the historical climate. Sustained warmth, sea ice loss, coastal flooding, river flooding, and major ecosystem changes have impacted the daily lives of Alaskans around the state.

Temperatures have been consistently warmer than at any time in the past century. This warming varies greatly across the state, with northern and western regions warming at twice the rate of southeastern Alaska. The growing season has increased substantially in most areas, and the snow cover season has shortened. Precipitation overall has increased, and like temperature, the changes vary regionally. The ocean around Alaska is now regularly warmer than at any time in the past 150 years, affecting everything from algae to fisheries and human health.

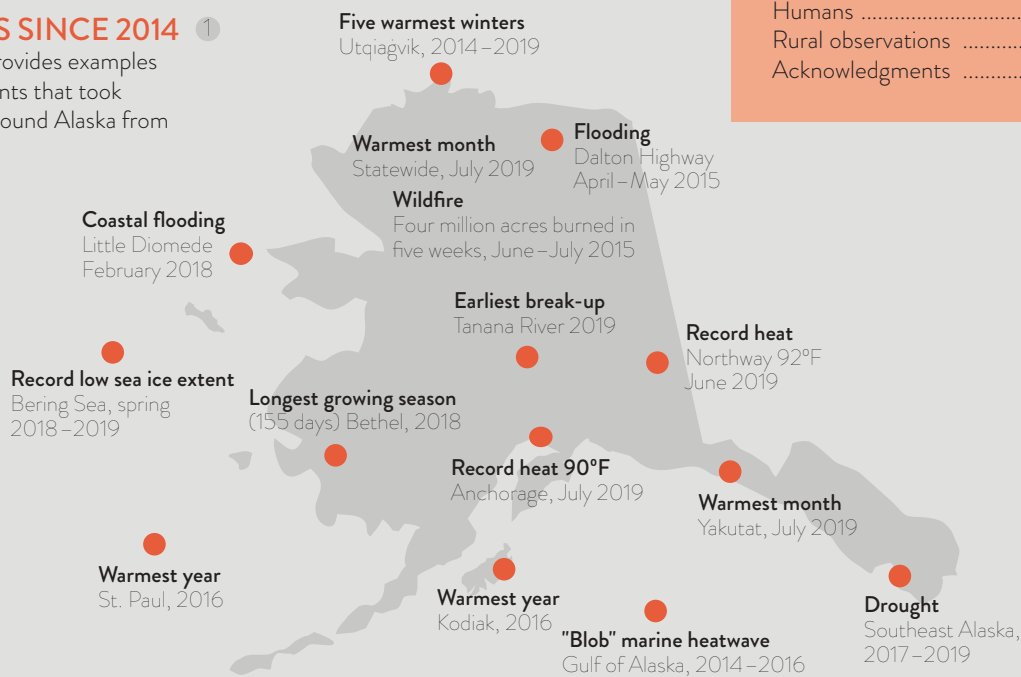
Coastal flooding during the autumn storm season has occurred on the Bering Sea coast throughout history, but recent winters have brought record low ice, which in the past has served as a buffer to big Bering Sea storms. This has resulted in out-of-season flooding occurring in places expecting stable sea ice.

Across the following pages we have compiled observations through August 2019 about the major changes currently affecting Alaska's physical and biological systems. We focus on the past five years, though we also provide information from earlier decades for historical context. This effort is by no means comprehensive, but serves to highlight the monumental shifts occurring in our state. We welcome additional contributions to future iterations of this product.

The International Arctic Research Center and the University of Alaska Fairbanks are providing individuals, Alaska businesses, communities, government, and others with the resources needed to better assess impacts and develop adaptation strategies.

## RECORDS SINCE 2014 <sup>1</sup>

This graphic provides examples of notable events that took place in and around Alaska from 2014 to 2019.



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Number in grey circle on each graphic links to source on p. 16

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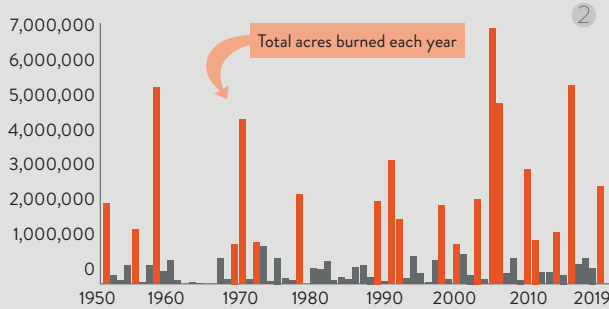
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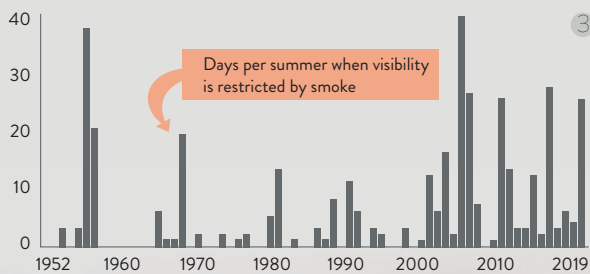
## BIG FIRE SEASONS MORE FREQUENT

Warmer springs and earlier snow melt had lengthened the wildfire season to the point in 2006 when Alaska's interagency fire management organization changed the "start date" for wildfire response from May 1 to April 1. While the year-to-year variability of acreage burned has changed little, the frequency of large wildfire seasons has increased dramatically. Wildfire seasons with more than one million acres (red bars in graph) burned have increased by 50% since 1990, compared to the 1950-1989 period.



## DRAMATICALLY MORE SMOKY DAYS

As the frequency of big (1+ million acres) wildfire seasons has increased, so has the frequency of smoky days, posing a significant health hazard. Prior to 2004, Fairbanks had only one summer (1957) in the previous half century when there were more than three weeks of significant smoke. Since 2004, it has occurred five times, including twice since 2014.

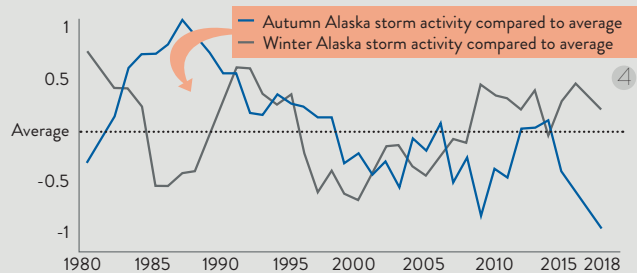


# SEASONS

Many factors in Alaska's environment are specific to certain times of year: ice break-up of Alaska's big rivers is a sure sign of spring; wildfires are a summer issue, and the season is lengthening; costly coastal flooding along the Bering and Chukchi Seas has historically been an autumn concern. While powerful storms impacting maritime operations near the Aleutians and Gulf of Alaska can occur any time of year, the strongest storms nearly always happen in the fall and winter months. Many of these seasonal events have experienced profound changes in recent years.

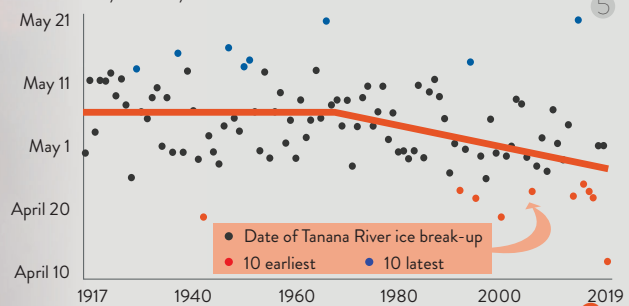
## STORMINESS NOT INCREASING

Storminess, related to the frequency, duration, and intensity of wind, is one of the most important aspects of day-to-day weather for Alaskans. In and around Alaska there has been a slight overall decline in autumn (September-November) storminess over the past 40 years. Winter (December-February) storminess has shown no clear trend since 1990. There has also been no detectable trend in the number of moderate and strong storms during the past 70 years over the Bering and Chukchi Seas, where sea ice has retreated. However, even without an increase in storms, coastal flooding and erosion in these waters are increasing as the sea ice-free open water season lengthens.



## RIVER BREAK-UP HAPPENING EARLIER

Alaskans have closely watched spring river ice break-up for millennia, and for generations have monitored the timing of the break-up of the Tanana River at Nenana. Break-up has trended earlier, especially in recent years. Four of the past six years have seen break-up earlier than all but one year prior to 1990. The earliest break-up in the history of the Nenana Ice Classic, by six days, was in 2019.

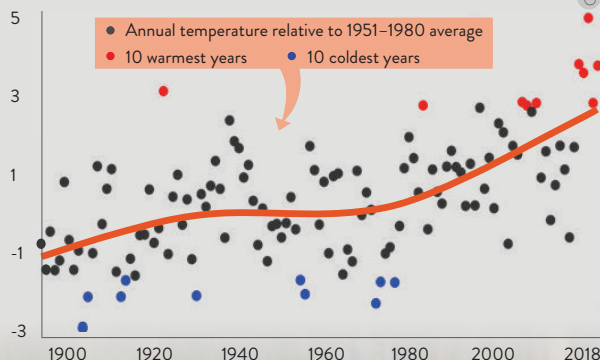


# TEMPERATURE

Recent years have brought many temperature extremes to Alaska, including the warmest year (2016), the warmest month (July 2019), and in places like Anchorage, the warmest day (July 4, 2019). Air temperatures in Alaska are rising twice as fast as in other parts of the United States and, apart from sea ice, are the most obvious sign of change. Factors contributing to this warming include decreases in sea ice and snow cover, warming ocean, and increasing greenhouse gases. Of course, there is considerable day-to-day and even year-to-year variability, depending on average storm tracks, but these trends are unmistakable.

