



United States Department of Agriculture



Alaska Field Office Technical Guide

August 2020

FARM PRODUCTION AND CONSERVATION
FSA | NRCS | RMA | Business Center

FOTG Data & References for Alaska

Prerequisite: Before taking this course, you must first complete the AgLearn course:

[Introduction to the Field Office
Technical Guide](#)

Course catalog: NRCS-NEDC-000149

Alaska-Specific Field Office Technical Guide (FOTG)

NRCS' Primary Technical Reference

- The FOTG is the primary technical reference for the Natural Resource Conservation Service (NRCS).
- The purpose of the FOTG is to promote conservation of natural resources in a consistent and responsible fashion, and to provide a defensible scientific basis for NRCS designs, standards, and specifications.
- The FOTG contains technical information about conservation of soil, water, air, plant, animal, and energy resources with human considerations (SWAPAE+H).

Alaska-Specific Field Office Technical Guide (FOTG)

Each State Maintains its Own FOTG:

- Each state's FOTG is organized according to a national Table of Contents arrangement.
- Each state's FOTG maintains conservation practice standards and specifications that follow a national template but are specific to that state.
- Each state's FOTG includes data on soils, climate, laws and regulations, cultural resources, economics, and ecologic resources that are specific to that state.
- Alaska's FOTG contains Alaska-specific data, guidance, and tools to assist conservation planners and landowners to make informed landuse and natural resource conservation decisions.

Alaska-Specific Field Office Technical Guide (FOTG)

Alaska Data

Alaska lacks much of the ecology and climate data that Lower 48 states take for granted.

The vastness, remoteness, and inaccessibility of Alaska's land mass and islands make it particularly challenging to acquire data on the natural environment.

Several areas in Alaska have not yet had a Soil Survey completed; aerial photography is often low resolution or several decades old; climate stations are few and far between; and economic and production data are limited.

Alaska-Specific Field Office Technical Guide (FOTG)

Alaska Data

The lack of data should not prevent a capable Conservation Planner from preparing a conservation plan that effectively addresses all the natural resource concerns on an operation.

First, do not assume that data does not exist!

Alaska's Soil Survey covers nearly 90 percent of the primary agricultural areas and several surveys are ongoing. New imagery is being acquired daily. And NRCS works in partnership with other agencies to constantly add to our data library.

The Alaska FOTG contains enough data for most conservation planning activities.

Alaska-Specific Field Office Technical Guide (FOTG)

Alaska Data

Second, while the FOTG is the primary repository of environmental data that NRCS uses to provide conservation technical assistance to our customers, do not limit your search for data to the FOTG.

Other Federal agencies, such as the Forest Service, National Oceanic and Atmospheric Administration, Bureau of Land Management, and US Army Corps of Engineers, among several others, maintain Alaska-specific data that is readily-accessible online.

The State of Alaska, University of Alaska, and numerous non-governmental organizations also maintain useful data libraries to assist your planning efforts.

Alaska-Specific Field Office Technical Guide (FOTG)

Alaska Data

Finally, a capable Conservation Planner will acquire planning data by conducting on-site data collection and then analyzing that data with a variety of technical tools and processes that are found in the FOTG.

A field visit to inventory and analyze the natural resources on the land is a critical step in the Nine Step Planning Process.

A Conservation Planner may use a shovel, a measuring wheel, a hand level, a clinometer, a range stick, a camera, and a variety of other tools and instruments to gather information on the condition of soils, plants, water and animals on the planning land unit.

Alaska-Specific Field Office Technical Guide (FOTG)

FOTG arrangement and structure:

- Information in the FOTG is arranged in folders and subfolder. Some sections have many subfolders which are necessary to keep the large array of information organized in a neat and orderly structure.
- Information in the FOTG is constantly being updated:
 - Some information is updated on a scheduled basis. For instance, all conservation practice standards are reviewed and updated every five years.
 - Other information is added or updated as new information comes available, such as results from the latest scientific research or new regulations that are passed.

Alaska-Specific Field Office Technical Guide (FOTG)

Five Sections of the FOTG:

- Section 1: General Resource References- Lists references, cost data, maps, research, laws, cultural resources, and other info for assisting in making decisions about resource use and conservation management systems.
- Section 2: Natural Resource Information- Contains soils, climatic, cultural resources, Threatened and Endangered Species information.
- Section 3: Resource Management Systems (RMS) and Quality Criteria- Provides guidance on developing RMS to prevent or treat problems associated with SWAPAE+H, as well as for developing Acceptable Management Systems when economic, social and cultural constraints prohibit RMS development.

Alaska-Specific Field Office Technical Guide (FOTG)

Five Sections of the FOTG:

- Section 4: Practice Standards- This section provides an alphabetical list of conservation practices used by field offices including standards and specifications for each practice. Practice standards establish the minimum level of acceptable quality for planning, designing, installing, operating and maintaining conservation practices.
- Section 5: Conservation Effects- This section contains effects information used in evaluating the physical effects of conservation practices on soil, water, air, plants, animals, energy and human resources.



Accessing the FOTG

On the Alaska NRCS Homepage: <https://www.nrcs.usda.gov/wps/portal/nrcs/ak/home/>

USDA Natural Resources Conservation Service Alaska

United States Department of Agriculture

About Us | National Centers | State Website

Search []

Topics | Programs | Newsroom | Contact Us

Browse By Audience | A-Z Index | He

Technical Resources

- Soils
- Water
- Snow Survey
- Air
- Plants & Animals
- Energy
- People

The FOTG can be accessed from several links on the Alaska NRCS Homepage.

Popular Topics

- People
- Financial Assistance
- Conservation Planning
- Soil Surveys
- Snow Survey

Sign up for email updates: [] Go

In the News | Events & Deadlines

- NRCS field offices resuming in-person visits in some locations while taking precautionary measures for public health.

Highlights

State Technical Committee
Alaska Publications
Field Office Technical Guide (EFOTG)

Conservation Client Gateway



Accessing the FOTG

The direct web address is: <https://efotg.sc.egov.usda.gov/>

To access the Alaska FOTG, you must select the state from the drop-down menu, and click "SUBMIT"

Alaska-Specific Field Office Technical Guide (FOTG)



FIELD OFFICE TECHNICAL GUIDE

Welcome to NRCS Field Office Technical Guide (FOTG)

Select a state for documents.

State:

Alaska

SUBMIT

Document Tree

Document Search

Recently Changed

Keyboard navigation instructions

Section I

Section II

Section III

Section IV

Section V

Documents (0)

Document Title

No documents to show.

