

TRAINING SLIDE-SHOW

CoCoRaHS

Community Collaborative Rain, Hail & Snow Network

"Because every drop counts!"



WHAT IS CoCoRaHS??

“CoCoRaHS is a grassroots, non-profit, community-based, high-density precipitation network



made up of volunteers of all backgrounds and ages . . .



. . . who take daily measurements of “just precipitation” right in their own backyards”



CoCoRaHS

Snow Netw...

We just measure precipitation!

Rain

Snow

Hail

Once trained, our
volunteers collect data
using low-cost
measurement tools . . .



4-inch diameter
high capacity rain gauges



Aluminum foil-wrapped
Styrofoam hail pads



CoCoRaHS

and report their daily observations on our interactive Web site: www.cocorahs.org

CoCoRaHS COMMUNITY COLLABORATIVE RAIN, HAIL & SNOW NETWORK
"Because every drop counts"

Home | States | View Data | Maps | My Data | My Account | Admin | Logout

Welcome to CoCoRaHS

Main Menu

- Home
- About Us
- Join Cocorahs
- Contact Us

Resources

- FAQ / Help
- Education
- Volunteer Coordinators
- Hail Pad
- Distribution/Drop-off
- Help Needed
- Printable Forms
- CoCoRaHS Store
- Calendar
- The Catch
- News
- In the Spotlight
- Sponsors
- Presentations
- Links

Things to know about...

- Rain
- Hail
- Snow

News

- Newsletter
 - Read the PDF.
- CoCoRaHS Brochure
 - Read the PDF.
- Fox News Channel
 - Watch the video.
- USA TODAY Article
 - Read the article.

CoCoRaHS begins in Nevada and Wisconsin March 2007

Average Annual Precipitation Nevada

Average Annual Precipitation Wisconsin

Purchase an official CoCoRaHS® Rain Gauge



**Our aim is
to provide the highest quality
data for natural resource,
education and research
applications.**

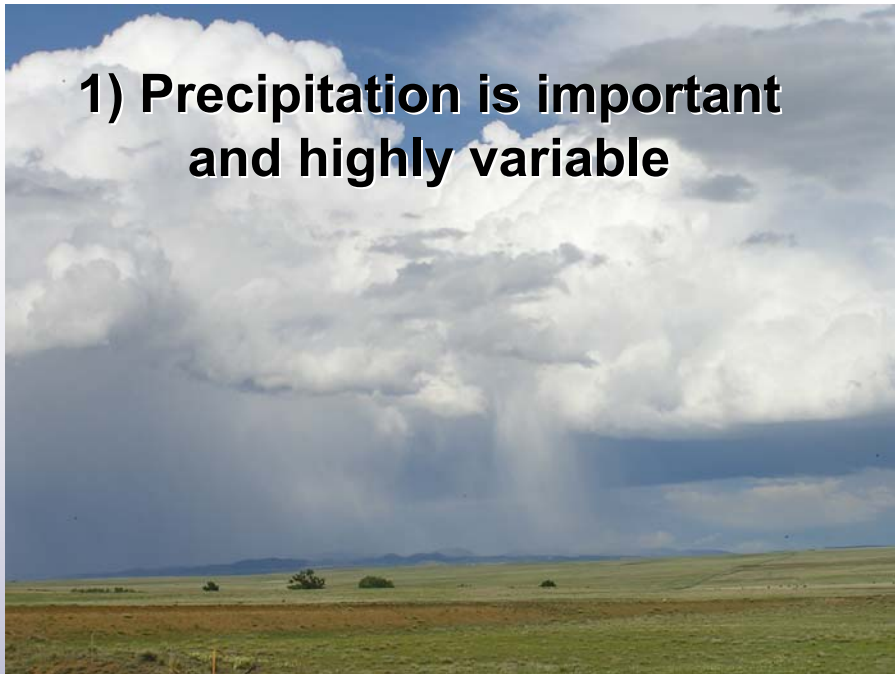
WHY CoCoRaHS ?

Five
Important
Reasons

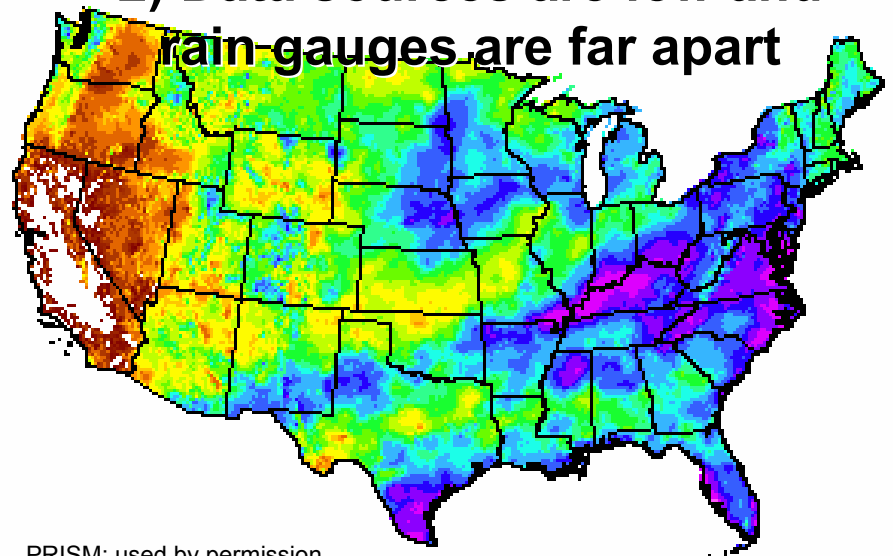
CoCoRaHS

Mail & Snow Network

1) Precipitation is important and highly variable



2) Data sources are few and rain-gauges are far apart

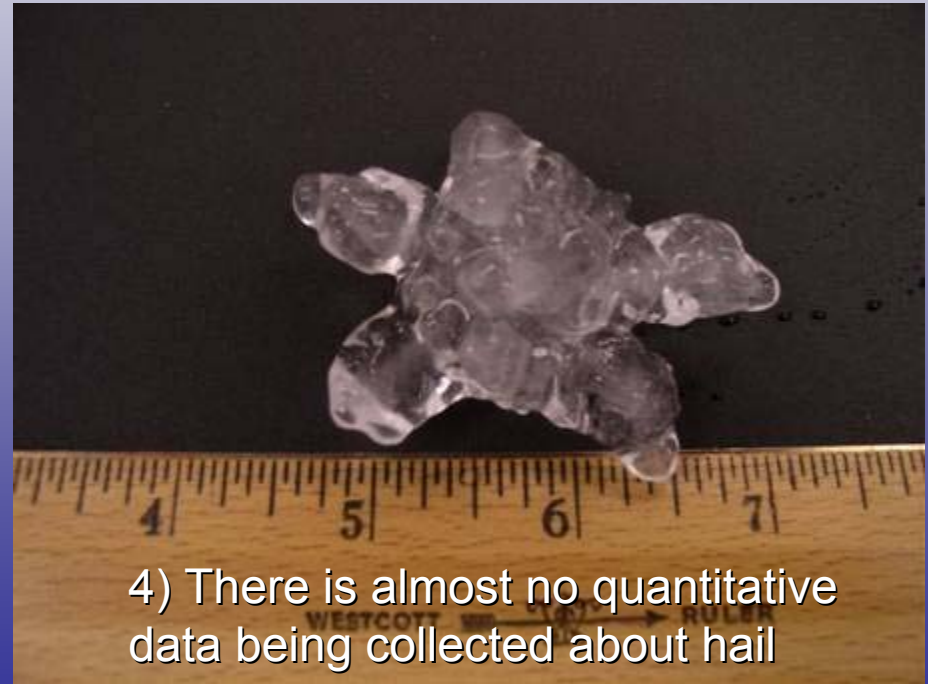


PRISM: used by permission

3) Measurements from many sources are not always accurate (especially snow)



4) There is almost no quantitative data being collected about hail



5) Storm reports can save lives

STORM TOLL
Deaths - 5 confirmed
Injuries - 40
Missing - 16
Rescued - 160
Damages - Tens of millions of dollars at Colorado State University, \$1.5 million to \$2 million to city roads and bridges; \$1 million to city parks and trails; no estimate for private property.