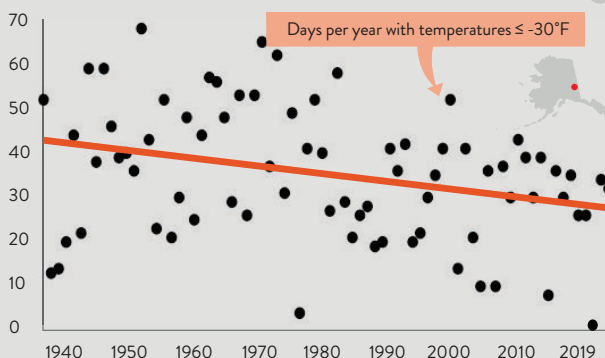
## WARMER TEMPERATURES

Annual average temperatures are widely used as a measure for long term changes, and modern techniques allow reasonable estimates of temperatures over large areas back to the 1800s. Temperatures in and around Alaska have been rising since the 1970s, with typical annual average statewide temperatures now 3 to 4°F warmer than during the early and mid-20th century. Recent years have all been exceptionally warm. In fact, four of the past five years (2014–16, 2018) were warmer than any year prior to 2014.



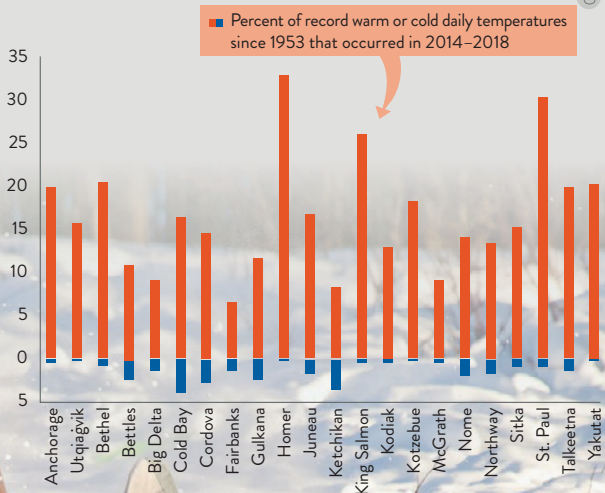
## FEWER VERY COLD DAYS

One of the most dramatic changes in interior and northern Alaska has been the decrease in the number of very cold days in winter. This graphic shows that the typical number of days in Northway, Alaska with low temperatures of -30°F or lower has fallen from more than 40 days prior to 1960 to less than 30 days in the past decade. This trend is representative of most interior Alaska locations, including Fairbanks.



## RECORD HIGHS OUTNUMBER LOWS

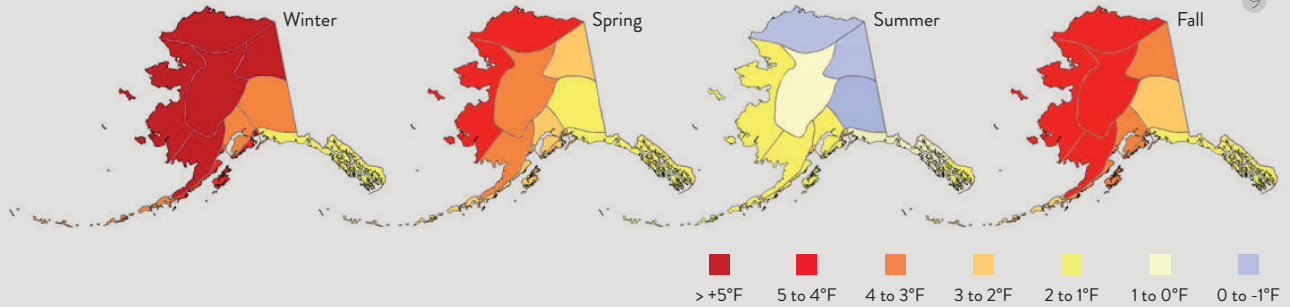
Daily high and low temperature records are a widely reported measure of extreme weather. Given a stable climate (i.e., no warming or cooling trend) we would expect fewer than 10 percent of both high and low daily temperature records, for the period 1953–2018, to have been set during the past five years. However, since 2014, there have been five to 30 times more record highs set than record lows.



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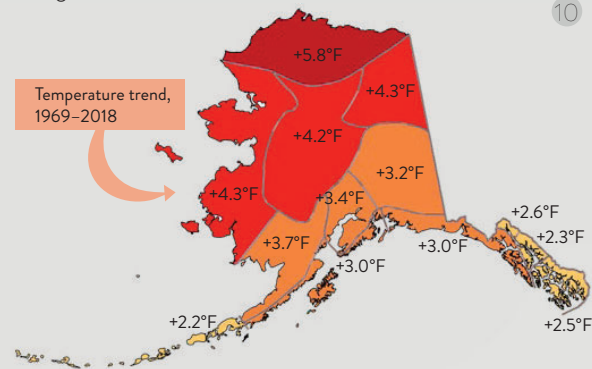
### FALL & WINTER WARMER THAN AVERAGE

2014–2018 average temperatures in most regions and seasons have been dramatically warmer than the average for 1981–2010. The exception is summer, when the past five years have been close to normal over much of the state.



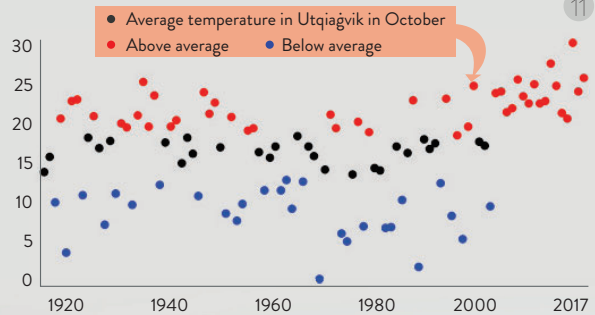
### GREATEST WARMING IN WEST & NORTH

Temperatures are rising all across the state, but not uniformly. The changes are largest over northern and western Alaska, where snow and especially sea ice losses are impacting the regional climate. Temperatures have risen least dramatically in southeast Alaska and the Aleutians, where seasonal snowpack changes and sea ice are more indirect factors.



### UTQIAĠVIK HIGH TEMPERATURES

The abrupt change in air temperatures due to the loss of sea ice is nowhere more obvious than in Utqiaġvik (formerly Barrow) during the month of October. Direct heating from the sun is weak during October, so the autumn air temperatures are controlled by the amount of open water offshore of Utqiaġvik. Prior to 2002, many Octobers had extensive ice through the entire month or at least by late October, allowing for much lower temperatures. In recent years, open water remained late into fall, and air temperatures were consistently warmer relative to the past.

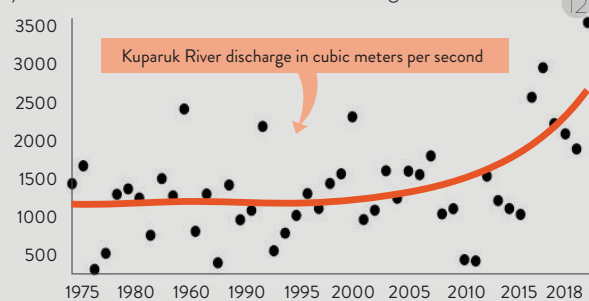


# PRECIPITATION

Alaska's precipitation is increasing throughout the state. Even so, precipitation varies greatly over short distances and is very strongly influenced by the way air flows across Alaska's mountain ranges.

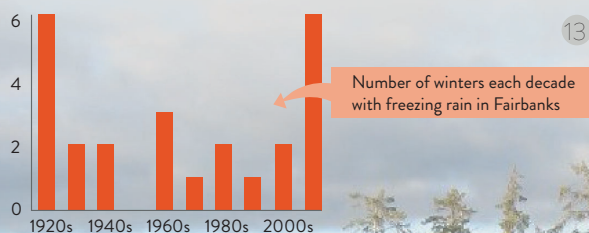
## MORE RUNOFF ON NORTH SLOPE

The amount of water flowing in non-glacier fed rivers is a useful indicator of annual precipitation. The non-glacial Kuparuk River on the North Slope has been monitored since the days of Trans-Alaska oil pipeline construction. Since 2013, the Kuparuk River has experienced unprecedented high annual flow, indicating high (relative to the prior 40 years) snow and summer rains in this region.



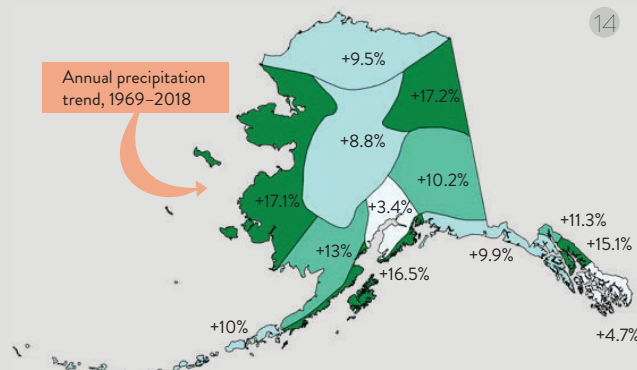
## FREEZING RAIN

Freezing rain can pose significant threats to safety and wildlife. During the last decade, the number of winters with freezing rain in Fairbanks more than doubled what was typical for the 1930–2000 period. School day cancellations associated with freezing rain have also increased in recent years. In winters with heavy ice accumulation on vegetation, caribou die-offs have occurred because animals are unable to access their food.



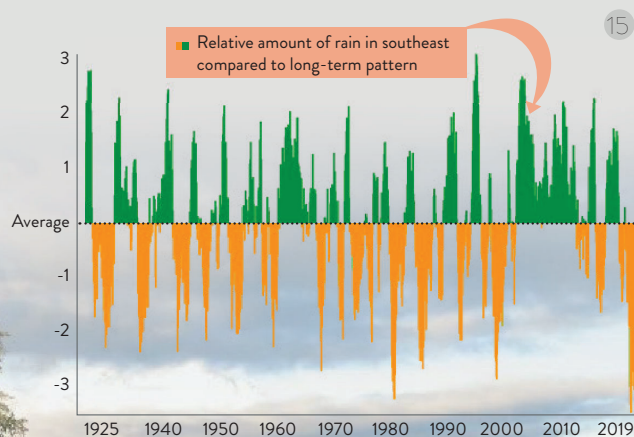
## ANNUAL PRECIPITATION INCREASING

Over the past half century, annual precipitation has increased in all regions of the state. The best available estimates over the century time-scale suggest Alaska as a whole was relatively wet early in the 20th century, then drier from the 1940s–1990s, and wetter again recently.



