

# How to Determine if Observed Precipitation is “Normal” for a WSDOT Delineation Report

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updated August 27, 2019



Note: The notes section below some slides contain additional information.

## WSDOT and Hydrology Indicators

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WSDOT typically follows the Corps of Engineers guidance for difficult situations when determining wetland hydrology, especially when indicators may naturally be missing during summer or fall field work.

Using this guidance allows the author and reviewers to evaluate field observations in the context of recent and historical precipitation data from the best climate station.

# Purpose

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- This tutorial describes steps to determine whether precipitation conditions prior to a site visit are either:
  - drier than normal
  - normal
  - wetter than normal
- In WSDOT reports the description is supported by data presented in an appendix:
  - comparing historical to recent precipitation, to determine if normal precipitation occurred in the 3 months preceding field work.
  - documenting precipitation conditions in the 10 days prior to field work.

# Background

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- This tutorial is based on guidance for Difficult Wetland Situations in the Regional Supplements to the Corps Delineation Manual:
  - Western Mountains, Valleys and Coast Version 2.0, page 118, paragraph b
  - Arid West Version 2.0, page 104, paragraph b
- For general instructions, see pages 19-24 to 19-27, Procedure 2 of the NRCS [Engineering Field Handbook Chapter 19](#).
- The following pages are adapted specifically to Washington State, and information available in 2018.

# Assumptions

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- We assume:
  - Historical precipitation data provides the best available estimate of “normal” precipitation.
  - In the WETS tables, the interval between the lower 30% value and the upper 30% value is the range of normal precipitation.
  - Data from the chosen observation station represents similar precipitation conditions occurring at the site.

# Contents

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- report appendix table template
- how to find long-term precipitation data
- how to find current precipitation data
- example table documenting if conditions are normal, or wetter or drier than normal
- how to find precipitation data for the 10 days preceding field work
- example report text

# Template for Precipitation Data



## Appendix B — Precipitation Data

### Appendix B-1. Comparison of Observed and Normal Precipitation (NRCS 2018)

Monthly precipitation data for **City**, Washington.

Month	Long-term rainfall records <sup>a</sup>			Rain fall <sup>a</sup>	Condition dry, wet, normal <sup>b</sup>	Condition Value	Month weight value	Product of previous two columns
	3 yrs. in 10 less than	Average	3 yrs. in 10 more than					
1 <sup>st</sup> prior month							3	
2 <sup>nd</sup> prior month							2	
3 <sup>rd</sup> prior month							1	
<b>Sum</b>								

<sup>a</sup> NRCS 2018

<sup>b</sup> Conditions are considered normal if they fall within the low and high range around the average.

Note: <u>If sum is</u>	<u>Condition value:</u>
6 - 9 then prior period has been drier than normal	Dry (D) =1
10 - 14 then period has been normal	Normal (N) =2
15 - 18 then period has been wetter than normal	Wet (W) =3

Conclusions: **Normal, drier than normal, or wetter than normal** precipitation conditions were present prior to the field visit.

# Natural Resources Conservation Service (NRCS) Field Office Technical Guide (FOTG) website

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Use the [NRCS FOTG website](#) to obtain:

1. Long term rainfall records (5 steps & 3 tips)
2. Current precipitation data (2 steps)

In the following slides, the Anacortes WETS station is used to illustrate the process for an early May 2014 field visit.



# First: Long-Term Rainfall Info



To fill out the “Long-term rainfall records” section of the table using WETS table info.

Note: closest WETS station to your site may be in an adjacent county.

WETS Tables can be found here: [WETS Tables](#)

## Appendix B — Precipitation Data

### Appendix B-1. Comparison of Observed and Normal Precipitation (NRCS 2018)

Monthly precipitation data for **City**, Washington.

Month	Long-term rainfall records <sup>a</sup>			Rain fall <sup>a</sup>	Condition dry, wet, normal <sup>b</sup>	Condition Value	Month weight value	Product of previous two columns
	3 yrs. in 10 less than	Average	3 yrs. in 10 more than					
1 <sup>st</sup> prior month							3	
2 <sup>nd</sup> prior month							2	
3 <sup>rd</sup> prior month							1	
<b>Sum</b>								

<sup>a</sup> NRCS 2018

<sup>b</sup> Conditions are considered normal if they fall within the low and high range around the average.