The opening page of the Alaska FOTG will exhibit a menu tree showing each of the five sections.

Alaska-Specific Field Office Technical Guide (FOTG)

Clicking on the “Document Search” tab will allow you to search for specific information by name or subject.

 FIELD OFFICE TECHNICAL GUIDE

Welcome to NRCS Field Office Technical Guide (FOTG)
Select a state for documents.

State:

Documents (0)

Document Title	Type	Pub Date	Subject	Keywords	Abstract
No documents to show.					

Alaska-Specific Field Office Technical Guide (FOTG)



FIELD OFFICE TECHNICAL GUIDE

Welcome to NRCS Field Office Technical Guide (FOTG)

Select a state for documents.

State:

Alaska

SUBMIT

Document Tree Document Search

Recently Changed

Time Range:

- Last 30 days...
- Last 90 days...
- Last 365 days...

Document Title	Type	Pub Date	Subject	Keywords
AK IDX June 2020		2020-6-24	--	--
442 AK SOW Sprinkler System 2015		2015-10-1	--	--
351 AK SOW Well Decommissioning 2015		2015-1-1	--	--
612 AK PS Tree Shrub Establishment 2011		2011-7-1	--	--
660 AK PS Tree Shrub Pruning 2011		2011-7-1	--	--
658 AK PS Wetland Creation 2011		2011-8-1	--	--

IPM, prevention
suppression. P

Clicking on the “Recently Changed” tab will show you recent updates to the FOTG materials within the time range you choose.





United States Department of Agriculture

Alaska FOTG Section I -

General Resources for Alaska

Alaska FOTG – Section 1

FIELD OFFICE TECHNICAL GUIDE

[Support](#)
[Help](#)
[Login](#)

Welcome to NRCS Field Office Technical Guide (FOTG)
 Select a state for documents.

State:

Document Tree | Document Search | Recently Changed

Keyboard navigation instructions

Section I ▲

- Archive Materials - Section I ▼
- Erosion prediction ▼
- Information ▼
- Laws ▼
- Maps ▼
- Reference Lists and Technical Notes ▼
- State Payment Rates and Methods ▼
- Section II ▼
- Section III ▼
- Section IV ▼
- Section V ▼

Section I

Documents (1)

Document Title	Type	Pub Date	Subject	Keywords	Abstract	Size (kB)	Actions
Table of Contents		2003-10-29	-	Table of contents	-	169	

Expand each folder and subfolder by selecting the triangle next to the section title.

For a complete list of FOTG contents, select the Table of Contents link.

Alaska FOTG – Section 1

i Keyboard navigation instructions

Section I	▲
Archive Materials - Section I	▼
Erosion prediction	▼
Information	▼
Laws	▼
Maps	▼
Reference Lists and Technical Notes	▼
State Payment Rates and Methods	▼
Section II	▼
Section III	▼
Section IV	▼
Section V	▼

Much of the information in Section 1 is specific to Alaska. Maps, Reference Lists, and Technical Notes will include data that relates directly to Alaska natural resources.



Alaska FOTG – Section 1

The document date lets you know if the information is the most current available.

The abstract gives a brief overview of the document's contents and purpose.

Keyboard navigation instructions

- Section I
 - Archive Materials - Section I
 - Erosion prediction
 - Information
 - Laws
 - Maps**
 - Reference Lists and Technical Notes
 - State Payment Rates and Methods
- Section II
- Section III
- Section IV
- Section V

Document Title	Type	Pub Date	Subject	Keywords	Abstract	Size (kB)	Actions
Permafrost Zones		2002-6-25	Engineering; Geology; Soils Information	Permafrost; Permafrost Map	This dataset consists of a georeferenced digital map and attribute data derived from the publication Permafrost map of Alaska. The map shows the correlation of physiographic province to presence of permafrost across the state of Alaska. Source map is from Ferrians, O.J., 1965, Permafrost map of Alaska U.S. Geological Survey Miscellaneous Geologic Investigations Map I-445.	160	
Public Land Survey System in Alaska		2011-2-14	Conservation Planning	PLSS; surveying	Meridian, Township, and Sections are the basis for Alaska's Public Land Survey System. The Map provides guidance on the locations of Meridians and guidance on using the PLSS in Alaska	609	

The document title tells you what the document is about.

The subject and keywords will help you find the document using the search tool under the Document Search tab or in the Table of Contents