## A RAINFOREST DROUGHT

While precipitation over long time-scales is increasing, year-to-year variability remains important. Southeast Alaska is one of the wettest areas in the world. Below is the Standardized Precipitation Index for the region. The values reached in 2017–2019 were the lowest rainfall on record. This drought contrasts with the prolonged wet period of the early 2000s. Partly for this reason, the impacts of the recent drought have been tremendous, despite longer dry periods in the past. Some reservoir levels are now too low to reliably run hydropower, prompting short-term water conservation efforts.



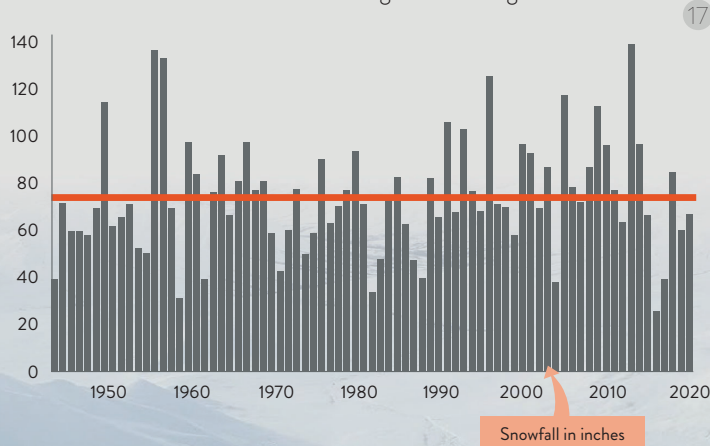
## SHRINKING SNOW SEASON STATEWIDE

The snowpack now develops about a week later in autumn and melts nearly two weeks earlier in the spring compared to the late 1990s.



## NO CHANGE IN ANCHORAGE

Anchorage's total seasonal snowfall shows no significant trend from the early 1940s to the present, even though snowfall for five of the past six cold seasons has been less than the long-term average.



not surviving the summer season, so the underlying dark dirty snow is left exposed. Because dark snow absorbs more sunlight, this change in color could make the snowfields even more likely to melt in summer. Of the 34 square miles of white snowfields seen in 1985, only four square miles remained by 2017.



# SNOW

Alaska now becomes 50% snow covered about a week later in October than in the 1990s. The snow-off date (when statewide snow coverage drops below 50%) is now nearly two weeks earlier than in the 1990s. The five earliest snow-off dates have all occurred since 2014. This shorter snow season impacts a wide variety of activities, ranging from overland travel by snow machine or dog sled to recreational skiing. Road maintenance is also affected by the delayed snow onset and earlier melt. However, a shorter snow season does not necessarily translate to less snowfall, as heavy snow events can occur in a compressed snow season. Despite the shorter snow season for the state as a whole, winter snowfall in some areas like Anchorage has not decreased significantly.

## SHRINKING SNOW FIELDS IN THE BROOKS RANGE

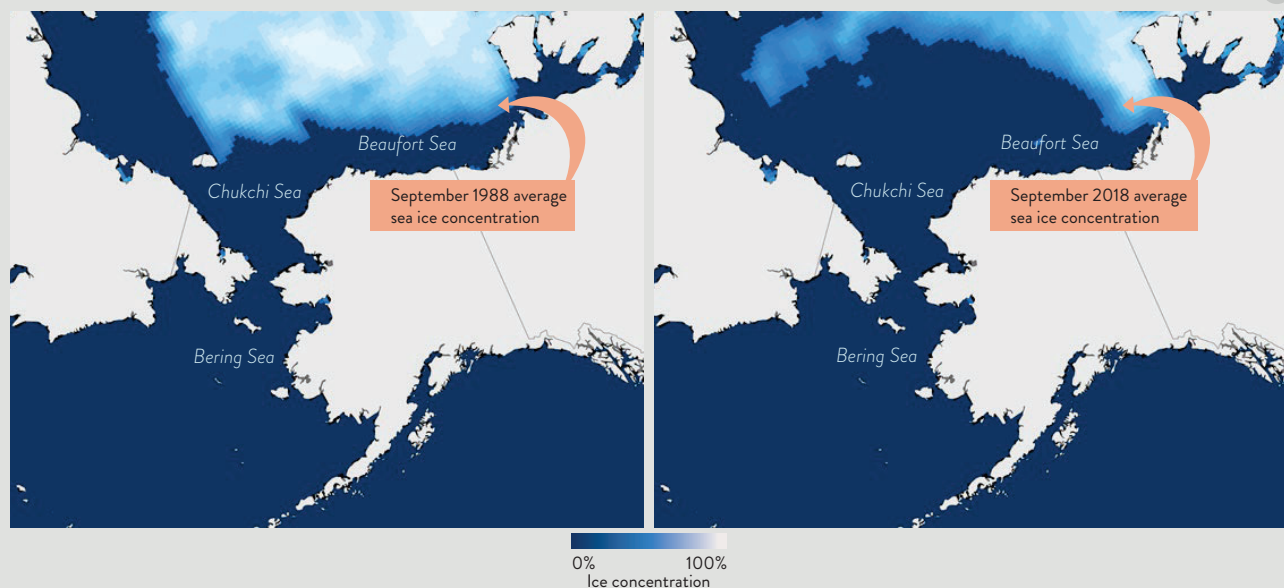
A different metric for changing snow is the area of year-round snow cover, also known as perennial snowfields. These thin snowfields are highly susceptible to changes in weather and climate. In Gates of the Arctic National Park and Preserve (colored red on the map) in the central Brooks Range, smaller areas of winter snowpack are now surviving the summer melt season (July 1–August 15) compared to 1985. The biggest change is related to the color of the snowfields, which are becoming darker. Since new snow is typically brighter than old snow, this suggests that fresh snow from the previous winter is

# SEA ICE

Sea ice plays a profound role in the climate, environment, and economies of Alaska. The presence of sea ice significantly modulates regional temperatures and moisture, determines the structure of the marine food web, and shapes the kinds of activities that people can or cannot do: from subsistence and travel to resource extraction to national security. Nothing in the Alaska environment is changing faster than sea ice.

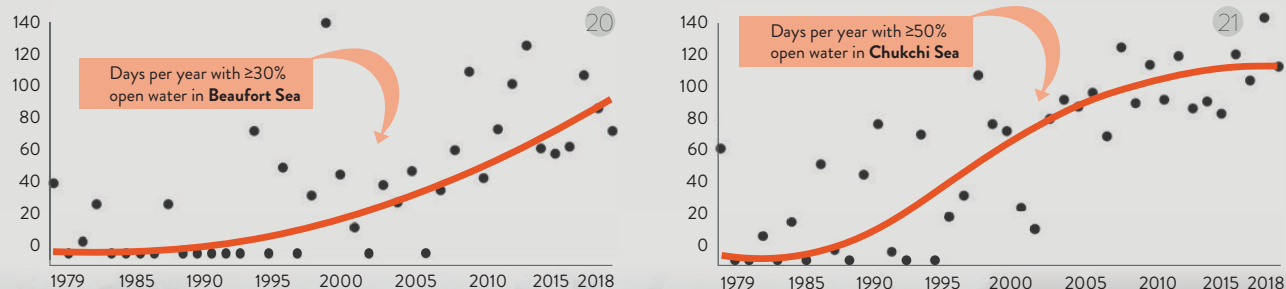
## SEA ICE FORMS LATER IN FALL

The extent, duration, and thickness of sea ice has changed significantly in the seas around Alaska. The changes have been most widespread in the late summer and autumn. The average sea ice concentration in September of 1988 (left) and 2018 (right), both of which are fairly typical for their eras, shows much lower ice concentrations (or no ice) in the Chukchi and Beaufort Seas in 2018 compared to 30 years prior.



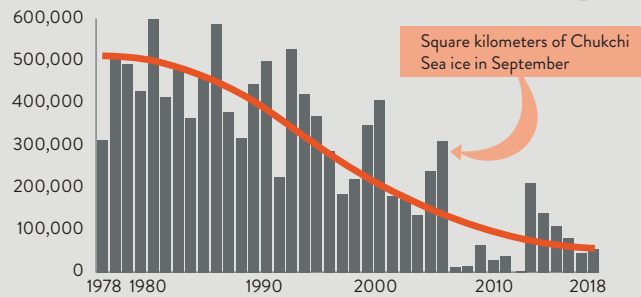
## MORE LARGE OPEN WATER AREAS

Recent years have seen a dramatic increase in the duration of open water in the Chukchi and Beaufort Seas to the north and northwest of Alaska. In both seas there is now typically open water for three to four months.



### CHUKCHI SEA ICE EXTENT DECLINE

Sea ice extent in the Chukchi Sea has declined dramatically outside of winter in recent years, especially during the late summer. Typical ice extent in summer is only 10% of what it was in the early 1980s, and the September Chukchi Sea ice edge is now regularly hundreds of miles northwest of the Alaska coast.



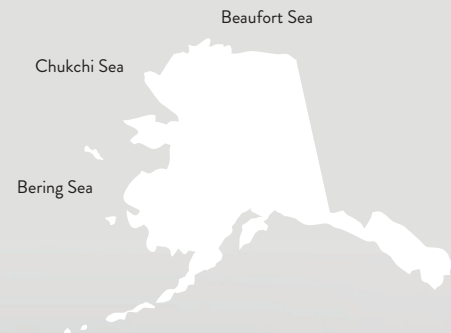
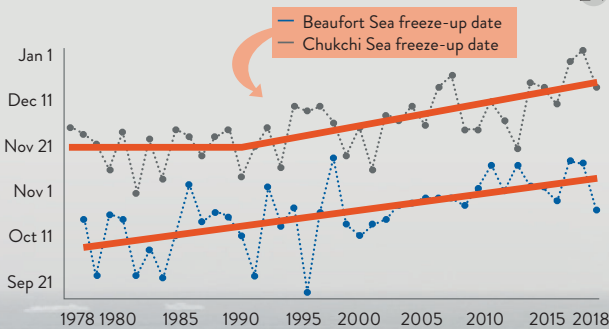
### BERING SEA ICE EXTENT DECLINE

For decades, communities in the Bering Sea region have reported that sea ice quality has been changing, with little or no old ice and thinner ice than in the past. Data show that the extents of spring and autumn ice have been declining, but until recently there has been no long term trend in the winter and early-season ice extent. However, in 2018 and 2019, late winter ice coverage in the Alaska waters of the Bering Sea was far lower than any winter in the past 170 years.