Note: If sum is	Condition value:
6 - 9 then prior period has been drier than normal	Dry (D) =1
10 - 14 then period has been normal	Normal (N) =2
15 - 18 then period has been wetter than normal	Wet (W) =3

Conclusions: **Normal, drier than normal, or wetter than normal** precipitation conditions were present prior to the field visit.

# Find the WETS Tables



Step 1:

Go to [NRCS FOTG website](https://efotg.sc.egov.usda.gov/#/details),

Click on Washington state, and click “Submit”

The screenshot shows a web browser window with the URL [efotg.sc.egov.usda.gov/#/details](https://efotg.sc.egov.usda.gov/#/details). The page title is "FIELD OFFICE TECHNICAL GUIDE". The main heading is "Welcome to NRCS Field Office Technical Guide (FOTG)". Below this, there is a section titled "Select a state for documents." with a "State:" label. A dropdown menu is open, showing a list of states: New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, and Wyoming. The "Washington" option is highlighted in blue. To the right of the dropdown menu is a "SUBMIT" button, which is circled in red. Below the dropdown menu, there is a table with columns: Pub Date, Subject, Keywords, Abstract, Size (kB), and Actions. The table is currently empty. At the bottom of the page, there is a footer with links for NRCS Home, USDA.gov, Site Map, Civil Rights, FOIA, Accessibility Statement, Support (Help Desk), Privacy Policy, NonDiscrimination Statement, Information Quality, USA.gov, Whitehouse.gov, and eFOTG v5.0.0.1458. The USDA logo and "United States Department of Agriculture" are also present.

# Find the WETS Tables



Step 2: Click “Section II” and “Climatic Data”

**FIELD OFFICE TECHNICAL GUIDE** Support Help Login

Welcome to NRCS Field Office Technical Guide (FOTG)

Select a state for documents.

State: Washington SUBMIT

Document Tree Document Search Recently Changed

Keyboard navigation instructions

- Section I
- Section II**
- Climatic Data
- Climatic Data Cultural Resources
- Ecological Site Descriptions
- Forage Suitability Groups
- Soils
- Threatened and Endangered Species
- Section III
- Section IV
- Section V

# Find the WETS Tables



## Step 3:

Select “AgACIS (Agricultural Applied Climate Information System)”

Ecological Site Descriptions	▼
Forage Suitability Groups	▼
Soils	▼
Threatened and Endangered Species	▼
Section III	▼
Section IV	▼
Section V	▼

### Climatic Data

Documents (2)

Document Title	Type	Pub Date	Subject	Keywords	Abstract	Size (kB)	Actions
<a href="#">AgACIS (Agricultural Applied Climate Information System)</a>	🔗	2016-12-15	Climatic Data	-	DAILY CLIMATE DATA FOR A MONTH - daily maximum, minimum and average temperature (degrees F), base 40 and base 50 growing degree days (GDD), precipitation, snowfall and snow depth (inches) for all days of the selected month. Basic monthly summary statistics are also provided.	-	📘
WA County ID (FIPS) Codes	📄	2014-6-2	-	-	-	15	📘

# Find the WETS Tables

Step 4:  
Select your state from the dropdown list,  
then your county of interest

The screenshot shows the AgACIS web application interface. At the top, there is a blue header with the text "AgACIS". Below the header is a "Help" section with a close button (X). The main content area contains instructions: "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." Below this text are two dropdown menus: "State" (set to "Washington") and "County" (set to "Select county"). A red circle highlights the "State" dropdown. Below the "County" dropdown is a list of counties: Klickitat County, Lewis County, Lincoln County, Mason County, Okanogan County, Pacific County, Pend Oreille County, Pierce County, San Juan County, Skagit County, Skamania County, Snohomish County, Spokane County, Stevens County, Thurston County, Wahkiakum County, Walla Walla County, Whatcom County, Whitman County, and Yakima County. A red circle highlights "Skagit County" in the list. To the left of the county list is a "View map" button. Below the county list is a "Product Description" section with text: "DAILY DATA FOR A MONTH - daily maximum, minimum ; (degrees F), base 40 and base 50 growing degree days ( and snow depth (inches) for all days of the selected month statistics are also provided. Values of 'M' indicate missing indicate a trace." At the bottom right, there is a footer with the text "Powered by ACIS NOAA Regional Climate Centers" and two links: "- Submit a question/comment -" and "- Select a different county -".