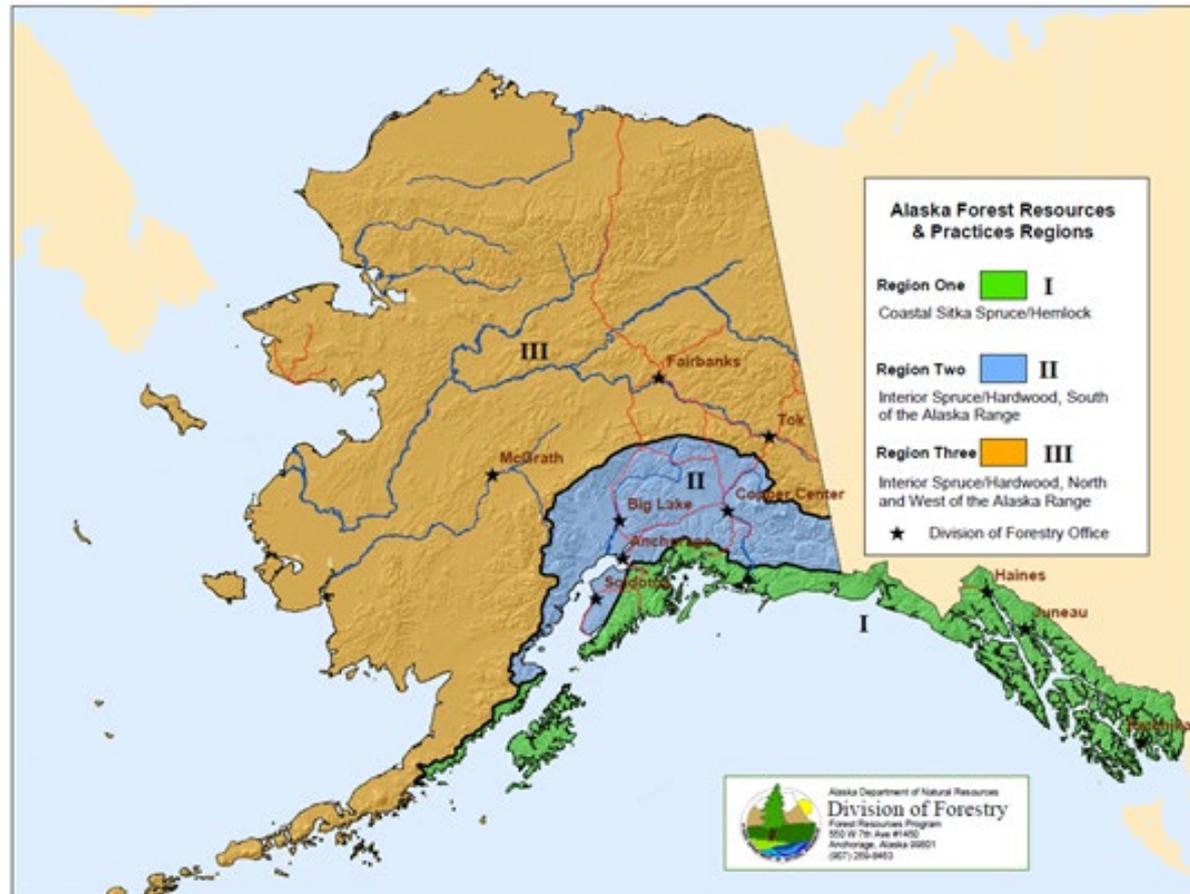
Alaska FOTG – Section 1

FOTG Section 1 Documents and Data Specific to Alaska:

1. Alaska Forest Resources & Practice Regions
2. ANSCA Native Corporation Boundaries
3. C-Factor, R-Factor and Rainfall Maps – used in erosion calculations
4. Alaska Common Resource Areas - descriptions and maps
5. Alaska Borough Map and Census Areas
6. Alaska Farmland Agriculture Potential – map of potential farmable soils
7. Field Office Service Areas in Alaska
8. General Land Status – generalized land ownership
9. Geologic Map of Alaska
10. Kenai Wetland Maps
11. Location of Alaska Soil Surveys
12. Major Land Resource Areas in Alaska (MLRAs)
13. Permafrost Zones in Alaska
14. Snow Course Locations and Telemetry Sites
15. Conservation District Maps in Alaska
16. UTM Zones for Alaska

Example of an Alaska Map in Section 1

Notice that this map comes from the Alaska Division of Forestry. NRCS utilizes technical materials, tools and data from a variety of professional sources, both private and governmental.





United States Department of Agriculture

Alaska FOTG Section II -

Natural Resource Information for Alaska

Alaska FOTG – Section 2

i Keyboard navigation instructions

Section I

Section II

Climatic Data

Cultural Resources Information

Ecological Site Descriptions

HEL Frozen Soil Legends and Interpretations

NEPA

Soil Survey Information

Threatened and Endangered Species

Wetlands

Section III

Section IV

Section V

Section 2 holds the bulk of Alaska-specific environmental data including climate, soils, plant, and animal information. It also contains data and guidance that helps Conservation Planners comply with the National Environmental Policy Act (NEPA.)

Alaska FOTG – Section 2

Climatic Data

Documents (11)

Document Title	Type	Pub Date	Subject
AgACIS - Agricultural Applied Climate Information System		2018-9-21	Climatic Data
Alaska Climate Charts		2018-10-2	Climatic Data
Alaska Snowtel Climate Stations		2002-7-17	Climatic Data
Alaska Water Supply Data		2002-5-1	Climatic Data

All the climate data in Section 2 is specific to Alaska.

Much of the data in this section is obtained and curated by other Federal agencies.

Selecting some of the document links will take you to an external website rather than opening an actual document.



Alaska FOTG – Section 2

Selecting the AgACIS link takes you to an external website of climate data.

From the AgACIS main page, you can select Alaska as the state, and focus on the borough you require climate data for.

AgACIS

Help [X]

AgACIS is available on a county basis. If you need assistance finding the desired county, first select the state below. Once a state is selected, a county menu will be generated and you can select the county of interest.

State: County:

If you already know the county FIPS id, just enter it in the box below and click "Go".

FROST
 GROWTH
 WETS
 DAYS
 Station information

[View map](#)

Product Description:
 DAILY DATA FOR A MONTH - daily maximum, minimum (degrees F), base 40 and base 50 growing degree days (GDD) and snow depth (inches) for all days of the selected month. Statistics are also provided. Values of 'M' indicate missing data.

[question/comment - a different county -](#)

- Select county
- Aleutians East Borough
- Aleutians West Census Area
- Anchorage Municipality
- Bethel Census Area
- Bristol Bay Borough
- Denali Borough
- Dillingham Census Area
- Fairbanks North Star Borough
- Haines Borough
- Juneau City and Borough
- Kenai Peninsula Borough
- Ketchikan Gateway Borough
- Kodiak Island Borough
- Lake and Peninsula Borough
- Matanuska-Susitna Borough
- Nome Census Area
- North Slope Borough
- Northwest Arctic Borough
- Prince of Wales-Hyder Census Area
- Sitka City and Borough
- Skagway Municipality
- Hoonah-Angoon Census Area
- Southeast Fairbanks Census Area
- Valdez-Cordova Census Area
- Wade Hampton Census Area
- Wrangell-Petersburg City and Borough
- Petersburg Census Area
- Yakutat City and Borough
- Yukon-Koyukuk Census Area

Alaska FOTG – Section 2

AgACIS for Fairbanks North Star Borough

AgACIS

Copy CSV Excel PDF Print X

FROST Station: FAIRBANKS 11 NE, AK

Requested years: 1981 - 2010
 Spring: Missing data years: 24 deg = 22 28 deg = 22 32 deg = 22
 Years with no occurrence: 24 deg = 0 28 deg = 0 32 deg = 0
 Data years used: 24 deg = 8 28 deg = 8 32 deg = 8
 Fall: Missing data years: 24 deg = 21 28 deg = 21 32 deg = 21
 Years with no occurrence: 24 deg = 0 28 deg = 0 32 deg = 0
 Data years used: 24 deg = 9 28 deg = 9 32 deg = 9

Probability	Temperature		
	24F or lower	28F or lower	32F or lower
Last freezing temperature in spring:			
1 yr in 10 later than	Insufficient data	Insufficient data	Insufficient data
2 yr in 10 later than	Insufficient data	Insufficient data	Insufficient data
5 yr in 10 later than	Insufficient data	Insufficient data	Insufficient data
First freezing temperature in fall:			
1 yr in 10 earlier than	Insufficient data	Insufficient data	Insufficient data
2 yr in 10 earlier than	Insufficient data	Insufficient data	Insufficient data
5 yr in 10 earlier than	Insufficient data	Insufficient data	Insufficient data

You may then select the weather station closest to the property under consideration.