### LATE BEAUFORT & CHUKCHI FREEZE-UP

Both the Beaufort and Chukchi Seas become entirely ice covered during the winter (though there are always cracks and leads). However, ice-over is now happening significantly later in the fall than in past decades, with recent years generally two to three weeks later than was typical in the 1980s.



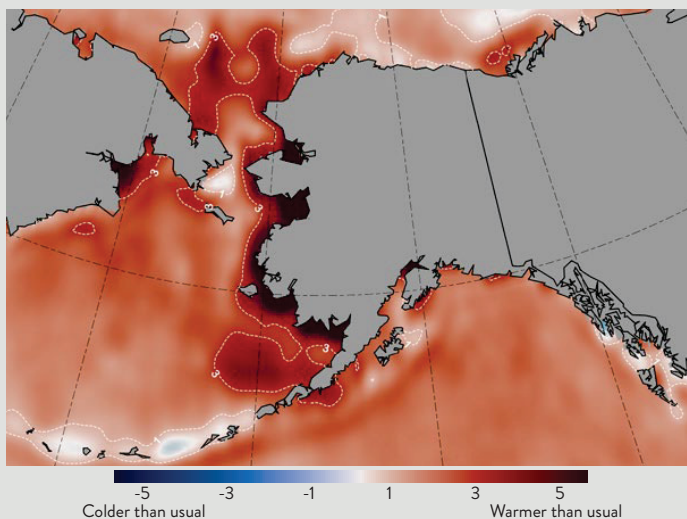


# OCEAN

The seas surrounding Alaska have been unusually warm in recent years, with unprecedented warmth in some cases. This warmth can be seen throughout the Alaska region, including the Gulf of Alaska as well as the Bering, Chukchi, and Beaufort Seas. The years 2015–2016 coincided with the occurrence of the “blob” of exceptionally warm water in the North Pacific Ocean. This warmth has persisted and even become more extreme in the 2017–2019 period in association with the unprecedented loss of sea ice. The past two winters (2017–18 and 2018–19) have seen “marine heat waves” in the Bering Sea. The heat content of the entire water column was greater in 2018 than ever recorded. The “cold pool” of water usually near the bottom of the Bering Sea disappeared during this time. This disappearance has major implications for the region, as the cold pool served as a barrier to northward migration of various aquatic species.

## WARM SURFACE WATERS

Summer sea surface temperatures in Alaska waters have been much warmer (colored red below) than average (colored white) during 2014–2018, especially along the west coast, where the surface waters were 4–11°F warmer than average in the summer of 2019.

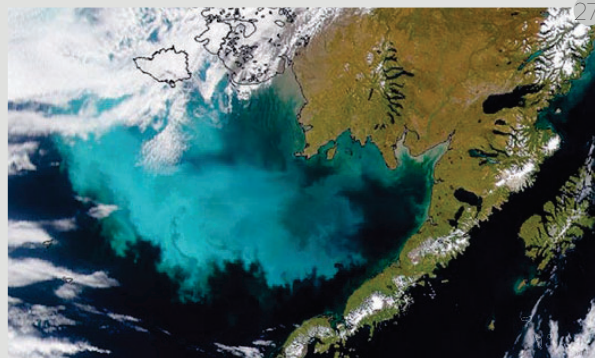


## OCEAN ACIDIFICATION

As atmospheric carbon dioxide concentrations increase, the ocean absorbs the additional CO<sub>2</sub>, leading to a decrease in pH. Ocean acidification poses major risks to marine ecosystems, and the risks are especially high in polar regions, because CO<sub>2</sub> dissolves more readily in cold water. Trends toward acidification have been detected north of Alaska in the Chukchi Sea and in the waters of the Canadian Arctic and the Greenland Sea, although the pre-2010 study periods pre-date the 2014–2019 focus of this report. Because ocean acidification threatens commercial fishing and subsistence activities in Alaska, the associated risks were recently mapped. The economic and social risks are highest in southwestern and southeastern Alaska. Systematic measurements of the chemistry of seawater west and south of Alaska are now underway, so that ocean acidification can be monitored in near-real time.

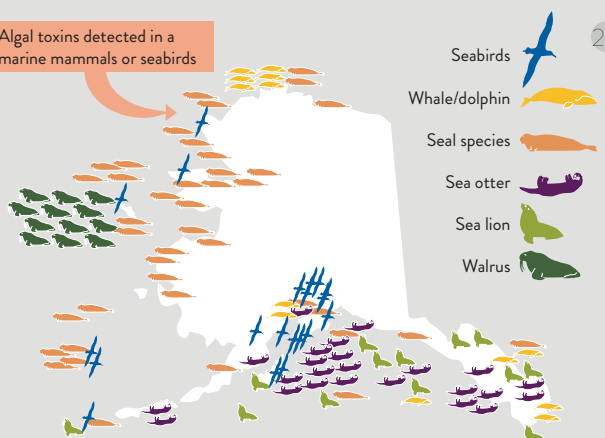
## WIDESPREAD ALGAL BLOOMS

The abnormally warm waters have had other consequences, including earlier and more widespread spring and summer algal blooms in Alaska waters (turquoise colored Bering Sea bloom shown in photo). Algal blooms sometimes produce harmful toxins. In recent years there have been increasing reports of harmful algal blooms linked to instances of human shellfish poisoning in the Gulf of Alaska. Algal toxins have been documented in both stranded and harvested marine mammals, as well as healthy and die-off seabirds across the state, but their effects on Alaska wildlife are not yet known.



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Algal toxins detected in a marine mammals or seabirds

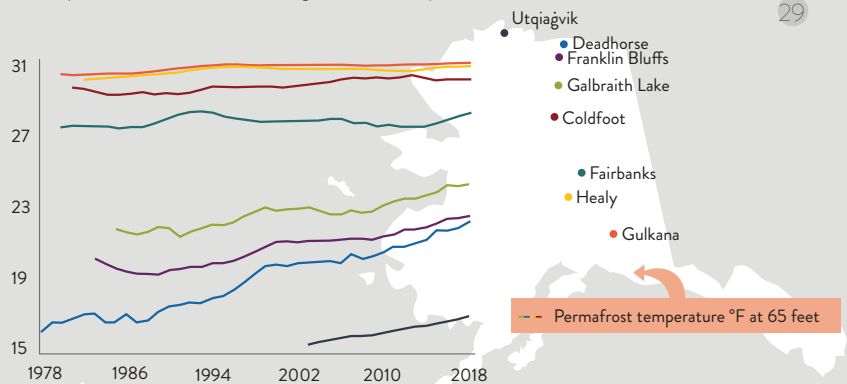


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# LAND

## WARMING PERMAFROST

Permafrost is warming in Alaska. Measurements of permafrost temperatures at depths of 30–65 feet, well below levels where the seasonal cycle is felt, show warming at essentially all monitoring sites in northern and interior Alaska. The warming is especially strong on the North Slope, where sites along the Dalton Highway have warmed by 2–5°F from the 1980s to 2018. Warming at Deadhorse, for example, would bring the temperature at 65-foot depth to the melting point of ice by 2100 if it were to continue at the current rate. In the interior the warming rates are smaller because permafrost temperatures are already reaching the melting point of ice and, as permafrost thaws, some heat is used in melting ice.

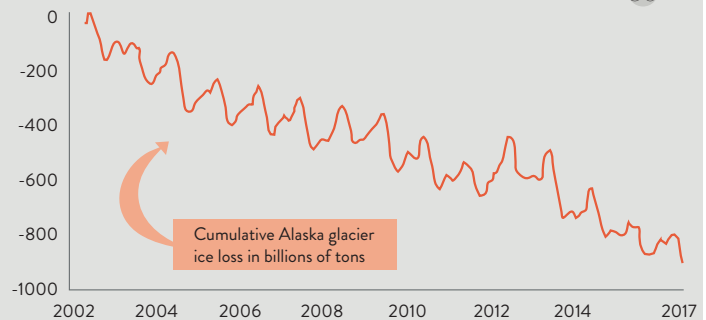


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Another measure of permafrost change is the depth of seasonal thaw, also known as active layer depth. Measurements at Council on the Seward Peninsula show that the thaw depth reached 33 inches in 2018, in contrast to much smaller values of 20–24 inches in the early part of the decade. The large thaw depths in recent years are consistent with high air temperatures of the 2016–2018 period.

## LOSS OF GLACIAL ICE

Each year the mass of glaciers increases due to snow in winter and then decreases during the summer melt season. Largely because of increasing air temperatures, summer melt has exceeded winter gain in recent years, resulting in the retreat and mass loss of Alaska glaciers. More than 90% of Alaska's glaciers are retreating. Between 2002 and 2017, Alaska glaciers thinned on average by several feet per year. Overall mass loss during this period was nearly 60 billion tons of ice per year. Alaska's glaciers contain enough ice to raise sea level by about 1.5 inches if all their ice were to melt.



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## GULKANA GLACIER RETREAT

The Gulkana Glacier in the eastern Alaska Range has been photographed and measured annually for over 50 years. The comparison photos below clearly show that the glacier has retreated, and mass data indicate that it thinned almost 100 feet between 1966 and 2018.