# Find the WETS Tables



## Step 5: Select the station of interest

### AgACIS for Skagit County

**1. Location ? »**

- FINNEY CREEK WASH ▲
- LA CONNER 0.2 ESE
- MARBLEMOUNT 2.1 NI
- MOUNT VERNON 0.8 E
- MOUNT VERNON 1.1 E
- MOUNT VERNON 1.5 E
- MOUNT VERNON 3.4 V
- RAINY PASS
- ROCKPORT 0.8 ESE
- ROCKPORT 0.5 E
- SEDRO-WOOLLEY**
- SEDRO-WOOLLEY 5.1
- SWAMP CREEK
- THUNDER BASIN

[View map](#)

**2. Product »**

- Daily data for a month
- Daily almanac
- Monthly summarized data
- Calendar day summaries
- Daily/monthly normals
- First/last dates
- Temperature graphs
- Accumulation graphs

**3. Options »**

Year range:  -

Thresholds:

**4. View »**

[Go](#)

**SEDRO-WOOLLEY**  
Max Temperature: 1896-08-06 to 2019-07-31  
Min Temperature: 1896-08-06 to 2019-07-31  
Precipitation: 1896-08-01 to 2019-07-31  
Snowfall: 1896-11-01 to 2019-03-08  
Snow Depth: 1898-11-19 to 2019-03-08

**Product Description:**

WETS - month by month summary and probability analysis of temperature and precipitation. The table also provides first/last dates and length of growing season using three index temperatures (32, 28, and 24 degrees Fahrenheit by default) at 50 and 70 percent probabilities. A third tables provides monthly precipitation totals (in inches) for the period of record.

- Submit a question/comment -  
- Select a different county -

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# Tips for Choosing the Most Applicable Observation Station

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## Tip 1

Research elevations and landscape position of available stations in the vicinity compared to your site.

Keep in mind a station farther away may have more similar precipitation patterns as your site than one that is closer in proximity, including stations in adjacent counties. The most relevant station may be in a neighboring county.

# Tips for Choosing the Most Applicable Observation Station



Tip 2 – Use the “View map” button to view locations of stations

**AgACIS for Skagit County**

1. Location ? »	2. Product »	3. Options »	4. View »
<ul style="list-style-type: none"><li>FINNEY CREEK WASH</li><li>LA CONNER 0.2 ESE</li><li>MARBLEMOUNT 2.1 NI</li><li>MOUNT VERNON 0.8 E</li><li>MOUNT VERNON 1.1 E</li><li>MOUNT VERNON 1.5 E</li><li>MOUNT VERNON 3.4 V</li><li>RAINY PASS</li><li>ROCKPORT 0.8 ESE</li><li>ROCKPORT 6.5 E</li><li>SEDRO-WOOLLEY</li><li>SEDRO-WOOLLEY 5.1</li><li>SWAMP CREEK</li><li>THUNDER BASIN</li></ul>	<ul style="list-style-type: none"><li><input type="radio"/> Daily data for a month</li><li><input type="radio"/> Daily almanac</li><li><input type="radio"/> Monthly summarized data</li><li><input type="radio"/> Calendar day summaries</li><li><input type="radio"/> Daily/monthly normals</li><li><input type="radio"/> First/last dates</li><li><input type="radio"/> Temperature graphs</li><li><input type="radio"/> Accumulation graphs</li><li><input type="radio"/> TAPS</li><li><input type="radio"/> FROST</li><li><input type="radio"/> GROWTH</li><li><input checked="" type="radio"/> WETS</li><li><input type="radio"/> DAYS</li><li><input type="radio"/> Station information</li></ul>	<p>Year range: 1971 - 2000</p> <p>Thresholds: 24 28 32</p>	<p>Go</p>

**View map**

**Product Description:**

WETS - month by month summary and probability analysis of temperature and precipitation. The table also provides first/last dates and length of growing season using three index temperatures (32, 28, and 24 degrees Fahrenheit by default) at 50 and 70 percent probabilities. A third tables provides monthly precipitation totals (in inches) for the period of record.

- Submit a question/comment -  
- Select a different county -

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NOAA Regional Climate Centers



# Tips for Choosing the Most Applicable Observation Station



Tip 2 – Use the “View map” button to view locations of stations

Hover cursor over station and info will pop up in lower left box

“Click station symbol to select” and be routed to all the station information options

The screenshot displays the 'AgACIS for Skagit County' interface. It features a map of Skagit County with various station symbols. A popup window for the 'SEDRO-WOOLLEY' station is visible in the lower-left corner, containing the following data:

SEDRO-WOOLLEY
Max Temperature:
1896-08-06 to 2019-07-31
Min Temperature:
1896-08-06 to 2019-07-31
Precipitation:
1896-08-01 to 2019-07-31
Snowfall:
1896-11-01 to 2019-03-08
Snow Depth:
1898-11-19 to 2019-03-08

At the bottom of the popup, the text 'Click station symbol to select' is circled in red. The main interface includes a zoom control (+/-) in the top-left, and buttons for 'Show more stations', 'Help', and 'Close Map' at the bottom.