A wide variety of climate data is available including temperature, frost and thaw dates, and precipitation.



Creation date: 2020-07-21

Alaska FOTG – Section 2

ALASKA Index

H =hottest **C** =coldest **W** =wettest **D** =dryest

Adak	Cooper Lake Project	Haines #2	Mananuska Experiment	Shemya Usaf Base
Alyeska	Cooper Landing	Haines Ap	Farm	Silver Lake
Amber Lake	Cordova M K Smith Ap	Hayes River	Mccarthy	Sitka Airport
Anchorage Frcst Ofc	Cordova North	Healy	Mcgrath Ap	Skagway
Anchorage Hillside	Craig	Hidden Falls Hatchery	Mckinley Park	Skagway Ap
Anchorage Intl Ap	Deadhorse Ap	Hollis	Mile	Skwentna
Anchorage Lake Hood	Delta	Homer	Mile	Slana
Ap	Delta	Homer	Minchumina	Snettisham Pwr Plt
Anchorage Merrill Fld	Delta Junction	Homer Ap	Mirror Lake Scout Camp	Snowshoe Lake
Anchorage Rabbit Ck #2	Dillingham Faa Ap	Hoonah	Monashka Creek Dam	Soldotna
Anchorage Upper	Dry Creek	Hope	Moose Pass	Sourdough
Dearmoun	Dutch Harbor	Hyder	Nabesna	St George Island Ap
Anderson Lake	Eagle Ap	Iliamna Ap	Nenana Muni Ap	St Paul Island Ap
H Annette Island Ap	Eagle River	Intricate Bay	Nome Muni Ap	Susitna Landing
Annex Creek	Eagle Rvr Gakona Cir	Juneau Dwtn	North Pole	Sutton
Auke Bay	Eagle Rvr Nature Ctr	Juneau Forecast Office	Northway Ap	Tahneta Pass
Aurora	Eielson Fld	Juneau Intl Ap	Nuiqsut Ap	Talkeetna Ap
Barrow Post Rogers Ap	Eielson Visitor Ctr	Juneau Lena Pt	Old Edgerton	Tanana Calhoun Mem
Beaver Falls	Eklutna Wtp	Juneau Mile 17	Ouzinkie	Ap
Bens Farm	Elfin Cove	Kaitag Ap	Palmer Job Corps	Tok
Bethel Ap	Elmendorf Afb	Kasilof	Palmer Muni Ap	Tonsina
Bettles Ap	Ester	Kenai	Paxson	Tutka Bay Lagoon
Big Delta Ap	Ester	Kenai Muni Ap	Pelican	Two Rivers
Big River Lakes	Ester Dome	Kenny Lake	Petersburg 1	C Umiat
Blashke Island	Fairbanks	Ketchikan Intl Ap	Plant Materials Ctr	University Exp Stn
Butte	Fairbanks Ap #2	Keystone Ridge	Point Baker	Valdez Airport
Butte	Fairbanks Intl Ap	King Salmon	Point Mackenzie	Valdez Wso
Cambell Creek Sci Ctr	Fairbanks Midtown	Kitoi Bav	Port Alcan	Wainwright Ap

While climate data is limited for Alaska, you will find that there is climate data available for most of the communities across the state.

NOAA, the NWS, NRCS and several non-government entities make a variety of climate data available to the public.

Alaska FOTG – Section 2

Keyboard navigation instructions

- Section I
- Section II
 - Climatic Data
 - Cultural Resources Information
 - Ecological Site Descriptions
 - MLRA 222 Southern Alaska Coastal Mountains
 - MLRA 223 Cook Inlet Mountains
 - MLRA 224 Cook Inlet Lowlands
 - MLRA 227 Copper River Basin
 - Forest Land
 - Picea glauca-Picea mariana/Betula glandulosa**
 - Picea glauca-Picea mariana/Betula glandulosa
 - Picea glauca-Picea mariana/Betula glandulosa/Carex lugens
 - Picea glauca/Alnus tenuifolia
 - Picea glauca/Betula glandulosa
 - Picea glauca/Betula glandulosa/Equisetum
 - Picea glauca/Salix alaxensis/Equisetum
 - Picea mariana-Picea glauca/Betula glandulosa
 - Picea mariana-Picea glauca/Betula glandulosa

Picea glauca-Picea mariana/Betula glandulosa <https://smartech.sc.egov.usda.gov>

Documents (2)

Document Title	Type	Pub Date	Subject	Keywords	Abstract
ESD Additional Information		2008-4-3	Ecological Site Descriptions	--	--
ESD Complete Report		2008-4-3	Ecological Site Descriptions	--	--

Many sections of the FOTG have multiple sub-folders.

Ecological site descriptions found in Section 2 are organized with multiple sub-folders so that the large amount of data can display in a narrow menu window.

Alaska FOTG – Section 2

NEPA

Air Quality

Alaska FEMA Flood Hazard Maps

Clean Water Act

Coastal Zone Management

Coral Reefs

Cultural Resources

Endangered and Threatened Species

Environmental Justice

Essential Fish Habitat

Floodplain Management

Invasive Species

Migratory Birds

Natural Areas

Prime and Unique Farmlands

Programmatic EA

Riparian Areas

Scenic Beauty

Wetlands

Wild and Scenic River

All activities of the NRCS, including activities of partner organizations that conduct conservation planning on the agency's behalf, must comply with the National Environmental Policy Act (NEPA).

Section 2 is where you will find all the information you will need to address NEPA considerations, including policy, guidance, forms, and ecological and cultural data.

Alaska FOTG – Section 2

EQIP

Documents (2)

Document Title	Type	Pub Date	Subject	Keywords	Abstract	Size (kB)	Actions
EQIP FONSI		2018-4-24	--	--	EQIP Finding of No Significant Effect 2014	2754	
EQIP Programmatic EA 2014		2018-4-24	--	EQIP;EA	EQIP Programmatic Environmental Assessment Dec 2014	8309	

NEPA data you will find in Section 2 includes Programmatic Environmental Assessments and resource maps such as essential fish habitat.