31

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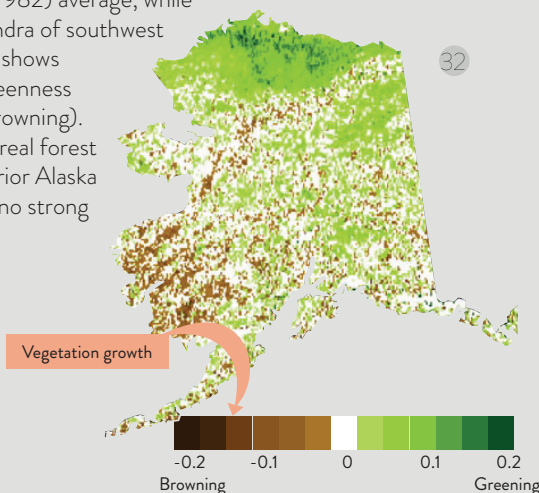
# PLANTS

Satellite measurements have been used to monitor the growth of vegetation over the past several decades. Satellites provide a measure of photosynthetic activity, which correlates with plant growth. An increase in this metric is referred to as “greening,” while a decrease is referred to as “browning” of the vegetation. Compared to other regions of the state, the tundra of the North Slope shows the most greening, or more plant growth, in the past five years relative to the longer-term average.

Growing Degree Days are widely used in agriculture to assess accumulated warmth over the course of the warm season. Higher values indicate more overall warmth. Many crops require a minimum amount of warmth to reach maturity. For example, peas require about 800 growing degree days before they are ready to be harvested, but canola requires 2000. Over the past five years, all regions of the state have had more total warmth than the long term normal, with the largest changes in southwest Alaska.

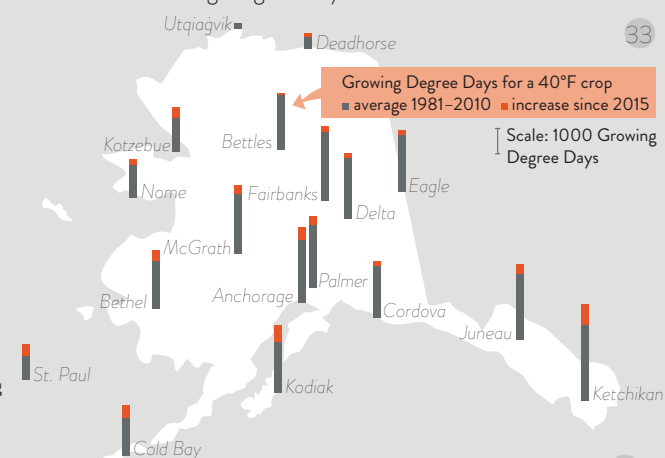
## NORTH SLOPE TUNDRA GREENING

The tundra of Alaska's North Slope shows increased greenness in 2014–2018 relative to the longer-term (post-1982) average, while the tundra of southwest Alaska shows less greenness (i.e., browning). The boreal forest of interior Alaska shows no strong trend.



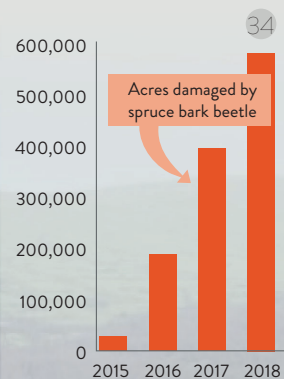
## GROWING SEASON WARMTH

Growing Degree Days relate the average daily temperature of a location compared to a threshold below which a specific crop would not grow, like peas below 40°F. This value for a single day accumulates across an entire growing season and can be used to estimate which crops will reach maturity. Since 2014, the number of Growing Degree Days have increased across Alaska.



## SPRUCE BARK BEETLE DEVASTATION

A major outbreak of spruce bark beetles has been spreading through southcentral Alaska during the past several years. The area affected by the outbreak increased from 33,000 acres in 2015 to 593,000 acres in 2018. Spruce bark beetle outbreaks have occurred previously in Alaska, most recently on the Kenai Peninsula in the late 1990s. While small populations of the beetles are always present in spruce forests, sudden increases in their populations are favored by a dry summer, which reduces trees' capacity to produce sap, a defense against the beetle. Longer and warmer summers also increase beetles' reproductive capacity, while milder winters increase over-winter survival rates. Damage from the spruce bark beetle is apparent in the large areas of gray and brown in this NASA aerial photo of the Susitna Valley during the summer of 2018.



# ANIMALS & FISH

## DELAYED BELUGA MIGRATION

Beluga whales migrate from the Bering Sea to the Chukchi and Beaufort Seas during the summer, followed by a return to the Bering in autumn. Data from beluga whales tagged with satellite-linked transmitters show that, comparing 1998–2002 to 2007–2012, beluga whales from the Chukchi Sea population delayed fall migration by about 33 days, resulting in a prolonged presence in the Beaufort Sea correlated with significantly later sea ice freeze-up.



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## SHRINKING WALRUS HABITAT

In the past four years, a dramatic shift in Bering Strait ice conditions has impacted ice habitat for walrus. Walrus use sea ice for molting, mating, and nursing, and as a platform for dives to the bottom of shallow shelf seas for clams and other food. As sea ice recedes beyond the shallow shelf seas of northern Alaska, female walrus and calves must either remain on sea ice in water too deep for feeding or come onshore where stampedes are a risk.

For the past decade walrus have gathered on the shores of a barrier island near Point Lay. These haul-outs are associated with declining sea ice. During summer 2019, several thousand walrus hauled out on the island, marking the earliest walrus haul-out since they were first observed in 2007.



36

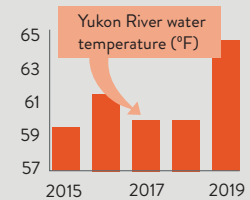


13

## HEAT & SALMON DIE-OFFS

In June and July of 2019, thousands of salmon died as they migrated to their spawning grounds of western Alaska. Although the cause is not confirmed, the leading suspect is unusually warm water temperatures above the range that causes stress to adult salmon. Warm water causes several problems: it contains less life-sustaining dissolved oxygen than cool water, greatly accelerates metabolism, resulting in faster burning of stored energy in the migrating fish, and promotes the growth of parasites and fungus that can weaken fish. Surveys of the Koyukuk River (a major tributary of the Yukon River) confirmed thousands of dead summer Chum salmon, which most likely succumbed to the heat, as the river did contain sufficient levels of dissolved oxygen.

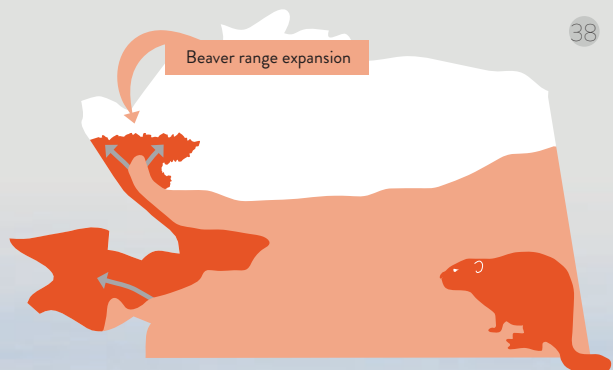
37



## BEAVER COLONIZATION IN ARCTIC

North American beavers are migrating into Arctic tundra areas and altering the landscape of northwestern Alaska. Beavers have historically occupied forested regions (light orange). There is new evidence, however, that beavers have moved from forest into tundra regions since 1999 (dark orange), re-engineering rivers and streams of northwest Alaska. Possible reasons for the expansion of beavers include a population rebound from over-trapping and environmental changes such as warming temperatures, creating beaver habitat and changing the Arctic tundra.

38



# HUMANS

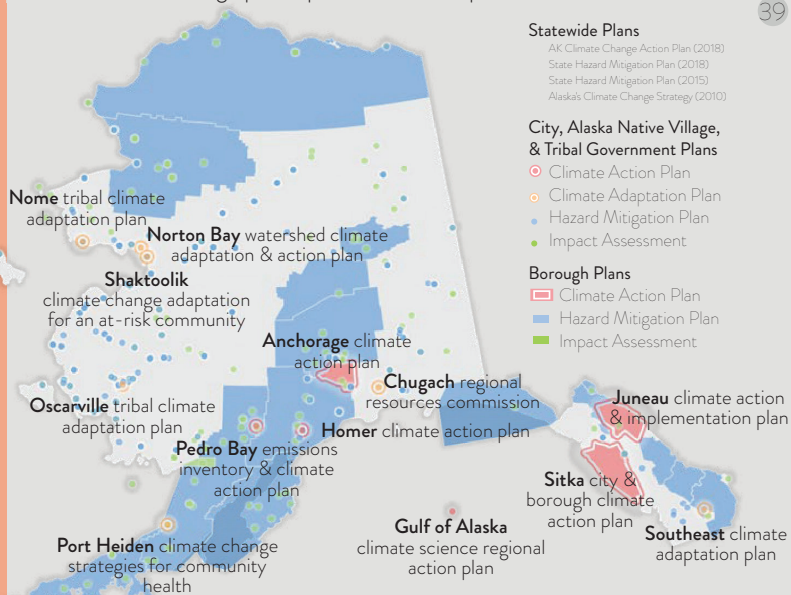
Responding to a changing environment is a complex undertaking, occurring at many levels across Alaska. From rural communities to the Municipality of Anchorage to State agencies, Alaskans are grappling with environmental change. In 2003, 184 out of 213 Alaska Native villages were affected by flooding or erosion. Since that time, tribal governments, cities, municipalities, boroughs, and the State of Alaska have developed plans to respond to climate change. In 2008, the Alaska Climate Change Impact Mitigation Program and the Coastal Impact Assistance Program were established to provide technical assistance and funding to communities preparing impact assessments that characterize, diagnose, and project risks or impacts of environmental change on people and communities. Across the state over 200 of these assessments—often focused on erosion threats—have been completed.

Many state agencies take into account climate change in their daily work. A few climate change strategies and reports are listed here. In 2010, the Alaska Department of Fish and Game released their climate change strategy, which recognized unprecedented environmental change in the Arctic and outlined needed research and a strategy to respond to climate impacts. Since 2010, the Alaska Department of Environmental Conservation has released two greenhouse gas emission inventories describing the state's emissions from anthropogenic and natural sources. In 2018, the Department of Health and Social Services released a report on the health impacts of climate change.

Adaptation to environmental changes in the Beaufort-Chukchi-Bering region were recently addressed internationally by the Arctic Monitoring and Assessment Program, an Arctic Council Working Group. The group helps to inform policy and decision-making related to Arctic adaptation actions.