Source: Emergency Officials
All information as of 1-a.m. today

Wednesday
COLORADOAN
City death toll at 5; damage in millions

July 30th 1997

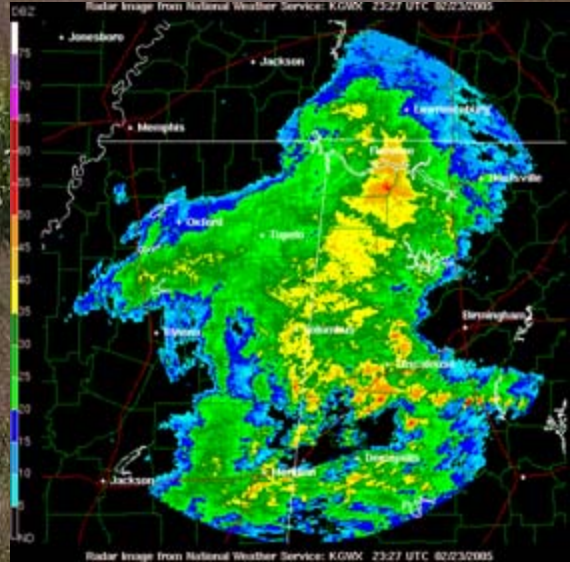
FLOOD
CSU's book losses speak volumes

Rainfall breaks 20-year record



Who uses CoCoRaHS Data?

- National Weather Service
- Other Meteorologists
- Hydrologists
- Emergency Managers
- City Utilities
 - Water supply
 - Water conservation
 - Storm water
- Insurance adjusters
- USDA—Crop production
- Engineers
- Scientists studying storms
- Mosquito control
- Ranchers and Farmers
- Outdoor & Recreation
- Teachers and Students
 - Geoscience education tool
 - Taking measurements
 - Analyzing data
 - Organizing results
 - Conducting research
 - Helping the community



Who Sponsors CoCoRaHS?

The National Oceanic and Atmospheric Administration

Colorado State University

USDA

US Bureau of Reclamation

National Weather Service Local Offices

Individual Contributors

As well as many others

SECTION ONE:

Observer Information

In this section we will:

a) Explain what we will need from you before you become an observer

b) Explain what you will need before you can participate

CoCoRaHS

a) What *we will need from you*
before you can participate as an
observer:

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& Snow Network



A completed application form
(on-line or paper)



Your location – so we can produce accurate maps. Just having your address may not be good enough. We have to pinpoint it just as close as we can.



Your commitment to collect accurate scientific data

Your willingness to receive CoCoRaHS e-mails

(spam blocking off)



CoCoRaHS

info@cocorahs.org
cocorahsqc@msn.com
nolan@atmos.colostate.edu

Snow Network

b) What *you will need* before you can participate as an observer

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#1

A sincere desire to help study and learn about storms



#2

Training

(In person or on-line)



#3

A unique station number and name

(we will assign you one)



Station Number : CO-LR-368

Station Name : FCL 3.4 SW

CoCoRaHS

Snow Netw...

#4

A CoCoRaHS “4-inch” rain gauge installed in a good location



#5

A login ID and password to enter data

A screenshot of the CoCoRaHS website login page. The page has a blue header with the CoCoRaHS logo and the text "COMMUNITY COLLABORATIVE RAIN, HAIL & SNOW NETWORK" and the tagline "Because every drop counts". Below the header is a navigation bar with links for Home, States, View Data, Maps, My Data Entry, and Login. The main content area is titled "Login" and contains a "Log In:" section with fields for "UserName:" (containing "username") and "Password:" (containing "*****"). There is a "Save Login" checkbox and a "Log In" button. Below the login fields are two links: "Find your login info." and "Apply to be a Cocorahs observer." The left sidebar contains a "Main Menu" with links for Home, About Us, Join CoCoRaHS, and Contact Us, and a "Resources" section with links for FAQ/Help, Education, Volunteer Coordinators, Mail List, Distribution/Coord, Help Needed, and Database Form.

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Snow Network

#6

Hail pads (some states may not be participating)



#7

Internet or telephone capabilities

The ability to gather accurate data
and transmit it in a timely fashion



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SECTION TWO:

Setting Up Your Equipment and Observing Precipitation

In this section we will:

a) Show how/where to place your gauge and hail pad

b) Explain how to measure rainfall

c) Illustrate how to observe hail

d) Show how to measure snow depth and water content

CoCoRaHS

The logo for CoCoRaHS is located in the bottom right corner. It features the text "CoCoRaHS" in a large, bold, blue font, slanted upwards. Below the text is a stylized graphic of a house roofline, also in blue, with a white interior. The roofline has a chimney on the right side and a series of vertical lines representing a fence or railing in the foreground.

a) Placement of your rain gauge



**Location! Location!
Location!**

CoCoRaHS

Places not to place your gauge



The #1, all time worst place to put your rain gauge is to leave it in the box!



Using your gauge to hold up your gutter downspout is not a wise choice either!



Avoid placing it
under trees or
any structure



Although convenient,
the deck is still too
close to the house

Also avoid placing your gauge near:



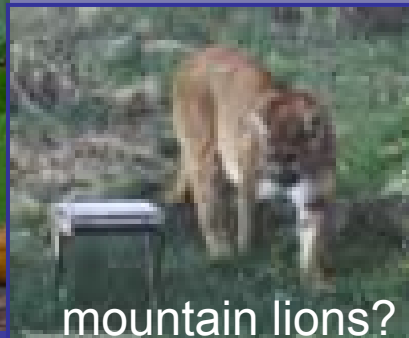
Sprinklers (both big and small)



Steep slopes (a bit exaggerated)



Animals (dogs, birds, etc)



mountain lions?

And finally avoid anything that would artificially increase or decrease your gauge catch



This can cause updrafting during strong winds, which may reduce your gauge catch

Ideal placement of your gauge



Distance from obstacles

- In open areas strive to be twice as far from obstacles as they are high.
- In developed areas strive to be as far from obstacles as they are high.

Distance between Trees



Ideally, place your gauge equidistant from the nearest trees

Height above the ground

In open areas place the gauge top approx. 2 feet off the ground

This is to improve gauge catch by reducing wind speed



In developed areas place the gauge top approx. 5 feet off the ground

This is to improve gauge catch by reducing the impact of nearby obstacles



LEVEL and BEVEL

Make sure your gauge is level



Bevel the top of the post to reduce rain splashing into the gauge.

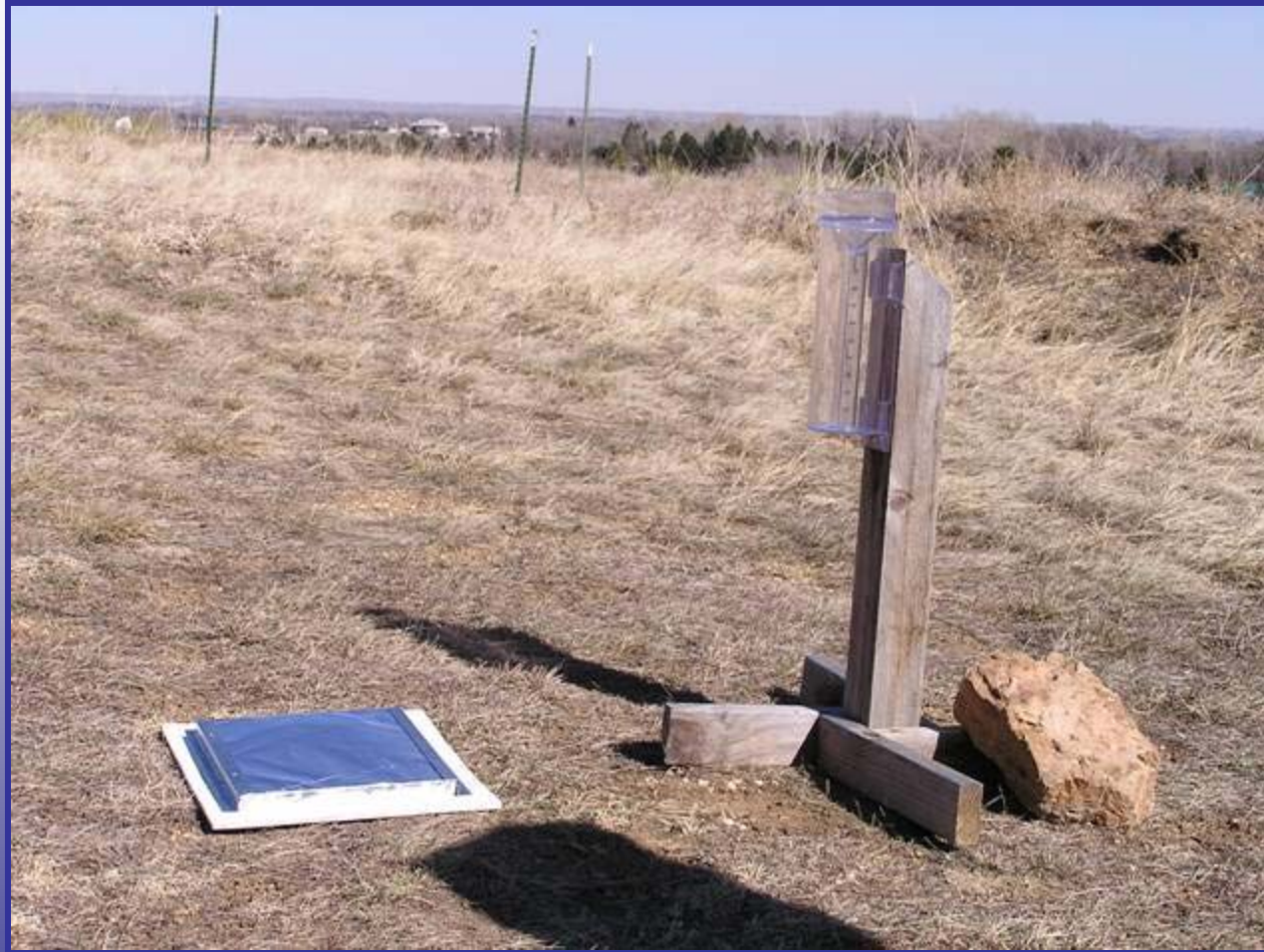
Hail Pad Placement



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Snow Netw...