RESOURCES

Alaska Essential Fish Habitat (EFH) Mapper

Essential Fish Habitat (EFH) ArcGIS web application

[View EFH Mapper](#)

[Map](#) | [Alaska](#)

ArcGIS Web Application with spatial data and maps of Essential Fish Habitat (EFH) for species managed by the North Pacific Fishery Management Council in [Alaska's federal fishery management plans](#). Identify Alaska EFH by species life history stage with several tools accessed through the icons at the bottom of the page.

Last updated by Alaska Regional Office on 11/19/2019

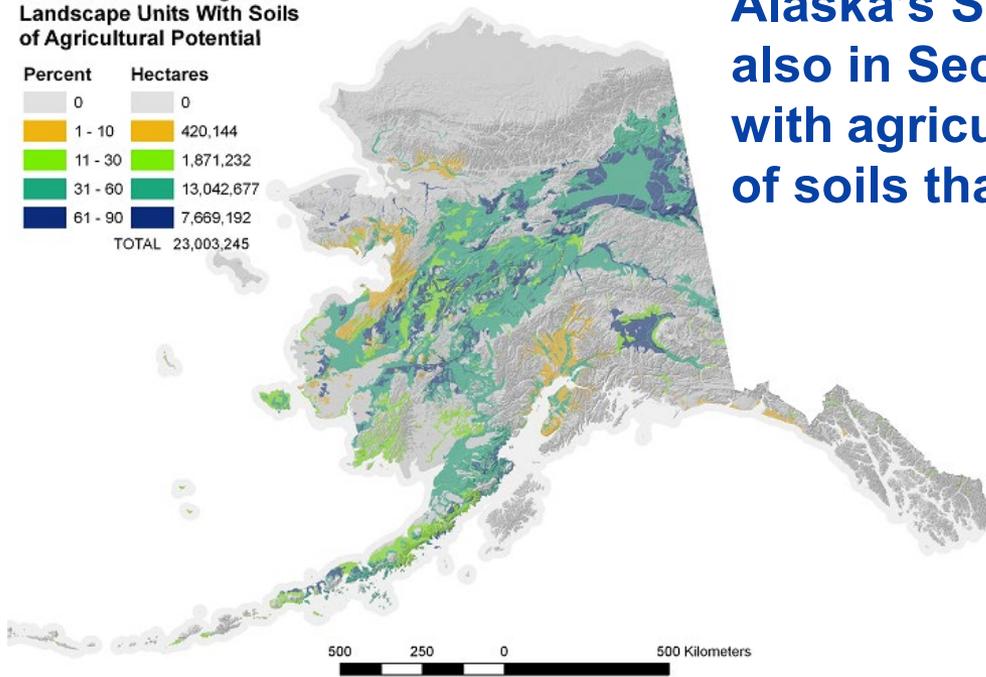
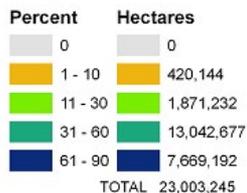
[Essential Fish Habitat](#)

More Information

- > [Alaska EFH Species Shapefiles \(zip\)](#)
- > [National EFH Mapper](#)
- > [Essential Fish Habitat in Alaska](#)

Alaska FOTG – Section 2

Estimated Percentage of Landscape Units With Soils of Agricultural Potential



Alaska's Soil Survey information is also in Section 2, including soils with agricultural potential and lists of soils that are highly erodible.

HIGHLY ERODIBLE LANDS REPORT
Survey Area- SALCHA-BIG DELTA AREA, ALASKA

The ratings for permafrost soils are presented for the soil conditions as mapped. Projected ratings for soils that may thaw are presented below.

Map Symbol	Soil Mapunit Name	HEL Classifications					
		C=1 R=35			C=29 R=30		
		wnd	wat	mu	wnd	wat	mu
BaA	BEALES SILT LOAM, NEARLY LEVEL	NHEL	NHEL	NHEL	HEL	NHEL	HEL
BaB	BEALES SILT LOAM, UNDULATING	NHEL	PHEL	PHEL	HEL	PHEL	HEL
BaC	BEALES SILT LOAM, ROLLING	NHEL	HEL	HEL	HEL	HEL	HEL
BaE	BEALES SILT LOAM, MODERATELY STEEP	NHEL	HEL	HEL	HEL	HEL	HEL
Br	BRADWAY VERY FINE SANDY LOAM	NHEL	NHEL	NHEL	NHEL	NHEL	NHEL
ChA	CHENA VERY FINE SANDY LOAM, NEARLY LEVEL	NHEL	NHEL	NHEL	HEL	NHEL	HEL
ChA	CHENA SILT LOAM, NEARLY LEVEL	NHEL	NHEL	NHEL	HEL	NHEL	HEL
ChB	CHENA SILT LOAM, UNDULATING	NHEL	PHEL	PHEL	HEL	PHEL	HEL
EsD	ESTER SILT LOAM, STRONGLY SLOPING	NHEL	PHEL	PHEL	NHEL	PHEL	PHEL
EsE	ESTER SILT LOAM, MODERATELY STEEP	NHEL	PHEL	PHEL	NHEL	PHEL	PHEL
EsF	ESTER SILT LOAM, STEEP	NHEL	HEL	HEL	NHEL	HEL	HEL
FaB	FAIRBANKS SILT LOAM, GENTLY SLOPING	NHEL	NHEL	NHEL	NHEL	NHEL	NHEL
FaC	FAIRBANKS SILT LOAM, MODERATELY SLOPING	NHEL	PHEL	PHEL	NHEL	NHEL	NHEL
FaD	FAIRBANKS SILT LOAM, STRONGLY SLOPING	NHEL	PHEL	PHEL	NHEL	PHEL	PHEL
FaE	FAIRBANKS SILT LOAM, MODERATELY STEEP	NHEL	HEL	HEL	NHEL	HEL	HEL
FaF	FAIRBANKS SILT LOAM, STEEP	NHEL	HEL	HEL	NHEL	HEL	HEL
GmC	GILMORE SILT LOAM, MODERATELY SLOPING	NHEL	HEL	HEL	HEL	HEL	HEL
GmD	GILMORE SILT LOAM, STRONGLY SLOPING	NHEL	HEL	HEL	HEL	HEL	HEL
GmE	GILMORE SILT LOAM, MODERATELY STEEP	NHEL	HEL	HEL	HEL	HEL	HEL
GmF	GILMORE SILT LOAM, STEEP	NHEL	HEL	HEL	HEL	HEL	HEL
GtF	GILMORE SILT LOAM, VERY SHALLOW, STEEP	NHEL	HEL	HEL	HEL	HEL	HEL
GtA	GOLDSTREAM SILT LOAM, NEARLY LEVEL	NHEL	NHEL	NHEL	NHEL	NHEL	NHEL
GtB	GOLDSTREAM SILT LOAM, GENTLY SLOPING	NHEL	NHEL	NHEL	NHEL	NHEL	NHEL
GtA	GOLDSTREAM SILT LOAM, GRAVELLY SUBSOIL* VARIANT NEARLY LEVEL	NHEL	NHEL	NHEL	NHEL	NHEL	NHEL
Ja	JARVIS VERY FINE SANDY LOAM, MODERATELY DEEP	NHEL	NHEL	NHEL	HEL	NHEL	HEL
Js	JARVIS VERY FINE SANDY LOAM, SHALLOW	NHEL	NHEL	NHEL	HEL	NHEL	HEL
Lp	LEMETA PEAT	NHEL	NHEL	NHEL	NHEL	NHEL	NHEL
MnA	MINTO SILT LOAM, NEARLY LEVEL	NHEL	NHEL	NHEL	NHEL	NHEL	NHEL
MnB	MINTO SILT LOAM, GENTLY SLOPING	NHEL	NHEL	NHEL	NHEL	NHEL	NHEL
MnC	MINTO SILT LOAM, MODERATELY SLOPING	NHEL	PHEL	PHEL	NHEL	NHEL	NHEL