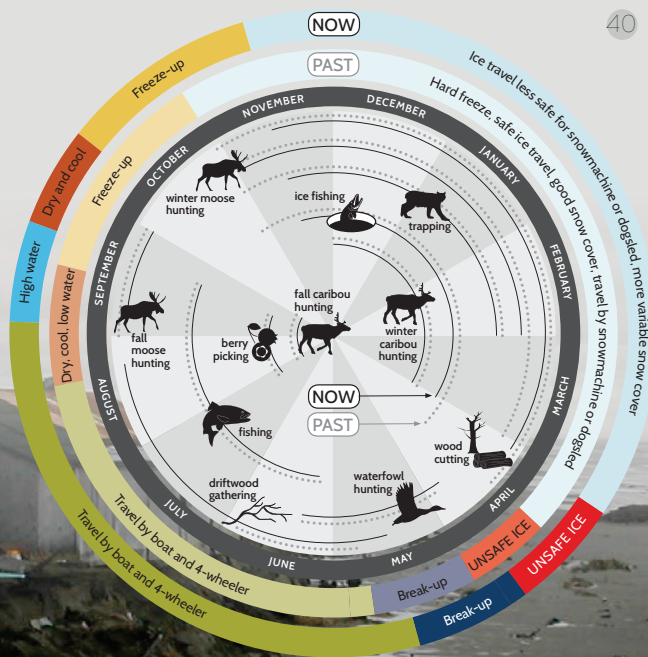
## CLIMATE ADAPTATION

Climate adaptation planning is underway at various levels in Alaska, including statewide plans, borough plans (shaded areas on the map), and city and Alaska Native village plans (points on the map).



## SHIFTING SUBSISTENCE RESOURCES

Environmental change is challenging travel and access to hunting, fishing, trapping, and gathering resources in interior Alaska (diagram below). Harvest windows are shrinking. Later freeze up and thinner river ice minimize the period of time it is safe to travel on rivers for hunting and trapping, while a shorter snow season reduces the window for travel over land. Accelerated permafrost thaw and changes in river break-up dynamics are influencing river navigability and fishing locations.



# RURAL OBSERVATIONS

41 42

**Jack Lane** from Point Hope said, "The ice is not too safe this year. 8–24 inches [April 18, 2018]. Chasing lots of ducks, but the ice is thin... No [pressure] ridges. One whale, yet bad ice, lots of snow."

**Willard Neakok** from Point Lay said, "in 1998 people would leave for fishing cabins in late August or early September, now [2015] it is as late as the end of November."

**Steven Patkotak** from Wainwright wrote on July 10, 2018: "Ocean currents flow strong to NE and remaining ice from lagoon taken out. Someone tried boating out of inlet but rough water and waves higher than the normal..." He mentioned that only four days in the past month were calm enough for boating.

**Billy Adams** of Utqiagvik reported on August 19, 2018 an unusual sighting of a Steller's Sea Lion more than 520 miles outside its range. "My friend Mark Ahsok Jr. sent me photos on his hunting trip and came across a Steller's Sea Lion just about 12 miles south of Barrow [Utqiagvik]! Looks like an old bull with a missing eye and some scarring which is natural."



**Noah Naylor** from Kotzebue reported that they had little sea ice in spring 2018 and Ugruk (seal) hunting was short. Not everyone could get out in time to hunt.

**Robert Tokeinna Jr.** from Wales wrote on May 4, 2018, "this week we lost our shorefast ice. Really super early."

**Joe Turner** of Nulato reported on June 22, 2017, "fire in Nulato during hot, dry summer. Very poor air quality."

**Ronnie Demientieff** of Holy Cross reported on January 1, 2017 that there was "open water in January. Froze to the bottom then flooded over because of lack of snow."

**Miki Collins** of Lake Minchumina reported earlier snow melt than usual on April 7, 2017. "Dog team hauling gas during spring melt. Gravel exposed on Holek Spit grinds on sled runners, a problem especially when hauling heavy loads."

**Misty Walsh** of Tok reported later freeze-up on November 7, 2016, a change she started noticing in 2005. "Thin ice on river. Can't travel the river yet and there is not enough snow to go overland on snowmachines."



# ACKNOWLEDGMENTS

This summary of Alaska environmental changes would not have been possible without the contributions of many individuals and organizations. Here we list photo credits and data sources. We also list the individual or entity who analyzed and produced each graphic. Each graphic and data source is associated with a number that can be found throughout the publication. We thank each of these contributors for their generosity and dedication to science and understanding Alaska's changing biological and physical systems.

## PHOTO CREDITS

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Page 6, rainforest – Tongas National Forest  
Page 7, snowy ridge – Alaska Region US Fish & Wildlife Service  
Page 8, sea ice – Hajo Eicken/International Arctic Research Center  
Page 9, Iditarod & Bering Sea no ice – Marc Lester/Associated Press  
Page 12, spruce bark beetle – NASA Earth Observatory  
Page 13, beluga – Kristin Laidre/University of Washington  
Page 13, walrus from above – Brad Benter/US Fish & Wildlife Service  
Page 13, salmon – Peter Westley/UAF College of Fisheries and Ocean Sciences  
Page 13, walrus bottom photo – C. Nayokpuk/Sea Ice for Walrus Outlook  
Page 15, rural resident open water – Ravenna Koenig  
Back cover – JR Ancheta/University of Alaska Fairbanks

## GRAPHICS & DATA SOURCES

Number in publication – Individual, entity who produced graphic and/or analyzed data (data source)

- 1 – Rick Thoman, Alaska Center for Climate Assessment and Policy
- 2 – Rick Thoman, Alaska Center for Climate Assessment and Policy (data source Alaska Interagency Coordination Center)
- 3, 7, 9–11, 13–15, 17, 25 – Rick Thoman, Alaska Center for Climate Assessment and Policy (data source NOAA/NCEI)
- 4 – Xiangdong Zhang & Liran Peng, International Arctic Research Center (data source ERA-Interim)
- 5 – Rick Thoman, Alaska Center for Climate Assessment and Policy (data source NOAA/NWS River Forecast Center)
- 6 – Rick Thoman, Alaska Center for Climate Assessment and Policy (data source NASA GISS & UAF/Brian Brettschneider)
- 8 – Brian Brettschneider, International Arctic Research Center (data source NCEI GHCN-D)
- 12 – Rick Thoman, Alaska Center for Climate Assessment and Policy (data source DOI/USGS)
- 16 – Brian Brettschneider, International Arctic Research Center (data source NSIDC)
- 18 – Molly Tedesche, International Arctic Research Center (data source NASA Landsat Missions 4, 5, 7, & 8; Hydrology, 2019)
- 19 – Rick Thoman, Alaska Center for Climate Assessment and Policy (data source NSIDC)
- 20–22, 24 – Rick Thoman, Alaska Center for Climate Assessment and Policy (data source NSIDC Sea Ice Index, V3)
- 23 – Zachary Labe, University of California, Irvine (data source Scenarios Network for Alaska + Arctic Planning)
- 26 – (data source AMAP Ocean Acidification Report, 2018; Nature Climate Change, 2017; Progress in Oceanography, 2015)
- 27 – ORBIMAGE (data sources SeaWiFS Project, NASA/Goddard Space Flight Center)
- 28 – Heather McFarland, International Arctic Research Center (data sources USGS Alaska Science Center, USGS National Wildlife Health Center, USFWS Alaska Region Migratory Bird Management, NOAA/Wildlife Algal-Toxins Research and Response Network WARRN-West)
- 29 – Vladimir Romanovsky, Geophysical Institute (data source GI Permafrost Lab Thermal State of Permafrost database, NSF)
- 30 – Bert Wouters, Utrecht University/Delft University of Technology (data source NASA/DLR GRACE mission; Frontiers in Earth Sciences, 2019)
- 31 – (data source Alaska Science Center USGS, L. Sass)
- 32 – Uma Bhatt, Geophysical Institute (NASA/GSFC)
- 33 – Nancy Fresco, Scenarios Network for Alaska + Arctic Planning/Rick Thoman, ACCAP (data source NOAA/NCEI, NDAWN, Canadian Journal of Plant Science, 2006)
- 34 – John Walsh, International Arctic Research Center (USDA Forest Service)
- 35 – Donna Hauser, International Arctic Research Center (Global Change Biology, 2017)
- 36 – Olivia Lee, International Arctic Research Center
- 37 – Peter Westley, College of Fisheries and Ocean Sciences (temperature graphic Rick Thoman, data source DOI/USGS)
- 38 – Ken Tape, Geophysical Institute (Global Change Biology, 2018)
- 39 – Kelsey Aho, Center for Alaska Policy Studies (data sources DEECD; Meeker and Kettle, 2017)
- 40 – Krista Heeringa, Community Partnerships for Self-Reliance (Environmental Impacts to Access in Interior Alaska)
- 41 – Donna Hauser, Alaska Arctic Observatory & Knowledge Hub (coastal observations)
- 42 – Community Observers (Interior observations; Environmental Impacts to Access in Interior Alaska)



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# Fall 2020 Regional Advisory Council Meeting Calendar

*Last updated on 11/12/19*

Due to travel budget limitations placed by Department of the Interior on the U.S. Fish and Wildlife Service and the Office of Subsistence Management, the dates and locations of these meetings will be subject to change.