Where should I place my hail pad?



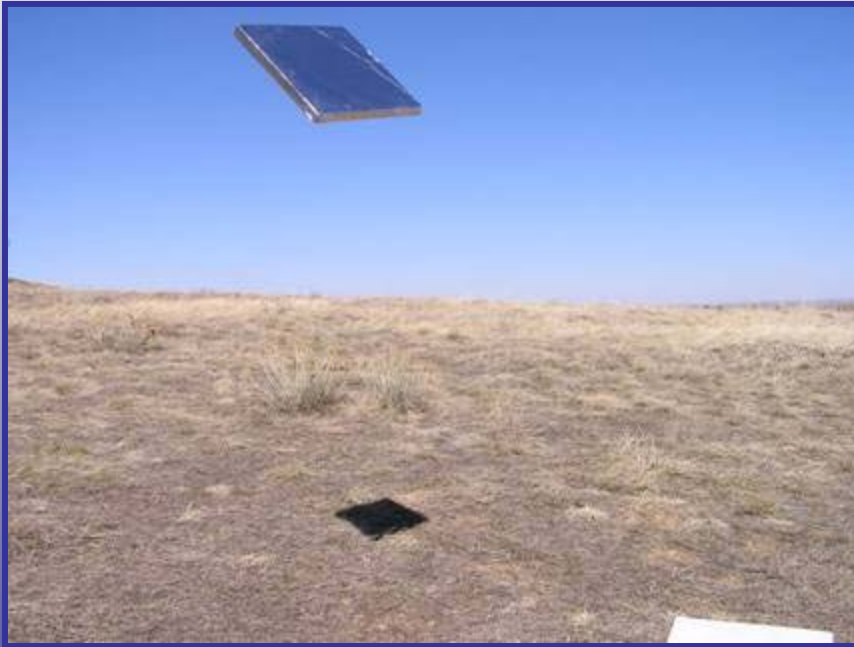
When you've found a good place for your rain gauge, that should be good enough for your hail pad as well.

Elevate and Attach



The pad must be horizontal.
It is best, but not necessary, to elevate the hail pad.
It should also be firmly attached so that . . .

. . . it doesn't blow away!



“When last seen, our hail pad was headed north at 3rd and Elm”

Spraying the pad

If you have trouble with birds, lightly spray paint the hail pad surface with a dull color*



* Bright Orange may not be the best choice . . . but it may keep hunters from shooting your pad.

Write the direction the pad is facing on the pad's back



This example shows an “N” for North

b) Measuring Rainfall



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When should we read our gauges?



7:00AM is preferred

Between 5:00AM and 9:00AM is OK

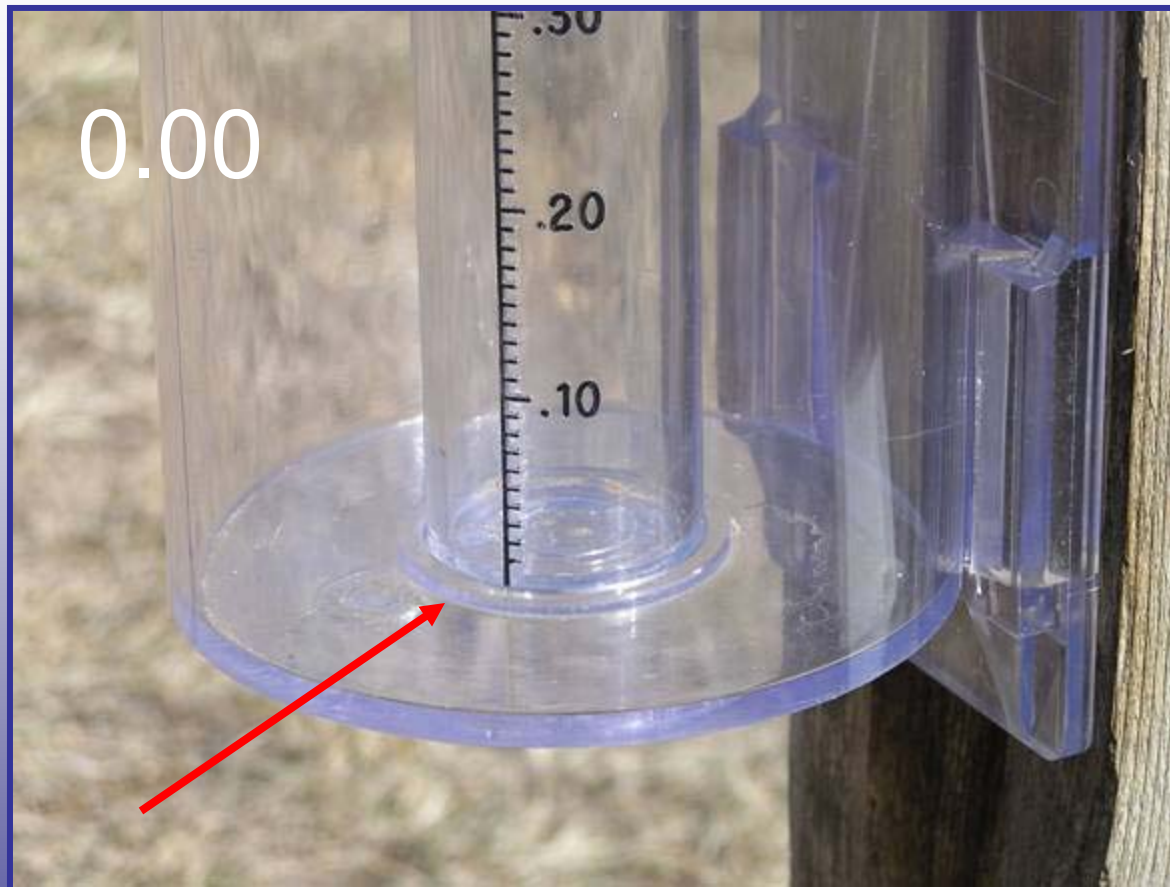
Other times are accepted, but they will not appear on CoCoRaHS Maps

Reading your rain gauge

- Reading the rain gauge is easy but accuracy & consistency are important.
- Here are the most common situations you may encounter when reading your gauge.