# Choose an Observation Station With a Complete Set of Necessary Data

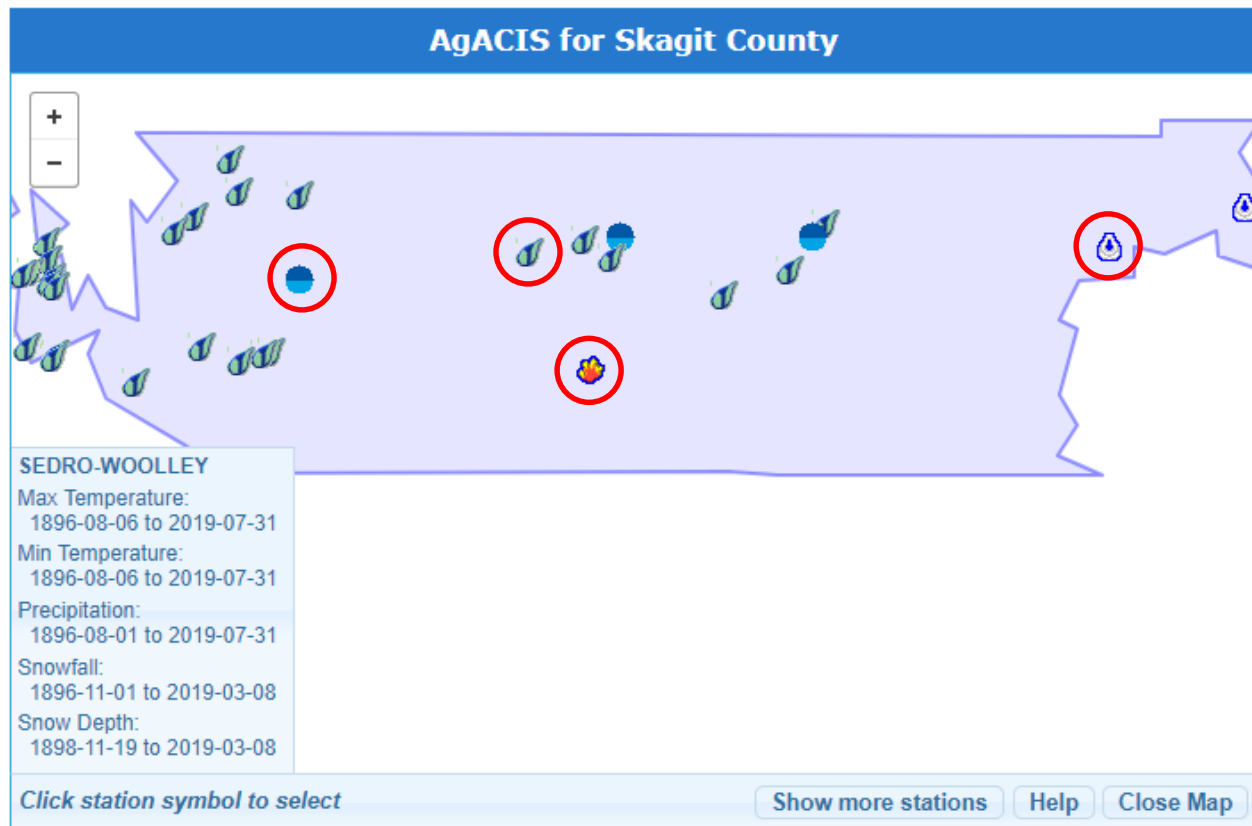


Tip 3 – Review available station data before settling on a station to use. Some stations are missing data you will need.

Make sure the selected station has all data needed for historic (WETS), current precipitation, and daily data.

Note the different icons. The stations with the blue circles tend to have the complete set of info needed (WETS tables, monthly data summarized, and daily data for a month).