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Aug. 16	Aug. 17 <i>Window opens</i>	Aug. 18 <b>NS — Point Hope</b>	Aug. 19	Aug. 20	Aug. 21	Aug. 22
Aug. 23	Aug. 24	Aug. 25	Aug. 26	Aug. 27	Aug. 28	Aug. 29
<b>K/A — Unalaska (in conjunction with “Life Forum Conference”)</b>						
Aug. 30	Aug. 31	Sep. 1	Sep. 2	Sep. 3	Sep. 4	Sep. 5
Sep. 6	Sep. 7 <b>LABOR DAY HOLIDAY</b>	Sep. 8	Sep. 9	Sep. 10	Sep. 11	Sep. 12
				<b>K/A — Cold Bay/Sand Point</b>		
Sep. 13	Sep. 14	Sep. 15	Sep. 16	Sep. 17	Sep. 18	Sep. 19
Sep. 20	Sep. 21	Sep. 22	Sep. 23	Sep. 24	Sep. 25	Sep. 26
		<b>YKD — St. Mary’s</b>				
Sep. 27	Sep. 28	Sep. 29	Sep. 30	Oct. 1	Oct. 2	Oct. 3
Oct. 4	Oct. 5	Oct. 6	Oct. 7	Oct. 8	Oct. 9	Oct. 10
			<b>SC — Anchorage</b>			
Oct. 11	Oct. 12 <b>COLUMBUS DAY HOLIDAY</b>	Oct. 13	Oct. 14	Oct. 15	Oct. 16	Oct. 17
		<b>WI — Aniak</b>				
		<b>EI — Fairbanks</b>				
Oct. 18	Oct. 19	Oct. 20	Oct. 21	Oct. 22	Oct. 23	Oct. 24
		<b>SE — Sitka</b>			<b>AFN — Anchorage</b>	
Oct. 25	Oct. 26	Oct. 27	Oct. 28	Oct. 29	Oct. 30	Oct. 31
			<b>SP — Nome</b>			
			<b>BB — Dillingham</b>			
Nov. 1	Nov. 2	Nov. 3	Nov. 4	Nov. 5	Nov. 6 <i>Window closes</i>	Nov. 7
		<b>NW — Kotzebue</b>				



# Winter 2021 Regional Advisory Council Meeting Calendar

Due to travel budget limitations placed by Department of the Interior on the U.S. Fish and Wildlife Service and the Office of Subsistence Management, the dates and locations of these meetings will be subject to change.

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
<i>Feb. 14</i>	<i>Feb. 15</i> <b>PRESIDENT'S DAY HOLIDAY</b>	<i>Feb. 16</i> <i>Window Opens</i>	<i>Feb. 17</i>	<i>Feb. 18</i>	<i>Feb. 19</i>	<i>Feb. 20</i>
<i>Feb. 21</i>	<i>Feb. 22</i>	<i>Feb. 23</i>	<i>Feb. 24</i>	<i>Feb. 25</i>	<i>Feb. 26</i>	<i>Feb. 27</i>
<i>Feb. 28</i>	<i>Mar. 1</i>	<i>Mar. 2</i>	<i>Mar. 3</i>	<i>Mar. 4</i>	<i>Mar. 5</i>	<i>Mar. 6</i>
<i>Mar. 7</i>	<i>Mar. 8</i>	<i>Mar. 9</i>	<i>Mar. 10</i>	<i>Mar. 11</i>	<i>Mar. 12</i>	<i>Mar. 13</i>
<i>Mar. 14</i>	<i>Mar. 15</i>	<i>Mar. 16</i>	<i>Mar. 17</i>	<i>Mar. 18</i>	<i>Mar. 19</i>	<i>Mar. 20</i>
<i>Mar. 21</i>	<i>Mar. 22</i>	<i>Mar. 23</i>	<i>Mar. 24</i>	<i>Mar. 25</i>	<i>Mar. 26</i> <i>Window Closes</i>	<i>Mar. 27</i>

## Subsistence Regional Advisory Council Correspondence Policy

The Federal Subsistence Board (Board) recognizes the value of the Regional Advisory Councils' role in the Federal Subsistence Management Program. The Board realizes that the Councils must interact with fish and wildlife resource agencies, organizations, and the public as part of their official duties, and that this interaction may include correspondence. Since the beginning of the Federal Subsistence Program, Regional Advisory Councils have prepared correspondence to entities other than the Board. Informally, Councils were asked to provide drafts of correspondence to the Office of Subsistence Management (OSM) for review prior to mailing. Recently, the Board was asked to clarify its position regarding Council correspondence. This policy is intended to formalize guidance from the Board to the Regional Advisory Councils in preparing correspondence.

The Board is mindful of its obligation to provide the Regional Advisory Councils with clear operating guidelines and policies, and has approved the correspondence policy set out below. The intent of the Regional Advisory Council correspondence policy is to ensure that Councils are able to correspond appropriately with other entities. In addition, the correspondence policy will assist Councils in directing their concerns to others most effectively and forestall any breach of department policy.

The Alaska National Interest Lands Conservation Act Title VIII required the creation of Alaska's Subsistence Regional Advisory Councils to serve as advisors to the Secretary of the Interior and the Secretary of Agriculture and to provide meaningful local participation in the management of fish and wildlife resources on Federal public lands. Within the framework of Title VIII and the Federal Advisory Committee Act, Congress assigned specific powers and duties to the Regional Advisory Councils. These are also reflected in the Councils' charters. (*Reference: ANILCA Title VIII §805, §808, and §810; Implementing regulations for Title VIII, 50 CFR 100 .11 and 36 CFR 242 .11; Implementing regulations for FACA, 41 CFR Part 102-3.70 and 3.75*)

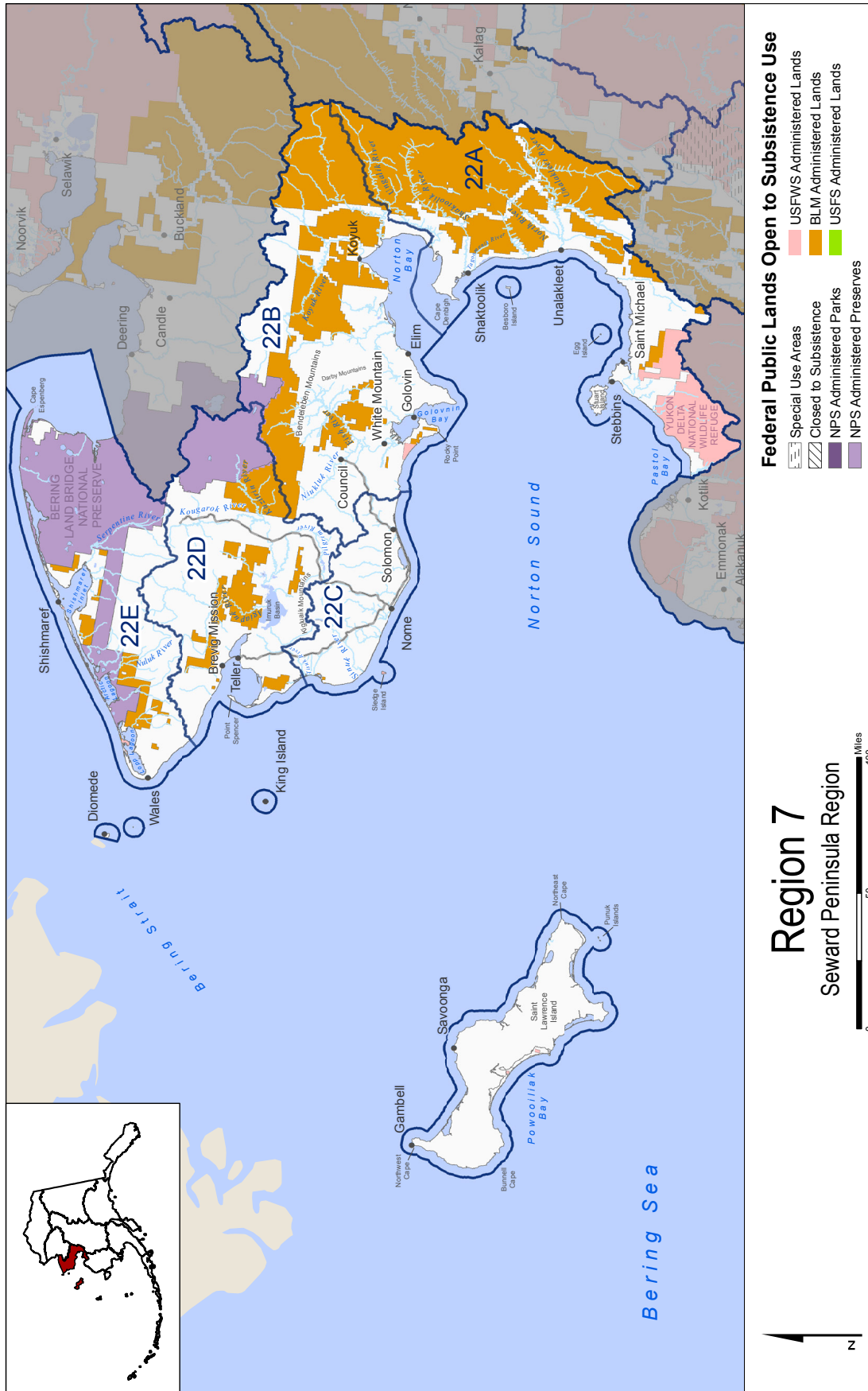
The Secretaries of Interior and Agriculture created the Federal Subsistence Board and delegated to it the responsibility for managing fish and wildlife resources on Federal public lands. The Board was also given the duty of establishing rules and procedures for the operation of the Regional Advisory Councils. The Office of Subsistence Management was established within the Federal Subsistence Management Program's lead agency, the U.S. Fish and Wildlife Service, to administer the Program. (*Reference: 36 CFR Part 242 and 50 CFR Part 100 Subparts C and D*)

### Policy

1. The subject matter of Council correspondence shall be limited to matters over which the Council has authority under §805(a)(3), §808, §810 of Title VIII, Subpart B §\_\_\_.11(c) of regulation, and as described in the Council charters.
2. Councils may, and are encouraged to, correspond directly with the Board. The Councils are advisors to the Board.
3. Councils are urged to also make use of the annual report process to bring matters to the Board's attention.