Your most common observation

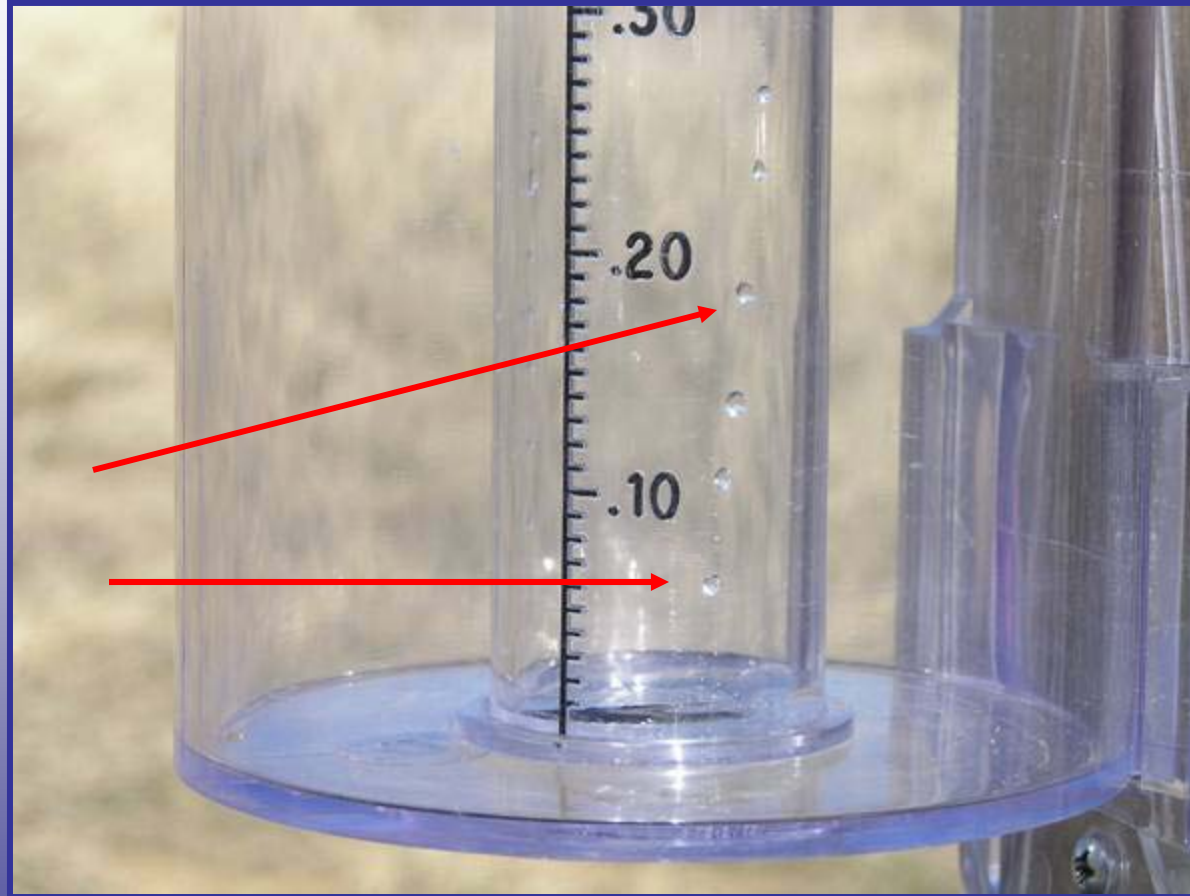


... will be zero, (0.00), nada, nothing, zilch!

It is important to know that it did NOT rain. Please report zeros!

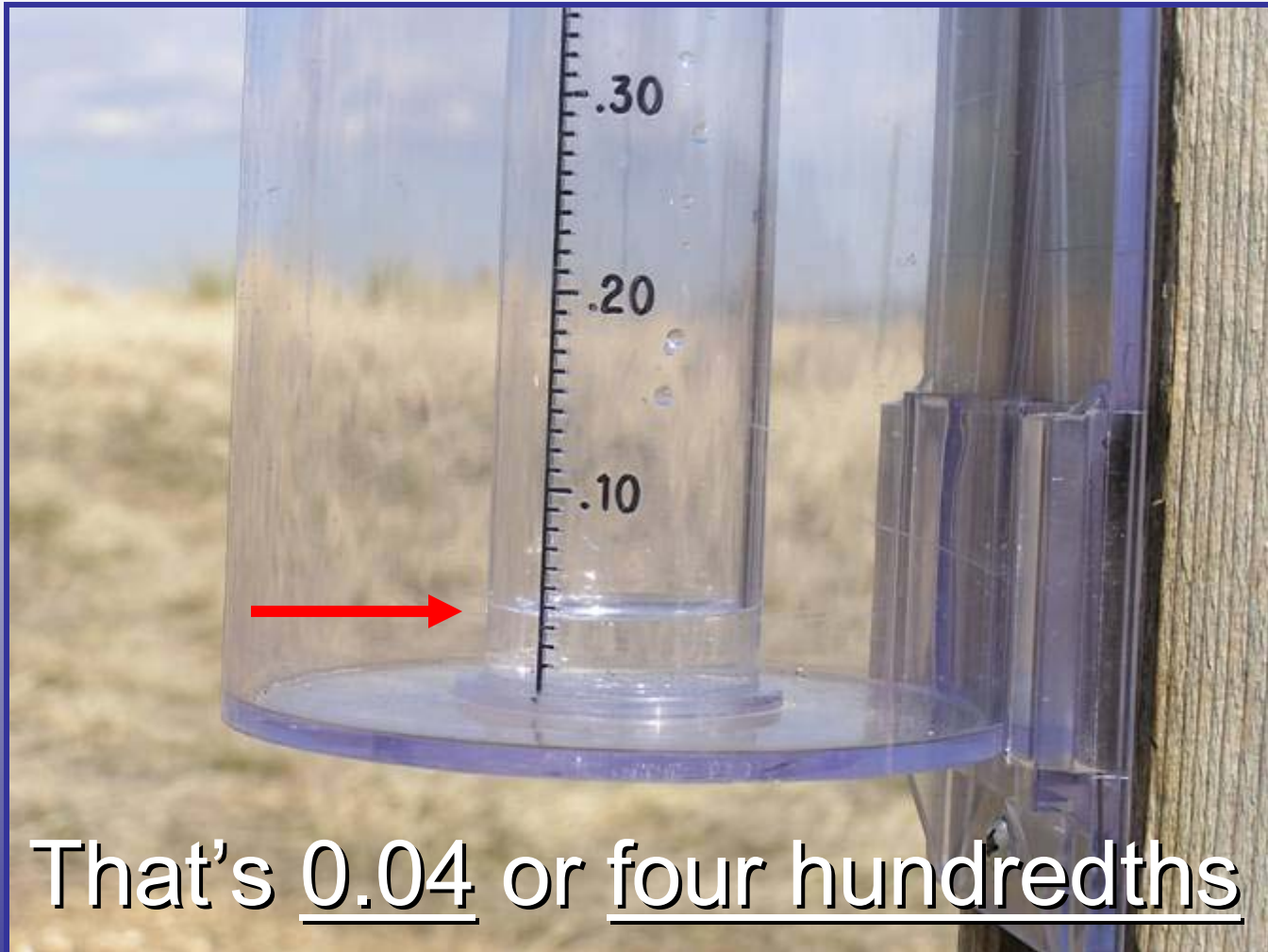
Trace “T”

T



When only a drop or two wet the gauge record a “T” for Trace

Between “T” and “one tenth” of an inch



That's 0.04 or four hundredths

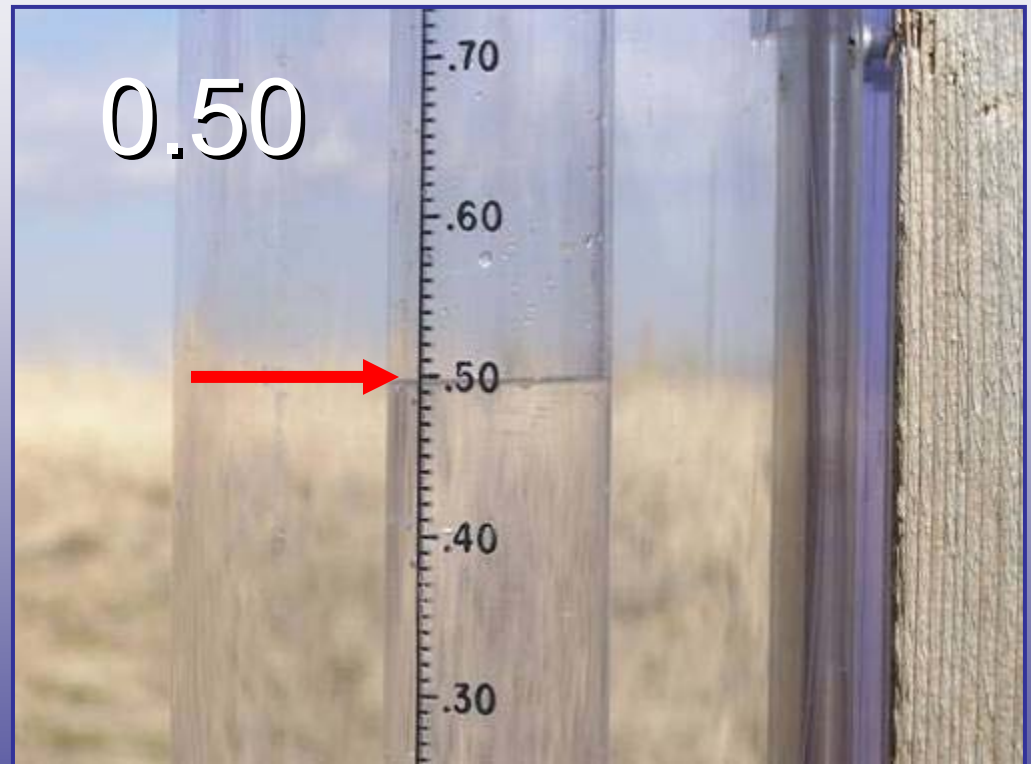
The surface of the water in the gauge looks curved. How do I know where to read?