Often the other station types lack pertinent data



# WETS Table Results



## AgACIS for Skagit County

AgACIS

Format for export

Print



WETS Station: ANACORTES, WA

Requested years: 1971 - 2000

Month	Temperature (°F)			Precipitation (inches)				
	Avg daily max	Avg daily min	Avg daily mean	Avg	30% chance will have		Avg number of days with 0.10 inch or more	Average total snowfall
					less than	more than		
Jan	45.4	34.6	40.0	3.71	2.50	4.44	10	1.8
Feb	48.7	36.3	42.5	2.48	1.77	2.94	8	0.4
Mar	52.3	38.5	45.4	2.22	1.70	2.59	8	0.0
Apr	57.4	42.0	49.7	1.86	1.51	2.12	6	0.0
May	62.8	46.6	54.7	1.65	1.18	1.95	5	0.0
Jun	67.4	50.4	58.9	1.48	0.92	1.79	4	0.0
Jul	71.7	52.8	62.3	1.03	0.55	1.24	3	0.0
Aug	72.2	53.1	62.7	1.05	0.44	1.25	2	0.0
Sep	67.3	50.0	58.6	1.41	0.69	1.73	4	0.0
Oct	58.8	44.1	51.4	2.27	1.41	2.75	7	0.0
Nov	50.4	39.2	44.8	4.23	2.90	5.04	11	0.8
Dec	45.7	35.3	40.5	3.92	2.88	4.60	11	1.0
Annual:					24.36	29.75		
Average	58.3	43.6	51.0	-	-	-	-	-
Total	-	-	-	27.33			80	4.0

3 months prior to early May 2014 field visit

Use these data to fill in the Long-term rainfall records columns in Appendix B-1

### GROWING SEASON DATES

Requested years of data: 1971 - 2000

Years with missing data: 24 deg = 3 28 deg = 3 32 deg = 3

Years with no occurrence: 24 deg = 4 28 deg = 0 32 deg = 0

Data years used: 24 deg = 27 28 deg = 27 32 deg = 27

# First: Fill in Appendix Table with Historic (WETS) Data



In the report appendix, month rows are in reverse order so that the most recent prior month (most weighted information) appears first. Note the columns are in a different order than the WETS Tables.

## Appendix B — Precipitation Data

### Appendix B-1. Comparison of Observed and Normal Precipitation (NRCS 1997)

Monthly precipitation data for Anacortes, Washington.

		Long-term rainfall records <sup>a</sup>			Rain fall <sup>a</sup>	Condition dry, wet, normal <sup>b</sup>	Condition Value	Month weight value	Product of previous two columns
Month	3 yrs. in 10 less than	Average	3 yrs. in 10 more than						
1 <sup>st</sup> prior month	Apr	1.51	1.86	2.12			3		
2 <sup>nd</sup> prior month	Mar	1.70	2.22	2.59			2		
3 <sup>rd</sup> prior month	Feb	1.77	2.48	2.94			1		
							<b>Sum</b>		

<sup>a</sup>NRCS 2018

<sup>b</sup>Conditions are considered normal if they fall within the low and high range around the average.

## Second:

# Compare Historical (WETS) Data to Current Precipitation Data



Use the Climate Data Page for the specific county found in [Section II, Climactic Data](#) to obtain recent “Rainfall” data.

## Appendix B — Precipitation Data

### Appendix B-1. Comparison of Observed and Normal Precipitation (NRCS 1997)

Monthly precipitation data for Anacortes, Washington.

	Long-term rainfall records <sup>a</sup>			Rain fall <sup>a</sup>	Condition dry, wet, normal <sup>b</sup>	Condition Value	Month weight value	Product of previous two columns
	3 yrs. in 10 less than	Average	3 yrs. in 10 more than					
1 <sup>st</sup> prior month	Apr	1.51	1.86	2.12			3	
2 <sup>nd</sup> prior month	Mar	1.70	2.22	2.59			2	
3 <sup>rd</sup> prior month	Feb	1.77	2.48	2.94			1	
							<b>Sum</b>	

<sup>a</sup>NRCS 2018

<sup>b</sup>Conditions are considered normal if they fall within the low and high range around the average.

# Current Precipitation Data



Step 1:

Return to the County Tab, click your station, “Monthly summarized data”, enter your “Year Range,” select “Precipitation,” & “Go”

The screenshot shows the 'AgACIS for Skagit County' interface with four main sections: 1. Location, 2. Product, 3. Options, and 4. View. In the 'Location' section, 'ANACORTES' is selected. In the 'Product' section, 'Monthly summarized data' is selected. In the 'Options' section, the 'Year range' is set to '2014 - 2014', the 'Variable' is 'Precipitation', and the 'Summary' is 'Sum'. In the 'View' section, the 'Go' button is highlighted. A 'Product Description' box at the bottom left explains that the data includes means, sums, and daily extremes for the selected variable and year range. At the bottom right, there are links to submit a question/comment and select a different county, along with the ACIS logo and the text 'Powered by NOAA Regional Climate Centers'.