United States Department of Agriculture

Alaska FOTG Section III -

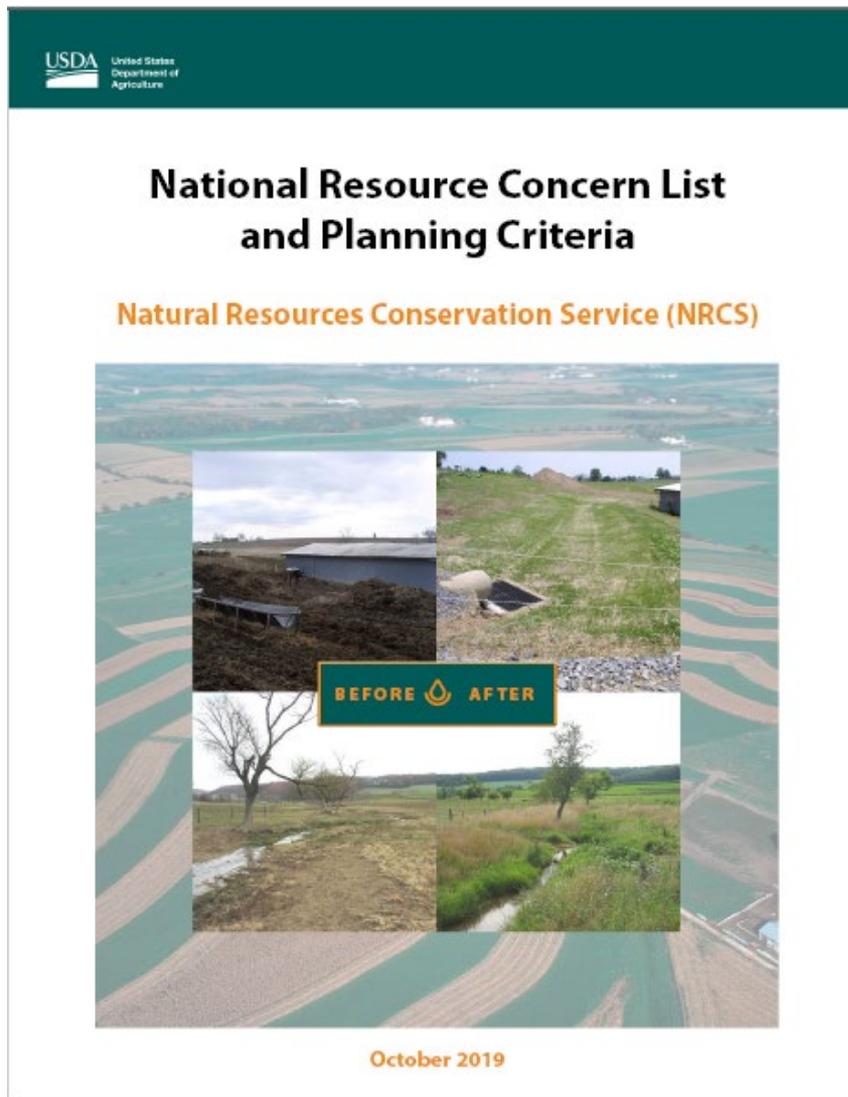
Resource Management Systems (RMS) and Quality Criteria- for Alaska

Alaska FOTG – Section 3

NRCS has listed forty-seven resource concerns to guide Conservation Planners through a field inventory and evaluation.

Although most of Alaska's private lands are forest or tundra, any one of the resource concerns may be encountered and need to be addressed in the state.

Information in Section 3 will assist you in evaluating and treating every resource concern you may encounter.



Alaska FOTG – Section 3

Specific tools are identified to evaluate and/or treat the resource concern. These tools can usually be found in other sections of the FOTG.

Often, the best tool is Planner observation.

Pesticides transported to surface water

Pesticides are lost from their application area and transported to surface water sources in quantities that degrade water quality and limit its use for intended purposes.

Objective: Reduce hazardous pesticide losses from application areas that can be transported to surface water sources.

Any Land Use, where pesticides are applied:

Tools	Planning Criteria
Evaluation of current pest management system	Pesticides are applied based on a pest management system which specifies the Land Grant University and label requirements, required conservation practices and/or IPM techniques needed to reduce pesticide movement to surface waters, and contains State-specific required application and livestock access setbacks (e.g., sinkholes, wells, water courses, wetlands, or rapidly permeable soil areas).
Windows Pesticide Screening Tool (WIN-PST)	Mitigation is applied based on the WIN-PST soil/pesticide combinations as follows: <ul style="list-style-type: none"> • Intermediate: 20 Points of Mitigation • High: 40 Points of Mitigation • Extra High: 60 Points of Mitigation

When Pesticides are stored/mixed/loaded, regardless of land use:

Tools	Planning Criteria
Client input and/or planner observation	Pesticides are stored/mixed/loaded in a way which reduces movement to surface water.