As water fills up the measuring tube, a curved surface is formed called a **meniscus**. This meniscus is formed by the surface tension of a liquid in contact with the sides of the tube.



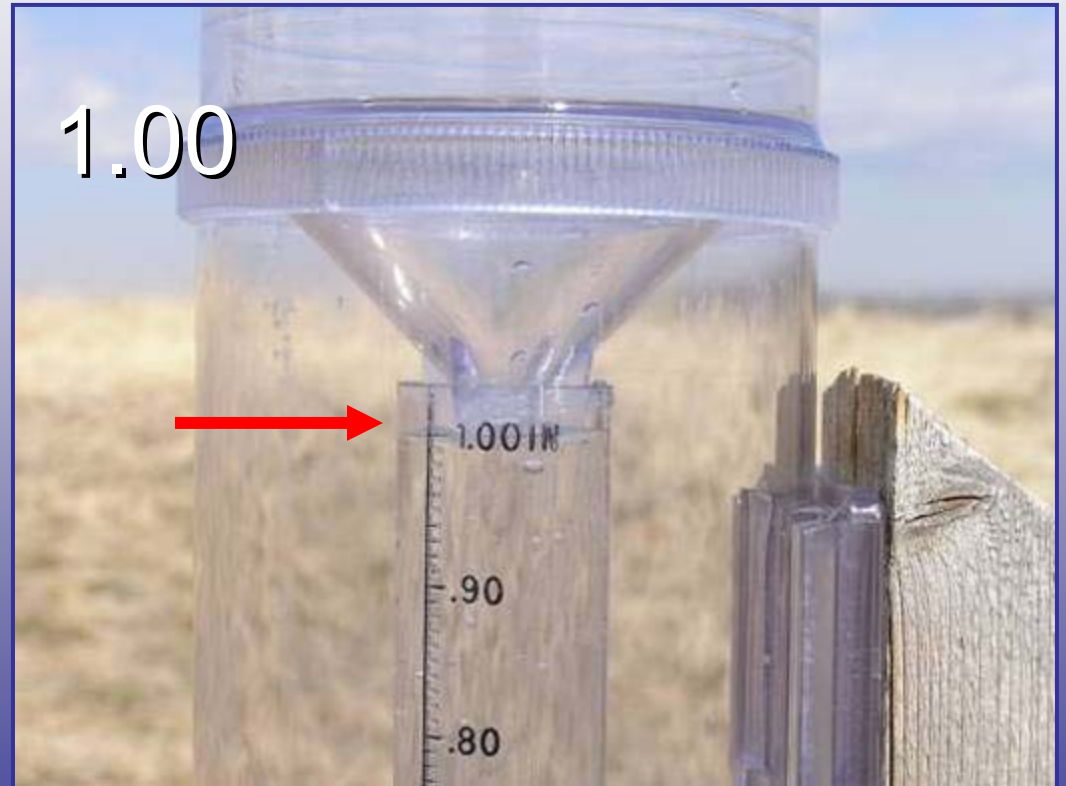
Always read the bottom of the **meniscus**, when the making your daily rain measurements.

A nice soaking rain



This is “one half” inch it’s . . . NOT 5.0, nor 0.05, but 0.50
(kind of like 50 cents out of a dollar)

A good rain



The inner tube holds 1.00 inch

DECIMALS

Getting the decimal point correct is ESSENTIAL

0.40”

There is a large water difference between 0.40 inches and 4.00 inches

Water! Water! Everywhere!



When more than an inch of rain falls the precipitation will overflow into the outer cylinder. The whole gauge has a capacity to hold 11 inches.

To measure greater than one inch . . .



Pour out the first inch from the inner tube and write it down.



Now pour the remaining water into the funnel & measure using the inner tube.



Continue until all of the water has been measured. Make sure you keep track of your amounts along the way.



c) Observing Hail



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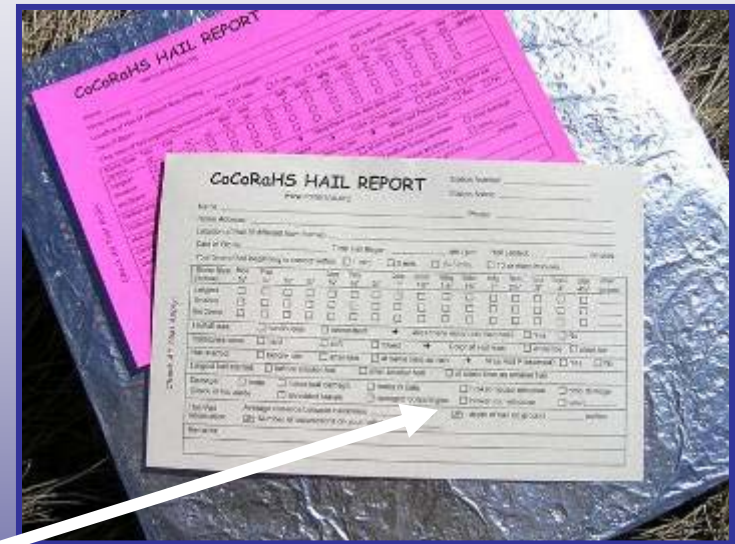


Three steps in
Observing hail

#1

As hail is falling

Fill out your CoCoRaHS Hail Report Card.
After the storm is over attach it the back of the pad.



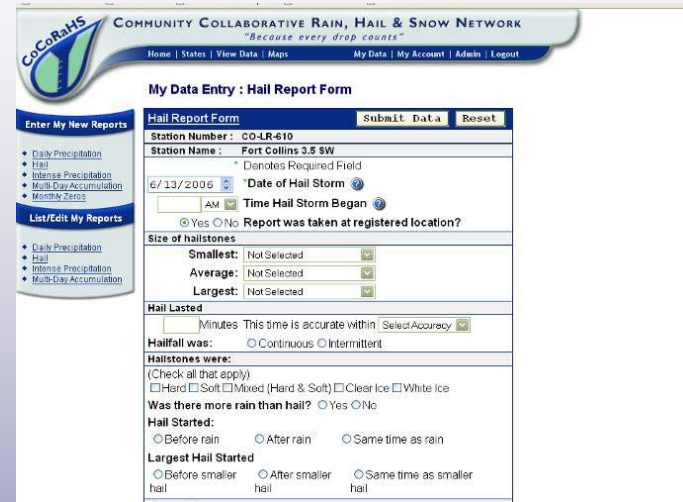
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Snow Netw...

#2 Fill out an on-line hail report

Submit an on-line hail report as soon as you can →

Your report goes right to the the National Weather Service and it may help them in issuing a “Severe Thunderstorm Warning”. →



The screenshot shows the 'My Data Entry : Hail Report Form' on the CoCoRaHS website. The form includes fields for Station Number (CO-LR-610), Station Name (Fort Collins 3.5 SW), Date of Hail Storm (6/13/2006), and Time Hail Storm Began. It also has sections for 'Size of hailstones' (Smallest, Average, Largest), 'Hail Lasted' (minutes), 'Hailfall was:' (Continuous or Intermittent), and 'Hailstones were:' (Hard, Soft, Mixed, Clear Ice, White Ice). There are also checkboxes for 'Was there more rain than hail?' and 'Hail Started:' (Before, After, or Same time as rain).



The screenshot shows a 'Severe Thunderstorm Warning' from the National Weather Service. The header includes the NOAA logo and the text 'Hazardous weather conditions for Wind River Basin, WY'. Below the header is a search bar for 'City, ST' or zip code. The main content of the warning is as follows:

Severe Thunderstorm Warning

SEVERE WEATHER STATEMENT
NATIONAL WEATHER SERVICE RIVERTON WY
346 PM MDT TUE JUL 25 2006

WY2013-252230-
/O.CON.KRCM.SV.W.004E.000000P00002-060725T2230Z/
PROMONT WY-
346 PM MDT TUE JUL 25 2006

...A SEVERE THUNDERSTORM WARNING REMAINS IN EFFECT FOR SOUTH CENTRAL
PROMONT COUNTY UNTIL 430 PM MDT...

AT 344 PM MDT...NATIONAL WEATHER SERVICE DOPPLER RADAR CONTINUED TO
INDICATE A SEVERE THUNDERSTORM CAPABLE OF PRODUCING GOLF BALL SIZE
HAIL...AND DAMAGING WINDS IN EXCESS OF 60 MPH. THIS STORM WAS
LOCATED OVER SOUTH CENTRAL PROMONT COUNTY...OR ABOUT 27 MILES
SOUTHEAST OF LARDER...MOVING SOUTHEAST AT 15 MPH.

#3

Drop off or send in your hail pad



Drop off your hail pad and pick up a new one at one of our drop off locations in your community (see the Web site for locations)

d) Measuring Snow



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If snow is anticipated . . .