**AgACIS for Skagit County**

**1. Location ? »**

- ANACORTES
- ANACORTES 0.4 ENE
- ANACORTES 0.5 SE
- ANACORTES 0.6 NE
- ANACORTES 0.8 ESE
- ANACORTES 1.3 NW
- ANACORTES 1.7 N
- ANACORTES 1.7 WNW
- ANACORTES 3.0 N
- ANACORTES 4.6 SSE
- ANACORTES 4.7 SSW
- ANACORTES 4.9 S
- ANACORTES 5.0 S
- ANACORTES 5.3 S
- BELLINGHAM 10.3 SSE

[View map](#)

**2. Product »**

- Daily data for a month
- Daily almanac
- Monthly summarized data
- Calendar day summaries
- Daily/monthly normals
- First/last dates
- Temperature graphs
- Accumulation graphs
- TAPS
- FROST
- GROWTH
- WETS
- DAYS
- Station information

**3. Options »**

Year range: 2014 - 2014

Variable: Precipitation

Summary: Sum

Allowable missing days: 1

**4. View »**

[Go](#)

**Product Description:**

MONTHLY SUMMARIZED DATA - means, sums, daily extremes or frequencies for the selected variable for each month of the year for the selected range of years. HDD, CDD and GDD are heating, cooling and growing degree days, respectively. Note: trace precipitation/snow/fall/snow depth amounts are treated as zero in sums, means, and frequency counts. Annual average temperatures are the average of the twelve monthly values. Values of 'M' indicate missing data and 'T' indicates a trace.

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

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NOAA Regional Climate Centers

# Current Precipitation Results



Step 2: Transfer the precipitation totals for the three months prior to the field work to the “Rainfall” column of your appendix table

AgACIS Copy CSV Excel PDF Print ×

**Monthly Total Precipitation for ANACORTES, WA**  
Click column heading to sort ascending, click again to sort descending.

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
2014	3.65	3.36	3.86	2.30	2.86	0.92	1.13	0.73	2.13	4.41	M	M	M
Mean	3.65	3.36	3.86	2.30	2.86	0.92	1.13	0.73	2.13	4.41	M	M	M

# Fill in the Appendix Table



## Appendix B Precipitation Data

### Appendix B-1 Comparison of Observed and Normal Precipitation (NRCS 1997)

Monthly precipitation data for Anacortes, Washington

		Long-term rainfall records <sup>a</sup>			Rain fall <sup>a</sup>	Condition: Dry, Wet, Normal <sup>c</sup>	Condition Value	Month weight value	Product of previous two columns
	Month	3 yrs. in 10 less than	Average	3 yrs. in 10 more than					
1 <sup>st</sup> prior month	Apr	1.49	1.86	2.12	2.30		3		
2 <sup>nd</sup> prior month	Mar	1.67	2.21	2.58	3.86		2		
3 <sup>rd</sup> prior month	Feb	1.75	2.49	2.95	3.36		1		
<b>Sum</b>								<b>x</b>	

<sup>a</sup> NRCS 2014a

<sup>c</sup> Conditions are considered normal if they fall within the low and high range around the average.

For this example, field work occurred in early May 2014. To accurately interpret field observations, you want to know how wet it was in April (1<sup>st</sup> prior month). How wet it was in March and February would be less influential on site conditions, but are still important. This is reflected in the “Month weight value” column and why the first prior month occurs in the top row of the table (as opposed to occurring order of calendar month).



## Fill out the rest of the table

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- For each row, if recently observed rainfall is:
  - Greater than the upper 30% value, it has been wetter than normal. The condition is **W** and the condition value is **3**.
  - Contained within the upper and lower 30% values, precipitation has been normal. The condition is **N** and the condition value is **2**.
  - Less than the lower 30% value, it has been drier than normal. The condition is **D** and the condition value is **1**.
- Multiply the condition value times the month weight value and enter the product in the right column.
- Add the 3 values in the right column and compare the total to the ranges in the lower left part of the template to determine precipitation conditions at the site for the 3 months prior to the visit.

# Example of completed report appendix table



## Appendix B — Precipitation Data

### Appendix B-1. Comparison of Observed and Normal Precipitation (NRCS 1997)

Monthly precipitation data for Anacortes, Washington.