Pesticides transported to ground water

Pesticide losses from the application area are transported to ground water sources in quantities that degrade water quality and limit its use for intended purposes.

Objective: Reduce hazardous pesticide losses from application areas that can be transported to ground water sources.

Any Land Use, where pesticides are applied:

Tools	Planning Criteria
Evaluation of current pest management system	Pesticides are applied based on a pest management system which specifies the Land Grant University and label requirements, required conservation

Each resource concern has planning criteria that must be met. These planning criteria are the optimal condition for that specific resource; e.g., an impaired resource should be improved and restored to the planning criteria for that resource.



Alaska FOTG – Section 3

Section 3 contains most of the conservation planning documentation support that is specific to the State of Alaska, such as the Alaska utility confirmation information which assists customer with contacting utilities prior to excavation.

 		AK-ENG-005 (Rev. 04/2011)	
United States Department of Agriculture Natural Resources Conservation Service			
Confirmation of Utility Notifications for Locate			
Project Information			
Cooperator Name:		Contract Number:	
<input type="text"/>		<input type="text"/>	
Planned Practices (that may affect utilities)			
<input type="text"/>			
Location of Excavation: (Fill out the Blocks below)			
Subdivision:		Lot:	Block:
<input type="text"/>		<input type="text"/>	<input type="text"/>
Quarter:	Section:	Township:	Range: Meridian:
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<p>The purpose of this form is to document that the contractor and/or cooperator complied with state law regarding utility notifications prior to excavation. Failure to return this completed and signed form shall result in termination of NRCS technical and financial assistance.</p> <p>The cooperator and/or contractor are liable for any damage to the utility and for any damage resulting from disruption of service caused by construction activities.</p>			



Alaska FOTG – Section 3

You will also find all the Alaska guidance for Conservation Activity Plans (CAPs), which are plans developed to address a specific natural resource need.

Section 3 includes information for planning soil health, ag energy, forests, nutrient and pest management, feed and forage, wildlife habitat, irrigation water, etc.

Conservation Activity Plans

Documents (24)

Document Title	Type	Pub Date	Subject	Keywords
116 AK CAP Soil Health Management Plan 2020		2020-3-6	Agronomy; Cropland; Forestry and Agroforestry; Soils Information	soil; soil health; agronomy; CAP; activity plan
116 AK Soil Health Management Plan Statement of Work 2020		2020-3-6	Agronomy; Cropland; Forestry and Agroforestry; Soils Information	soil, soil health, agronomy, activity plan
136 AK Agricultural Energy Design Plan Criteria 2020		2020-3-6	Energy	energy

United States Department of Agriculture

Natural Resources Conservation Service

STATEMENT OF WORK Soil Health Management Plan (116)

These deliverables apply to Conservation Activity Plan (CAP) 116 – Soil Health Management Plan, as a component of a conservation plan. This plan documents soil health concerns related to the physical, biological, and chemical properties of the soil. The purpose of the plan is to identify and document soil health resource concerns, problems, and opportunities

This conservation activity plan applies to cropland



United States Department of Agriculture

Alaska FOTG Section IV - Practice Standards-

Alaska FOTG – Section 4

Section IV ▲

Conservation Practice Standards & Support Documents ▲

Access Control (472)

Access Road (560)

Agrichemical Handling Facility (309)

Alley Cropping (311)

Anaerobic Digester (366)

Aquatic Organism Passage (396)

Brush Management (314)

Building Envelope Improvement (672)

The FOTG section that you will likely refer to most often is Section 4 which contains the agency's conservation practice standards and specifications.

There are 124 practices in the FOTG that are approved for implementation in Alaska.

Alaska FOTG – Section 4

Within each practice subfolder, there are documents that indicate when, where, how and to what extent a conservation practice should be applied.

CPS – Conservation Practice Standard.

SOW – Statement of Work

IR – Implementation Requirements

PS – Practice Specification

There may be other supporting documents as well (OTH)

Document Title	Type	Pub Date
612 AK CPS Tree-Shrub Establishment 2016		2016-5-2
612 AK SOW Tree Shrub Establishment 2016		2016-7-1
612 AK IR Tree Shrub Establishment 2011		2011-7-1
612 AK PS Tree Shrub Establishment 2011		2011-7-1

Alaska FOTG – Section 4

Although each state has the authority to add state-specific details to National conservation practice standards, Alaska typically adopts the National standard as-is.

		United States Department of Agriculture Natural Resources Conservation Service, Alaska	
NRCS-AK		Practice Implementation Requirements	
383 Fuel Break			
Owner	<input type="text"/>	Operator I.D.	<input type="text"/>
		Date	<input type="text"/>
Operator	<input type="text"/>	Tract	<input type="text"/>
		Field (s):	<input type="text"/>
Contract Number	<input type="text"/>	Contract Item Number (s):	<input type="text"/>
Field Office	<input type="text"/>		
MANDATORY DOCUMENTATION WITHIN THE PLAN			
<ul style="list-style-type: none"> *Identification of the extent of practices applied, *Location identification, this can be an aerial photo, reference to the conservation plan map, or a sketch in the plan drawings (legal description is required), *Environmental Evaluation NRCS-CPA-052, *Documentation of necessary permits – federal, state, tribal, local - as applicable, and *Site-specific practice specification *Copy of existing Forest Management/Stewardship Plan 			

The Implementation Requirements, which provide details on how the practice is to be applied on the ground, is the conservation practice document most likely to contain Alaska-specific requirements and guidance. The IR form will often reference data that was developed in, or for, Alaska.

Alaska FOTG – Section 4

Each Conservation Planner may include implementation requirements that are specific to a location, so long as the requirements fall within the National Practice Standard.

The Conservation Planner should include as much detail as necessary for the customer to install the practice according to the standard.



Planned Permanent Vegetation Seeding Rates

<u>Species</u>	<u>Variety or Release</u>	Full PLS Rate in Lbs/Ac	% of Mix Planned	Planned PLS Rate/Ac	Planned Acres	Total Lbs PLS Needed
Fireweed	Common	3	30%	0.90	2	1.80
Alpine Sweetvetch		1	10%	0.10	2	0.20
Wild Geranium		1	10%	0.10	2	0.20
Fescue	Arctared Red	30	30%	9.00	2	18.00
Clover	Alsike	25	20%	5.00	2	10.00
		Total	100%			

Alaska FOTG – Section 4

Grassed Waterway (412)

Documents (2)

Document Title	Type	Pub Date	Subject	Keywords	Abstract	Size (kB)	Actions
412 AK CPS Grassed Waterway 2015		2015-1-1	--	--	--	106	
412 AK SOW Grassed Waterway 2015		2015-1-1	--	--	--	102	

Some Conservation Practices in Section 4 have few guidance documents beyond the Conservation Practice Standard. The Standard will provide the Conservation Planner with enough information to plan the practice in consultation with an appropriate Technical Specialist such as, an Agronomist, Forester, Biologist or Engineer.