Remove the funnel AND inner tube, otherwise snow will clog the funnel

There are two ways in which snow is measured:

1. Liquid water content
 - From the gauge
 - From a core sample
2. Depth of snow
 - 24 hour snowfall accumulation
 - Existing snow depths

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Measuring liquid water content from your gauge



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If you live in a protected area many times you will have an accumulation of snow on the rim of your gauge



How do I know what to measure and what not to??



Take your snow-swatter and tap gently on the rim of the gauge

What falls in gauge we measure

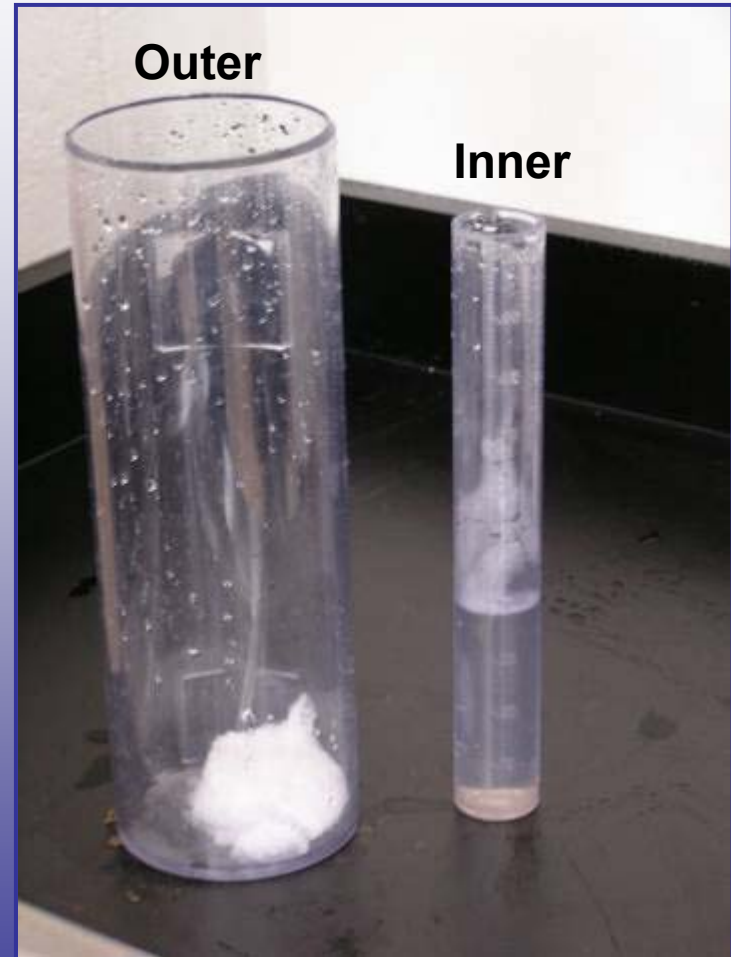


We will disregard the snow that lands outside the gauge.



Go ahead and clear away the snow from the gauge

Melting snowfall



Add some warm water to the inner cylinder Notice that you have two cylinders

Carefully measure your tap water before adding to outer cylinder



Be sure to measure to nearest hundredth of an inch

Add the warm water to the snow sample



Pour water directly into sample



Allow sample to completely melt

Measure the liquefied snowfall sample



Pour snow sample into smaller tube



Remember "Every drop counts!"

Carefully read to the nearest one hundredth of an inch



Remember to subtract the amount of warm water that you've added to the tube

Reading of 0.79 inches of water
minus 0.50 inches of water added
gives a final reading of 0.29 inches

Tube full	0.79
- Water added	0.50

Final reading	0.29

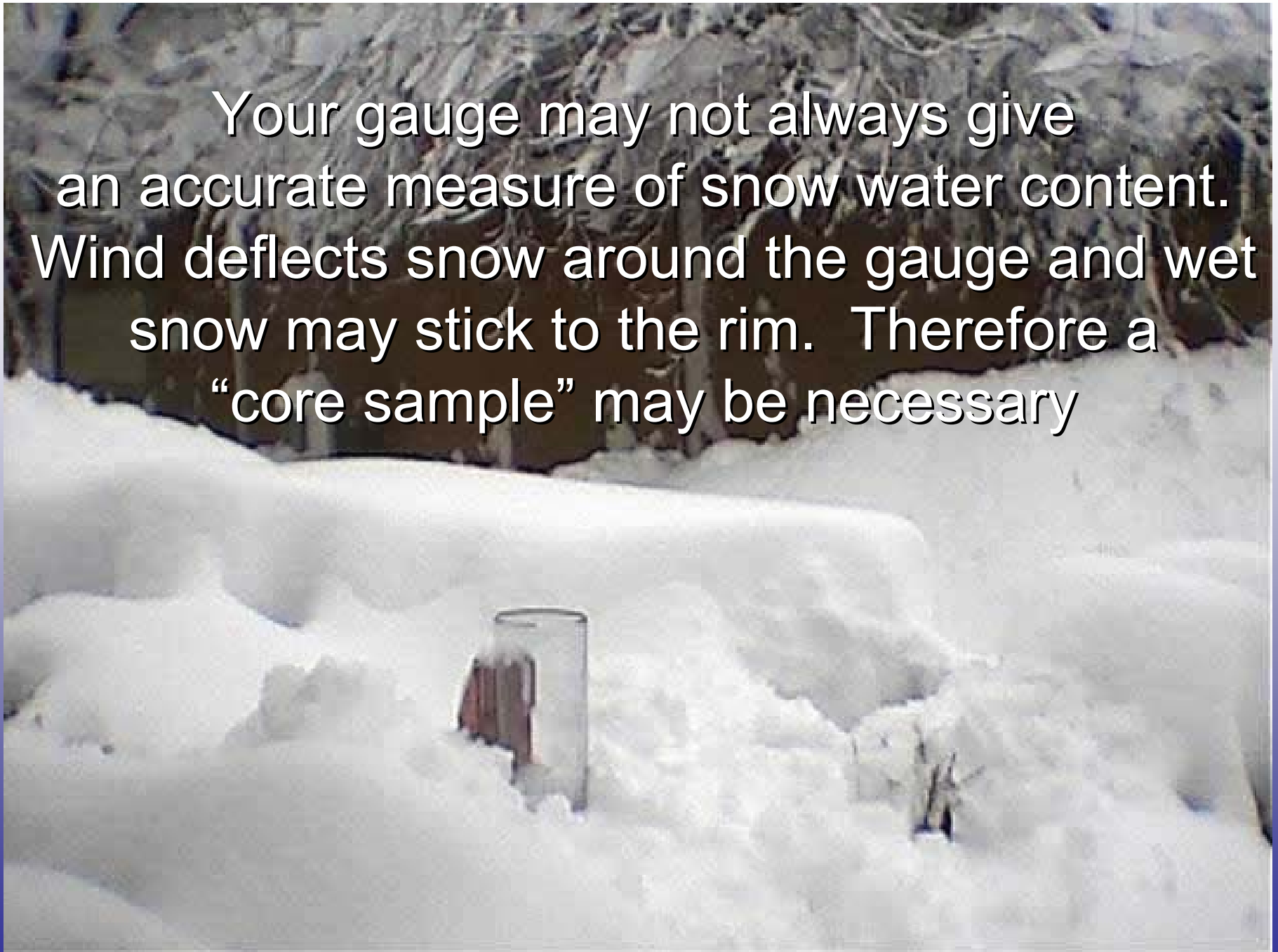
Measuring liquid water content from a core sample



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Your gauge may not always give an accurate measure of snow water content. Wind deflects snow around the gauge and wet snow may stick to the rim. Therefore a “core sample” may be necessary



First find a representative location



“This looks like the best place!”

The location should have not drifted, melted, or blown clear

Steps to cutting a sample



Place gauge upside down and push down into the snow



Clear snow from around the gauge

Capturing the core

Slide



Slide snow-swatter
under gauge

Lift



Carefully lift and get
ready to flip the gauge

Flip



Bring the sample
inside to melt

Snow Cores in deeper snow

Push
down



Turn



Pull



In wetter snow, the core will come out as one piece



Record your measurement



Enter your data on the precip sheet . . .

or using the CoCoRaHS Web site
www.cocorahs.org

Again, there are two ways in which snow is measured:

1. Liquid water content

- From the gauge
- From a core sample

2. Depth of snow

- 24 hour snowfall accumulation
- Existing snow depths

Now let's look at the second way — Depth of Snow

What is Snowfall ?



Snowfall is the accumulation of new snow and sleet in the past 24 hours prior to melting or settling

When do I measure new snowfall?



Your observation is normally around 7AM. Because snow melts settles and drifts it is wise to measure when the snow first stops.