		Long-term rainfall records <sup>a</sup>			Rain fall <sup>a</sup>	Condition dry, wet, normal <sup>b</sup>	Condition Value	Month weight value	Product of previous two columns
Month	3 yrs. in 10 less than	Average	3 yrs. in 10 more than						
1 <sup>st</sup> prior month	Apr	1.51	1.86	2.12	2.30	W	3	3	9
2 <sup>nd</sup> prior month	Mar	1.70	2.22	2.59	3.86	W	3	2	6
3 <sup>rd</sup> prior month	Feb	1.77	2.48	2.94	3.36	W	3	1	3
<b>Sum</b>								<b>18</b>	

<sup>a</sup>NRCS 2018

<sup>b</sup>Conditions are considered normal if they fall within the low and high range around the average.

Note: If sum is

- 6 - 9 then prior period has been drier than normal
- 10 - 14 then period has been normal
- 15 - 18 then period has been wetter than normal

Condition value:

- Dry (D) =1
- Normal (N) =2
- Wet (W) =3

Conclusions: Wetter than normal precipitation conditions were present prior to the field visit on May 5, 2014.

## Third: Document Precipitation Occurring in the 10 Days Prior to Field Work



Use the Climate Data Page for the specific county found in [Section II, Climactic Data](#) to obtain “daily data for a month”.

### Appendix B-2. Daily Precipitation 10 days preceding field work occurring on May 11, 2014, Anacortes, Washington



Date (2014)	Daily Precipitation (inches) <sup>a</sup>
May 10	
May 9	
May 8	
May 7	
May 6	
May 5	
May 4	
May 3	
May 2	
May 1	
<b>Sum</b>	

<sup>a</sup> NRCS 2018

# Document Precipitation Occurring in the 10 Days Prior to Field Work



Step 1: Return to the County Tab, click your station, “Daily data for a month”, enter your “Date,” & “Go”

**AgACIS for Skagit County**

**1. Location ? »**

- ANACORTES
- ANACORTES 0.4 ENE
- ANACORTES 0.5 SE
- ANACORTES 0.6 NE
- ANACORTES 0.8 ESE
- ANACORTES 1.3 NW
- ANACORTES 1.7 N
- ANACORTES 1.7 WNW
- ANACORTES 3.0 N
- ANACORTES 4.6 SSE
- ANACORTES 4.7 SSW
- ANACORTES 4.9 S
- ANACORTES 5.0 S
- ANACORTES 5.3 S
- BELLINGHAM 4.3 SSE

**2. Product »**

- Daily data for a month
- Daily almanac
- Monthly summarized data
- Calendar day summaries
- Daily/monthly normals
- First/last dates
- Temperature graphs
- Accumulation graphs
- TAPS
- FROST
- GROWTH
- WETS
- DAYS
- Station information

**3. Options »**

Date: 2014-05 Date has the format yyyy-mm

May 2014

Su	Mo	Tu	We	Th	Fr	Sa
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

**4. View »**

View map

**Product Description:**

DAILY DATA FOR A MONTH - daily maximum, minimum and average temperature (degrees F), base 40 and base 50 growing degree days (GDD), precipitation, snowfall and snow depth (inches) for all days of the selected month. Basic monthly summary statistics are also provided. Values of 'M' indicate missing data and values of 'T' indicate a trace.

- Submit a question/comment -  
- Select a different county -

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NOAA Regional Climate Centers

# Document Precipitation Occurring in the 10 Days Prior to Field Work



Step 2: Transfer daily precipitation records for the appropriate days to the report appendix

AgACIS Copy CSV Excel PDF Print X

Climatological Data for ANACORTES, WA - May 2014  
Click column heading to sort ascending, click again to sort descending.

Date	Max Temperature	Min Temperature	Avg Temperature	GDD Base 40	GDD Base 50	Precipitation
2014-05-01	75	51	63.0	23	13	0.00
2014-05-02	77	53	65.0	25	15	0.00
2014-05-03	68	49	58.5	19	9	0.45
2014-05-04	62	50	56.0	16	6	0.50
2014-05-05	60	49	54.5	15	5	0.32
2014-05-06	62	50	56.0	16	6	0.07
2014-05-07	64	47	55.5	16	6	0.00
2014-05-08	65	47	56.0	16	6	0.00
2014-05-09	62	48	55.0	15	5	0.76
2014-05-10	58	47	52.5	13	3	0.00
2014-05-11	63	46	54.5	15	5	0.00
2014-05-12	66	48	57.0	17	7	0.00
2014-05-13	78	56	67.0	27	17	0.00
2014-05-14	78	53	65.5	26	16	0.00
2014-05-15	78	57	67.5	28	18	0.00
2014-05-16	76	54	65.0	25	15	0.00
2014-05-17	70	54	62.0	22	12	0.00
2014-05-18	65	51	58.0	18	8	0.00
2014-05-19	69	51	60.0	20	10	0.00
2014-05-20	68	50	59.0	19	9	0.00