6/15/04

4. As a general rule, Councils discuss and agree upon proposed correspondence during a public meeting. Occasionally, a Council chair may be requested to write a letter when it is not feasible to wait until a public Council meeting. In such cases, the content of the letter shall be limited to the known position of the Council as discussed in previous Council meetings.
5. Except as noted in Items 6, 7, and 8 of this policy, Councils will transmit all correspondence to the Assistant Regional Director (ARD) of OSM for review prior to mailing. This includes, but is not limited to, letters of support, resolutions, letters offering comment or recommendations, and any other correspondence to any government agency or any tribal or private organization or individual.
  - a. Recognizing that such correspondence is the result of an official Council action and may be urgent, the ARD will respond in a timely manner.
  - b. Modifications identified as necessary by the ARD will be discussed with the Council chair. Councils will make the modifications before sending out the correspondence.
6. Councils may submit written comments requested by federal land management agencies under ANILCA §810 or requested by regional Subsistence Resource Commissions under §808 directly to the requesting agency. Section 808 correspondence includes comments and information solicited by the SRCs and notification of appointment by the Council to an SRC.
7. Councils may submit proposed regulatory changes or written comments regarding proposed regulatory changes affecting subsistence uses within their regions to the Alaska Board of Fisheries or the Alaska Board of Game directly. A copy of any comments or proposals will be forwarded to the ARD when the original is submitted.
8. Administrative correspondence such as letters of appreciation, requests for agency reports at Council meetings, and cover letters for meeting agendas will go through the Council's regional coordinator to the appropriate OSM division chief for review.
9. Councils will submit copies of all correspondence generated by and received by them to OSM to be filed in the administrative record system.
10. Except as noted in Items 6, 7, and 8, Councils or individual Council members acting on behalf of or as representative of the Council may not, through correspondence or any other means of communication, attempt to persuade any elected or appointed political officials, any government agency, or any tribal or private organization or individual to take a particular action on an issue. This does not prohibit Council members from acting in their capacity as private citizens or through other organizations with which they are affiliated.



**Department of the Interior  
U. S. Fish and Wildlife Service**

**Seward Peninsula Subsistence Regional Advisory Council**

**Charter**

1. **Committee's Official Designation.** The Council's official designation is the Seward Peninsula Subsistence Regional Advisory Council (Council).
2. **Authority.** The Council is renewed by virtue of the authority set out in the Alaska National Interest Lands Conservation Act (ANILCA) (16 U.S.C. 3115 (1988)), and under the authority of the Secretary of the Interior, in furtherance of 16 U.S.C. 410hh-2. The Council is regulated by the Federal Advisory Committee Act (FACA), as amended (5 U.S.C. Appendix 2).
3. **Objectives and Scope of Activities.** The objective of the Council is to provide a forum for the residents of the Region with personal knowledge of local conditions and resource requirements to have a meaningful role in the subsistence management of fish and wildlife on Federal lands and waters in the Region.
4. **Description of Duties.** Council duties and responsibilities, where applicable, are as follows:
  - a. Recommend the initiation, review, and evaluation of proposals for regulations, policies, management plans, and other matters relating to subsistence uses of fish and wildlife on public lands within the Region.
  - b. Provide a forum for the expression of opinions and recommendations by persons interested in any matter related to the subsistence uses of fish and wildlife on public lands within the Region.
  - c. Encourage local and regional participation in the decision-making process affecting the taking of fish and wildlife on the public lands within the Region for subsistence uses.
  - d. Prepare an annual report to the Secretary containing the following:
    - (1) An identification of current and anticipated subsistence uses of fish and wildlife populations within the Region.
    - (2) An evaluation of current and anticipated subsistence needs for fish and wildlife populations within the Region.
    - (3) A recommended strategy for the management of fish and wildlife populations within the Region to accommodate such subsistence uses and needs; and

- (4) Recommendations concerning policies, standards, guidelines, and regulations to implement the strategy.
- e. Make recommendations on determinations of customary and traditional use of subsistence resources.
- f. Make recommendations on determinations of rural status.
- g. Provide recommendations on the establishment and membership of Federal local advisory committees.
- h. Provide recommendations for implementation of Secretary's Order 3347: Conservation Stewardship and Outdoor Recreation, and Secretary's Order 3356: Hunting, Fishing, Recreational Shooting, and Wildlife Conservation Opportunities and Coordination with States, Tribes, and Territories. Recommendations shall include, but are not limited to:
  - (1) Assessing and quantifying implementation of the Secretary's Orders, and recommendations to enhance and expand their implementation as identified;
  - (2) Policies and programs that:
    - (a) increase outdoor recreation opportunities for all Americans, with a focus on engaging youth, veterans, minorities, and other communities that traditionally have low participation in outdoor recreation;
    - (b) expand access for hunting and fishing on Bureau of Land Management, U.S. Fish and Wildlife Service, and National Park Service lands in a manner that respects the rights and privacy of the owners of non-public lands;
    - (c) increase energy, transmission, infrastructure, or other relevant projects while avoiding or minimizing potential negative impacts on wildlife; and
    - (d) create greater collaboration with States, Tribes, and/or Territories.
- i. Provide recommendations for implementation of the regulatory reform initiatives and policies specified in section 2 of Executive Order 13777: Reducing Regulation and Controlling Regulatory Costs; Executive Order 12866: Regulatory Planning and Review, as amended; and section 6 of Executive Order 13563: Improving Regulation and Regulatory Review. Recommendations shall include, but are not limited to:

Identifying regulations for repeal, replacement, or modification considering, at a minimum, those regulations that:

- (1) eliminate jobs, or inhibit job creation;
- (2) are outdated, unnecessary, or ineffective;
- (3) impose costs that exceed benefits;
- (4) create a serious inconsistency or otherwise interfere with regulatory reform initiative and policies;
- (5) rely, in part or in whole, on data or methods that are not publicly available or insufficiently transparent to meet the standard for reproducibility; or
- (6) derive from or implement Executive Orders or other Presidential and Secretarial directives that have been subsequently rescinded or substantially modified.

All current and future Executive Orders, Secretary's Orders, and Secretarial Memos should be included for discussion and recommendations as they are released. At the conclusion of each meeting or shortly thereafter, provide a detailed recommendation meeting report, including meeting minutes, to the Designated Federal Officer (DFO).

5. **Agency or Official to Whom the Council Reports.** The Council reports to the Federal Subsistence Board Chair, who is appointed by the Secretary of the Interior with the concurrence of the Secretary of Agriculture.
6. **Support.** The U.S. Fish and Wildlife Service will provide administrative support for the activities of the Council through the Office of Subsistence Management.
7. **Estimated Annual Operating Costs and Staff Years.** The annual operating costs associated with supporting the Council's functions are estimated to be \$155,000, including all direct and indirect expenses and 1.0 Federal staff years.
8. **Designated Federal Officer.** The DFO is the Subsistence Council Coordinator for the Region or such other Federal employee as may be designated by the Assistant Regional Director – Subsistence, Region 7, U.S. Fish and Wildlife Service. The DFO is a full-time Federal employee appointed in accordance with Agency procedures. The DFO will:
  - (a) Approve or call all Council and subcommittee meetings;
  - (b) Prepare and approve all meeting agendas;
  - (c) Attend all committee and subcommittee meetings;

(d) Adjourn any meeting when the DFO determines adjournment to be in the public interest; and

(e) Chair meetings when directed to do so by the official to whom the advisory committee reports.

9. **Estimated Number and Frequency of Meetings.** The Council will meet 1-2 times per year, and at such times as designated by the Federal Subsistence Board Chair or the DFO.

10. **Duration.** Continuing.

11. **Termination.** The Council will be inactive 2 years from the date the Charter is filed, unless, prior to that date, the charter is renewed in accordance with the provisions of section 14 of the FACA. The Council will not meet or take any action without a valid current charter.

12. **Membership and Designation.** The Council's membership is composed of representative members as follows:

Ten members who are knowledgeable and experienced in matters relating to subsistence uses of fish and wildlife and who are residents of the Region represented by the Council.

To ensure that each Council represents a diversity of interests, the Federal Subsistence Board in their nomination recommendations to the Secretary will strive to ensure that seven of the members (70 percent) represent subsistence interests within the Region and three of the members (30 percent) represent commercial and sport interests within the Region. The portion of membership representing commercial and sport interests must include, where possible, at least one representative from the sport community and one representative from the commercial community.

The Secretary of the Interior will appoint members based on the recommendations from the Federal Subsistence Board and with the concurrence of the Secretary of Agriculture.

Members will be appointed for 3-year terms. Members serve at the discretion of the Secretary.

Alternate members may be appointed to the Council to fill vacancies if they occur out of cycle. An alternate member must be approved and appointed by the Secretary before attending the meeting as a representative. The term for an appointed alternate member will be the same as the term of the member whose vacancy is being filled.

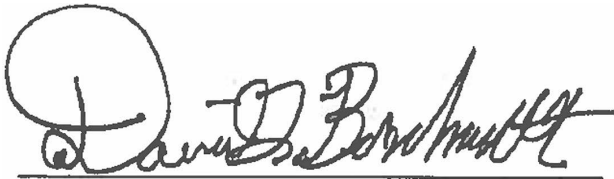
Council members will elect a Chair, Vice-Chair, and Secretary for a 1-year term.

Members of the Council will serve without compensation. However, while away from



their homes or regular places of business, Council and subcommittee members engaged in Council, or subcommittee business, approved by the DFO, may be allowed travel expenses, including per diem in lieu of subsistence, in the same manner as persons employed intermittently in Government service under section 5703 of title 5 of the United States Code.

13. **Ethics Responsibilities of Members.** No Council or subcommittee member will participate in any Council or subcommittee deliberations or votes relating to a specific party matter before the Department or its bureaus and offices including a lease, license, permit, contract, grant, claim, agreement, or litigation in which the member or the entity the member represents has a direct financial interest.
14. **Subcommittees.** Subject to the DFOs approval, subcommittees may be formed for the purpose of compiling information and conducting research. However, such subcommittees must act only under the direction of the DFO and must report their recommendations to the full Council for consideration. Subcommittees must not provide advice or work products directly to the Agency. Subcommittees will meet as necessary to accomplish their assignments, subject to the approval of the DFO and the availability of resources.
15. **Recordkeeping.** Records of the Council, and formally and informally established subcommittees or other subgroups of the Council, must be handled in accordance with General Records Schedule 6.2, and other approved Agency records disposition schedule. These records must be available for public inspection and copying, subject to the Freedom of Information Act (5 U.S.C. 552).



Secretary of the Interior

DEC 12 2019

Date Signed

DEC 13 2019

Date Filed





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