The goal of reporting new snowfall is to report the maximum accumulation prior to melting and settling

Measuring snowfall



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Snow Network

Where to measure new snowfall

Measure newly fallen snow your snowboard if the snow has fallen and accumulated uniformly.



Snow measured under a tree



Notice that only 3.0 inches of snow has accumulated here

Snow measured in the open



Where as 6.5 inches has fallen in the open

Angle of Measurement



Measure at eye level, as an angle will give you an inaccurate measurement

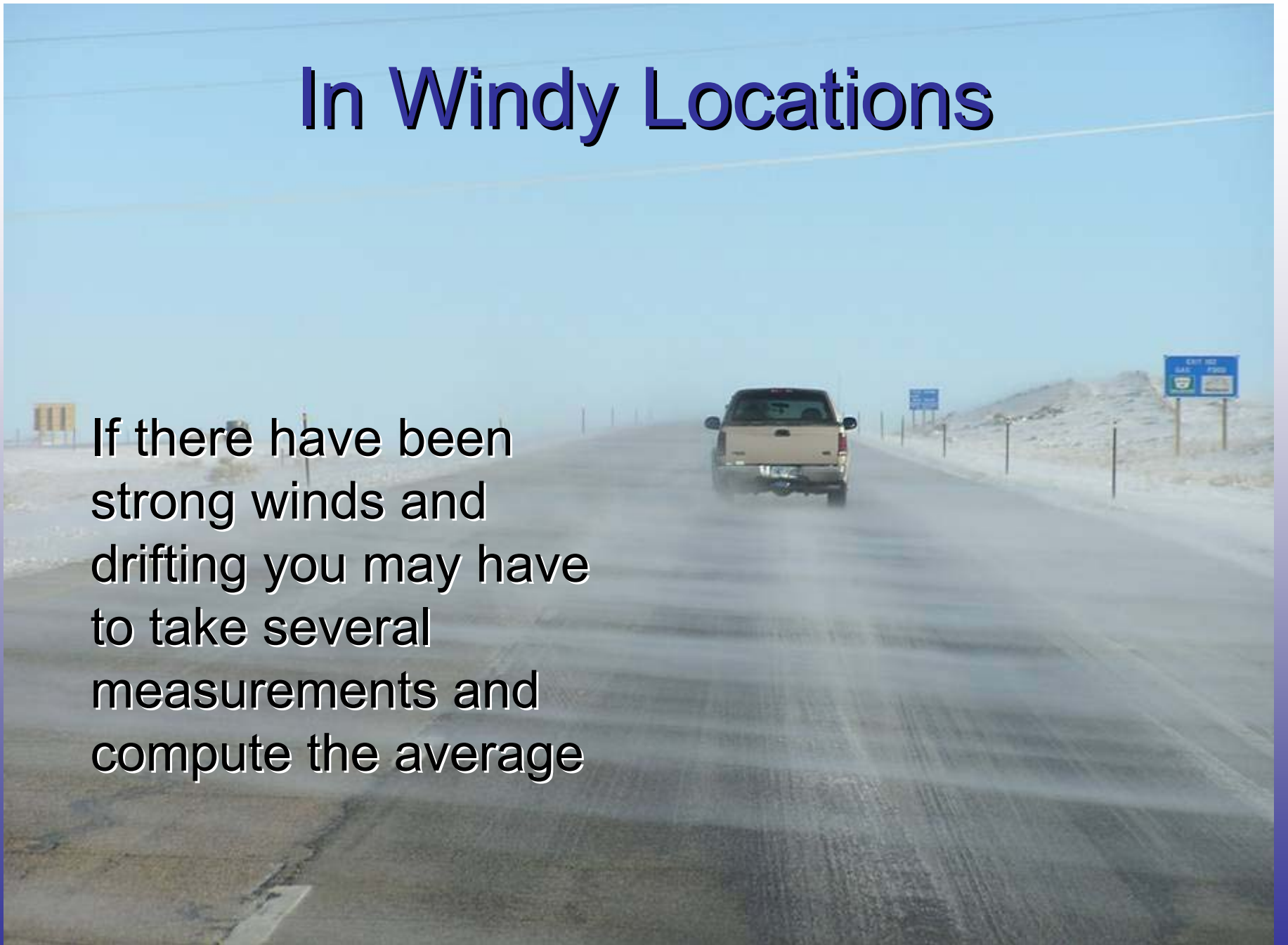
Replace the Board



After you have measured the snow on your board, clean it off and replace it on top of the newly fallen snow. Be sure to mark its location. Now you are ready for the next snowstorm.

In Windy Locations

If there have been strong winds and drifting you may have to take several measurements and compute the average



Snow depth is the average depth of snow (including old snow as well as new) that remains on the ground at a particular time of year.



Reporting snow on the ground



On some days snow will only partially cover the ground. To record this take an average of both covered and bare areas.



←
If half the ground has
2.0" and half the ground
is bare, report 1.0" as
your total depth.

→
If more than half the
ground is bare report "T"
(trace) and mention the
range of depths in your
comments.



How do I measure Freezing Rain?



“Freezing rain” is rain that falls in liquid form but freezes on contact with a surface.

Do NOT report freezing rain as "Snow". Melt and measure the moisture that has accumulated inside your gauge and report that as your daily precipitation amount.

Report ZERO for your new snow amount (assuming that it all fell as rain, and no sleet or snow accumulated).

Report the total depth of freezing rain remaining on the ground at time of observation and enter that in the "Total Snow on Ground" column. Make a note in your comments section so that we know it's freezing rain.

SECTION THREE:

Reporting Observations

In this section we will introduce you to the Web-site and show you how to record your observations

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Rail & Snow Network

The CoCoRaHS Web site

www.cocorahs.org

The screenshot shows the CoCoRaHS website homepage. At the top, the CoCoRaHS logo is on the left, and the text "COMMUNITY COLLABORATIVE RAIN, HAIL & SNOW NETWORK" is centered, with the tagline "Because every drop counts" below it. A navigation bar contains links for Home, States, View Data, Maps, My Data, My Account, Admin, and Logout. Below the navigation bar is a "Welcome to CoCoRaHS" section featuring a map of the United States. The map uses color coding: green for CoCoRaHS member states (including WA, OR, ID, MT, ND, MN, WI, MI, NY, PA, WV, VA, NC, SC, GA, AL, MS, AR, OK, NM, CO, KS, MO, IL, IN, KY, TN, MS, AL, GA, FL, AK, HI, NV, UT, AZ, TX, and WA), and blue and white stripes for pending states (NV, UT, AZ, TX, and WA). A key below the map explains the color coding. To the right of the map is a circular button that says "Join CoCoRaHS Click Here". Below the map is a "Things to know about..." section with icons for Rain (a triangle with a dot), Hail (a triangle with a dot and a line), and Snow (two asterisks). To the left of the map is a "Main Menu" section with links for Home, About Us, Join CoCoRaHS, and Contact Us. Below that is a "Resources" section with links for FAQ / Help, Education, Volunteer Coordinators, Hail Pad, Distribution/Drop-off, Help Needed, and Printable Forms. Below that is a "CoCoRaHS Store" section with links for Calendar, The Catch, News, and In the Spotlight. Below that is a "Sponsors" section with links for Presentations and Links. Below the map is a "News" section with links for Newsletter (Read the PDF), CoCoRaHS Brochure (Read the PDF), Fox News Channel (Watch the video), and USA TODAY Article (Read the article). At the bottom of the page is a "Purchase an official CoCoRaHS All-Weather Rain Gauge" button. In the center of the page, there is a banner for "CoCoRaHS begins in Nevada and Wisconsin March 2007" with two maps showing precipitation data for Nevada and Wisconsin.

CoCoRaHS
COMMUNITY COLLABORATIVE RAIN, HAIL & SNOW NETWORK
"Because every drop counts"

Home | States | View Data | Maps | My Data | My Account | Admin | Logout

Welcome to CoCoRaHS

Main Menu

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Things to know about...

- Rain
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News

- Newsletter
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- CoCoRaHS Brochure
 - Read the PDF.
- Fox News Channel
 - Watch the video.
- USA TODAY Article
 - Read the article.