**Appendix B-2. Daily Precipitation 10 days preceding field work occurring on May 11, 2014, Anacortes, Washington**

Date (2014)	Daily Precipitation (inches) <sup>a</sup>
May 10	0.00
May 9	0.76
May 8	0.00
May 7	0.00
May 6	0.07
May 5	0.32
May 4	0.50
May 3	0.45
May 2	0.00
May 1	0.00
<b>Sum</b>	<b>2.1</b>

<sup>a</sup> NRCS 2018

## Example Report Text

### Based on the example provided in this tutorial

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#### Wetland Hydrology and Recent Weather:

The Regional Delineation Supplement Version 2.0 (USACE 2010) recommends using methods described in Chapter 19 in *Engineering Field Handbook* (NRCS 2015) to determine if precipitation occurring in the three full months prior to the site visit was normal, drier than normal, or wetter than normal. Actual rainfall is compared to the normal range of the 30-year average. When considering the three prior months as a whole, **wetter** than normal precipitation conditions were present prior to field work. **All three** of the months prior to field work were **wetter than normal** (Appendix B-1).

**Heavy precipitation** was recorded in the ten days preceding field work (Appendix B-2).

# Report Citation For Your Data

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## Citation Information

1. [NRCS] Natural Resources Conservation Service [Internet]. 2018. Field Office Technical Guide. US Department of Agriculture. Climate Data for **Skagit** County, Coop Station **Anacortes, Washington 450176**. [cited **2018 Sept 12**]. Available at: <https://efotg.sc.egov.usda.gov/#/details>

# Report Citation



To determine the Coop Station information for your citation. Return to the County Tab, click your station, "Station information," & "Go," then look for the COOP Station ID number

**AgACIS for Skagit County**

1. Location ? »

- ANACORTES
- ANACORTES 0.4 ENE
- ANACORTES 0.5 SE
- ANACORTES 0.6 NE
- ANACORTES 0.8 ESE
- ANACORTES 1.3 NW
- ANACORTES 1.7 N
- ANACORTES 1.7 WNW
- ANACORTES 3.0 N
- ANACORTES 4.6 SSE
- ANACORTES 4.7 SSW
- ANACORTES 4.9 S
- ANACORTES 5.0 S
- ANACORTES 5.3 S
- BELLINGHAM 10.3 COOP

2. Product »

- Daily data for a month
- Daily almanac
- Monthly summarized data
- Calendar day summaries
- Daily/monthly normals
- First/last dates
- Temperature graphs
- Accumulation graphs
- TAPS
- FROST
- GROWTH
- WETS
- DAYS
- Station information

3. Options »  
No options for this product

4. View »

**AgACIS**

Station name:	ANACORTES										
State:	WA										
County:	Skagit County (FIPS 53057)										
Climate Division:	NE OLYMPIC SAN JUAN (WA02)										
Station ids:	04202 (WBAN) 450176 (Coop) US000450176 (CHGN) ACTW1 (NWS LI)										
Latitude:	48.5119 degrees										
Longitude:	-122.6136 degrees										
Elevation:	20 feet										
Available date ranges:	<table border="1"><tr><td>Max Temperature</td><td>1905-01-09 - 2016-11-30</td></tr><tr><td>Min Temperature</td><td>1905-01-09 - 2016-11-30</td></tr><tr><td>Precipitation</td><td>1892-09-01 - 2016-11-30</td></tr><tr><td>Snowfall</td><td>1894-01-03 - 2010-12-30</td></tr><tr><td>Snow Depth</td><td>1894-01-03 - 2010-12-30</td></tr></table>	Max Temperature	1905-01-09 - 2016-11-30	Min Temperature	1905-01-09 - 2016-11-30	Precipitation	1892-09-01 - 2016-11-30	Snowfall	1894-01-03 - 2010-12-30	Snow Depth	1894-01-03 - 2010-12-30
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Snow Depth	1894-01-03 - 2010-12-30										