Alaska FOTG – Section 4

COMPUTATION SHEET
NRCS-699-023

U. S. DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

STATE	ALASKA	PROJECT	Landowner Name		
BY	DATE	CHECKED BY	DATE	JOB NO.	
SUBJECT	High Tunnel Water Use Estimate			SHEET	1 OF 2

Legal Description of Property: _____
Farm Number: _____

This spreadsheet is intended to provide a quick estimate of the water use for a landowner, that will be properly irrigating a high tunnel, to assist in determining if a DNR water rights permit may be required. This estimate considers all water use, both agricultural and domestic, to be from a single source, DNR will determine if multiple wells or sources should be considered separately.

This estimate offers a snapshot in time of potential water use. There are inherent variations in water use with crop life-stage and weather conditions that are not accounted for. If there are multiple high tunnels, multiple spreadsheets will need to be completed and the results combined manually.

- Yellow boxes are user input values
- Blue boxes are calculated in Excel
- Red box is the estimated water use

High Tunnel Water Use

Irrigation System efficiency (%) :	90	(Surface and subsurface drip = 90%)
Crop specific water use (inch/day) =	0.18	(Varies through life of crop; 0.18 in/day is towards middle for many crops. Use area-weighted average if multiple crop values need to be considered)
High Tunnel Size		
Length (ft):	72	
Width (ft):	30	
Area (ft ²):	2160	
Percentage of HT area irrigated =	75	(How much of the high tunnel is irrigated crops and how much is walkways?)
Irrigation water use (ft ³ /day)=	27	(Crop specific water use * Area * Percentage irrigated/efficiency)
Gallons/day=	202	(Estimate of Irrigation water used per application)
Irrigation Frequency (days) =	4	(Likely varies from 1 to 7 days through the crop life. Recommend an average value of 4 unless better information is available)
Irrigation water use per application (Gallons)=	808	

Section 4 also offers several engineering design tools.

A Conservation Planner fills in the required data to assist them with the implementation design.

The engineering design tools should only be used with assistance and oversight of an NRCS Engineer.



United States Department of Agriculture

Alaska FOTG Section V -

Conservation Effects-

Alaska FOTG – Section 5

Document Title	Type	Pub Date	Subject	Keywords	Abstract	Size (kB)	Actions
CPPE 2020		2020-7-24	Conservation Effects	effects, physical effects	The Conservation Practice Physical Effects (CPPE) show the magnitude of the practice's effect on the resource concern assuming the practice is fully functional.	507	  

The critical guidance available in Section 5 of the FOTG is the Conservation Planning Physical Effects (CPPE).

The CPPE show the magnitude of each NRCS practice's effect on each NRCS resource concern assuming the practice is fully functional.

Each conservation practice has either a positive, negative or neutral effect on a resource concern. These effects help a Conservation Planner evaluate the short- and long-term impacts planned practice alternatives may have on the environment.

Alaska FOTG – Section 5

The effect each practice has upon a resource is qualified as a slight, moderate, or substantial effect. The practice may either improve or worsen the condition of the resource.

Resource Concerns FY2020				Soil quality limitations - Compaction (column order changed)		Soil quality limitations - Organic matter depletion	
Practice	Lead Discipline(s)	Practice Code	Unit	Effect	Rationale	Effect	Rationale
Forage Harvest Management	ESD- Graz Land Sp	511	ac.	Moderate Improvement	There will be improved root development, litter accumulation, increased biological activity and decrease number of mechanical operations.	Slight Improvement	There will be an increase in vegetative cover and deeper root systems that may increase soil organic material.
Forest Stand Improvement	ESD-For	666	ac	Slight Worsening	Equipment used to harvest or remove forest products can compact forest soils; however, forest management plans and practice plans will minimize impacts.	Slight Improvement	Trees and other vegetation are cut or killed; decomposition of woody debris and dead root systems increases soil OM.

Alaska FOTG – Section 5

Practice effects on each resource are also rated numerically in a matrix. A Conservation Planner can use the CPPE to quickly determine if a practice will have the desired effect on the target resource to be treated.

The following conversion was used to establish the values in the CPPE Matrix:

Effect Values	Value
Substantial Decrease	+5
Mod to Substantial Decrease	+4
Moderate Decrease	+3
Slight to Substantial Decrease	+3
Slight to Mod Decrease	+2
Slight Decrease	+1
Not Applicable	0
No Effect	0
Slight Increase	-1
Slight to Mod Increase	-2
Moderate Increase	-3
Slight to Substantial Increase	-3
Mod to Substantial Increase	-4
Substantial Increase	-5

FY 2020 - Do Not Edit	Practice Code	Wind and water erosion - Sheet and rill erosion	Wind and water erosion - Wind erosion
Channel Bed Stabilization	584	0	0
Clearing & Snagging	326	0	0
Combustion System Improvement	372	0	0
Composting Facility	317	0	0
Conservation Cover	327	4	4
Conservation Crop Rotation	328	4	4
Constructed Wetland	656	0	0
Contour Buffer Strips	332	3	0
Contour Farming	330	2	0
Contour Orchard and Other Perennial Crops	331	4	0
Controlled Traffic Farming	334	0	0
Cover Crop	340	4	4
Critical Area Planting	342	5	5

Alaska-Specific Field Office Technical Guide (FOTG)

NRCS' Primary Technical Reference

- The Alaska FOTG provides Conservation Planners with information, tools, and resources that they can use to address all possible planning situations and circumstances.
- The Alaska FOTG is a living document, constantly being updated to reflect new data, new research, and new policy.
- For guidance on the Alaska FOTG, or to request that specific data or references be added to the Alaska FOTG, contact the Alaska State Resource Conservationist in the NRCS State Office in Palmer, Alaska.



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(1) mail: U.S. Department of Agriculture
Office of the Assistant Secretary for Civil Rights
1400 Independence Avenue, SW
Washington, D.C. 20250-9410;

(2) fax: (202) 690-7442; or

(3) email: program.intake@usda.gov.

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