CoCoRaHS begins in Nevada and Wisconsin March 2007

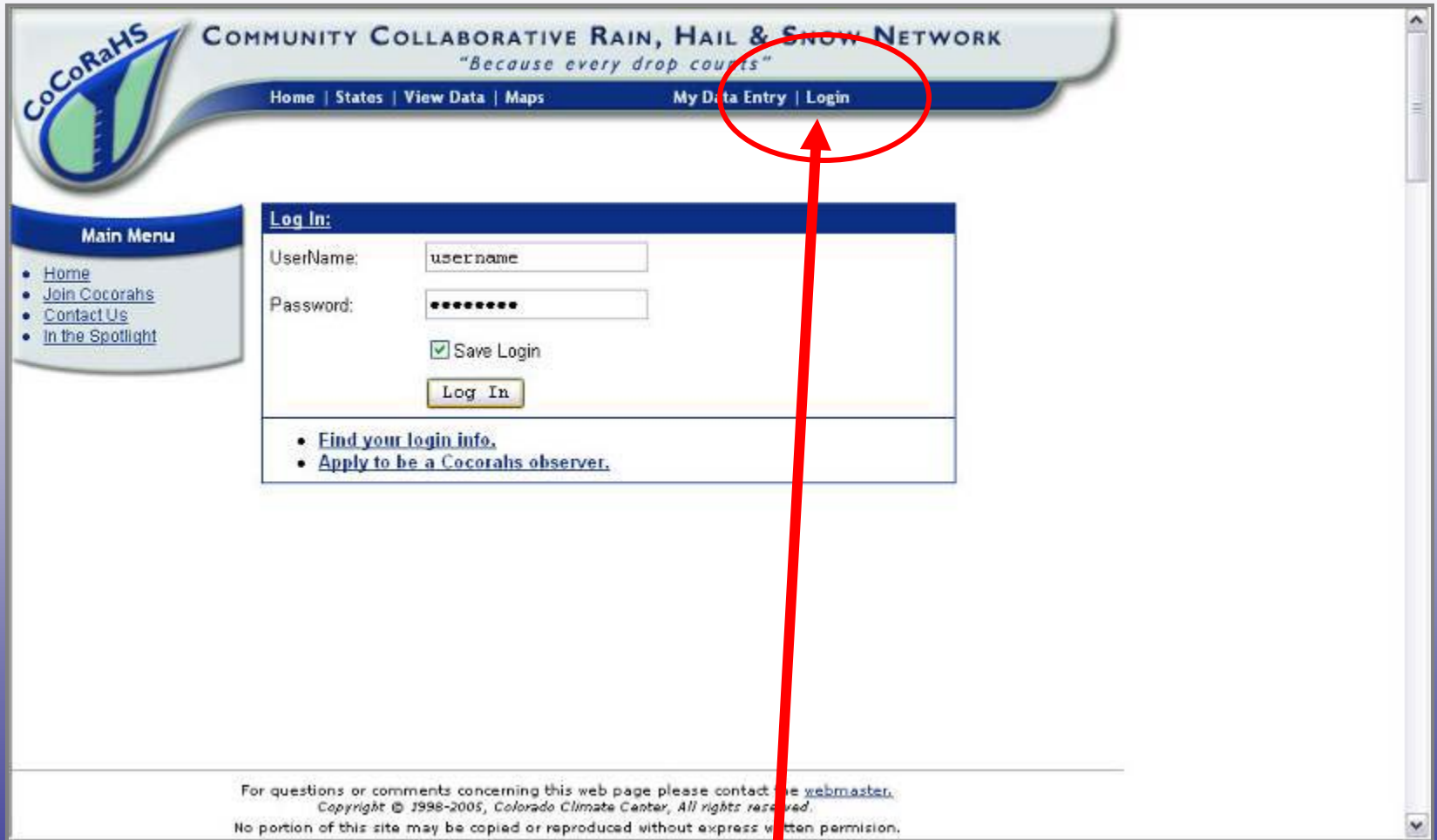
Average Annual Precipitation Nevada

Average Annual Precipitation Wisconsin

Purchase an official CoCoRaHS All-Weather Rain Gauge

Our Web site is informative and easy to use. Here's how to begin →

Login to CoCoRaHS



CoCoRaHS COMMUNITY COLLABORATIVE RAIN, HAIL & SNOW NETWORK
"Because every drop counts"

Home | States | View Data | Maps My Data Entry | **Login**

Main Menu

- [Home](#)
- [Join Cocorahs](#)
- [Contact Us](#)
- [In the Spotlight](#)

Log In:

UserName:

Password:

Save Login

- [Find your login info.](#)
- [Apply to be a Cocorahs observer.](#)

For questions or comments concerning this web page please contact the [webmaster](#).
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First, Click to Login

Recording your Daily Precipitation

Customize Links Free Hotmail Windows Marketplace Windows Media Windows

CoCoRaHS COMMUNITY COLLABORATIVE RAIN, HAIL & SNOW NETWORK
"Because every drop counts"

Home | States | View Data | Maps My Data | My Account | Admin | Logout

My Data Entry : Daily Precipitation Report Form

Enter My New Reports

- Daily Precipitation**
- Intense Precipitation
- Multi-Day Accumulation
- Monthly Zeros

List/Edit My Reports

- Daily Precipitation
- Hail
- Intense Precipitation
- Multi-Day Accumulation

Precipitation Report Form

Station Number : CO-LR-610

Station Name : Fort Collins 3.5 SW

*Observation Date

AM *Observation Time

*Total Rain and Melted Snow in gauge in inches to the nearest hundredth

Yes No Report was taken at registered location?

Observation Notes: (This will be available to the public)

New Snow

Depth of new snow in inches to the nearest tenth

Melted value from core to the nearest hundredth

Total Snow on Ground

Depth of total snow in inches to the nearest half inch

Melted value from core to the nearest hundredth

Duration Information

If a time is unknown or the storm has not ended leave it blank.

Precipitation Began AM PM

Precipitation Ended AM PM

Heaviest Precipitation Began AM PM

Heaviest Precipitation Lasted minutes

These times are:

After you login, the screen will automatically take you to the Daily Precip. Report

Enter Your Report

Customize Links Free Hotmail Windows Marketplace Windows Media Windows

CoCoRaHS COMMUNITY COLLABORATIVE RAIN, HAIL & SNOW NETWORK
"Because every drop counts"

Home | States | View Data | Maps My Data | My Account | Admin | Logout

My Data Entry : Daily Precipitation Report Form

Precipitation Report Form

Station Number : CO-LR-610
Station Name : Fort Collins 3.5 SW

* Denotes Required Field

6/12/2006 *Observation Date ?
7:00 AM *Observation Time ?
0.05 *Total Rain and Melted Snow in gauge in inches to the nearest hundredth ?
 Yes No Report was taken at registered location ?

Observation Notes: (This will be available to the public) ?

New Snow

0.0 Depth of new snow in inches to the nearest tenth ?
NA Melted value from core to the nearest hundredth ?

Total Snow on Ground

NA Depth of total snow in inches to the nearest half inch ?
NA Melted value from core to the nearest hundredth ?

Duration Information

If a time is unknown or the storm has not ended leave it blank.

Precipitation Began AM PM
Precipitation Ended AM PM
Heaviest Precipitation Began AM PM
Heaviest Precipitation Lasted minutes
These times are:

Record your measurement in hundredths (0.00)

Here you will enter the total precipitation measured in your gauge

Recording Comments

Customize Links Free Hotmail Windows Marketplace Windows Media Windows

CoCoRaHS COMMUNITY COLLABORATIVE RAIN, HAIL & SNOW NETWORK
"Because every drop counts"

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My Data Entry : Daily Precipitation Report Form

Enter My New Reports

- Daily Precipitation
- Hail
- Intense Precipitation
- Multi-Day Accumulation
- Monthly Zeros

List/Edit My Reports

- Daily Precipitation
- Hail
- Intense Precipitation
- Multi-Day Accumulation

Precipitation Report Form

Station Number : CO-LR-610
Station Name : Fort Collins 3.5 SW

* Observation Date ?
 AM * Observation Time ?
 * Total Rain and Melted Snow in gauge in inches to the nearest hundredth ?
 Yes No Report was taken at registered location?

Observation Notes: (This will be available to the public) ?
Brief, but intense thunderstorm at 8PM last night. Several branches broken on tree due to gusty winds.

New Snow
 Depth of new snow in inches to the nearest tenth ?
 Melted value from core to the nearest hundredth ?

Total Snow on Ground
 Depth of total snow in inches to the nearest half inch ?
 Melted value from core to the nearest hundredth ?

Duration Information
If a time is unknown or the storm has not ended leave it blank.
Precipitation Began AM PM
Precipitation Ended AM PM
Heaviest Precipitation Began AM PM
Heaviest Precipitation Lasted minutes
These times are:

Feel free to enter comments about the day's weather under "notes"

Submit your Report

Customize Links Free Hotmail Windows Marketplace Windows Media Windows

CoCoRaHS COMMUNITY COLLABORATIVE RAIN, HAIL & SNOW NETWORK
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My Data Entry : Daily Precipitation Report Form

Enter My New Reports

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- Hail
- Intense Precipitation
- Multi-Day Accumulation
- Monthly Zeros

List/Edit My Reports

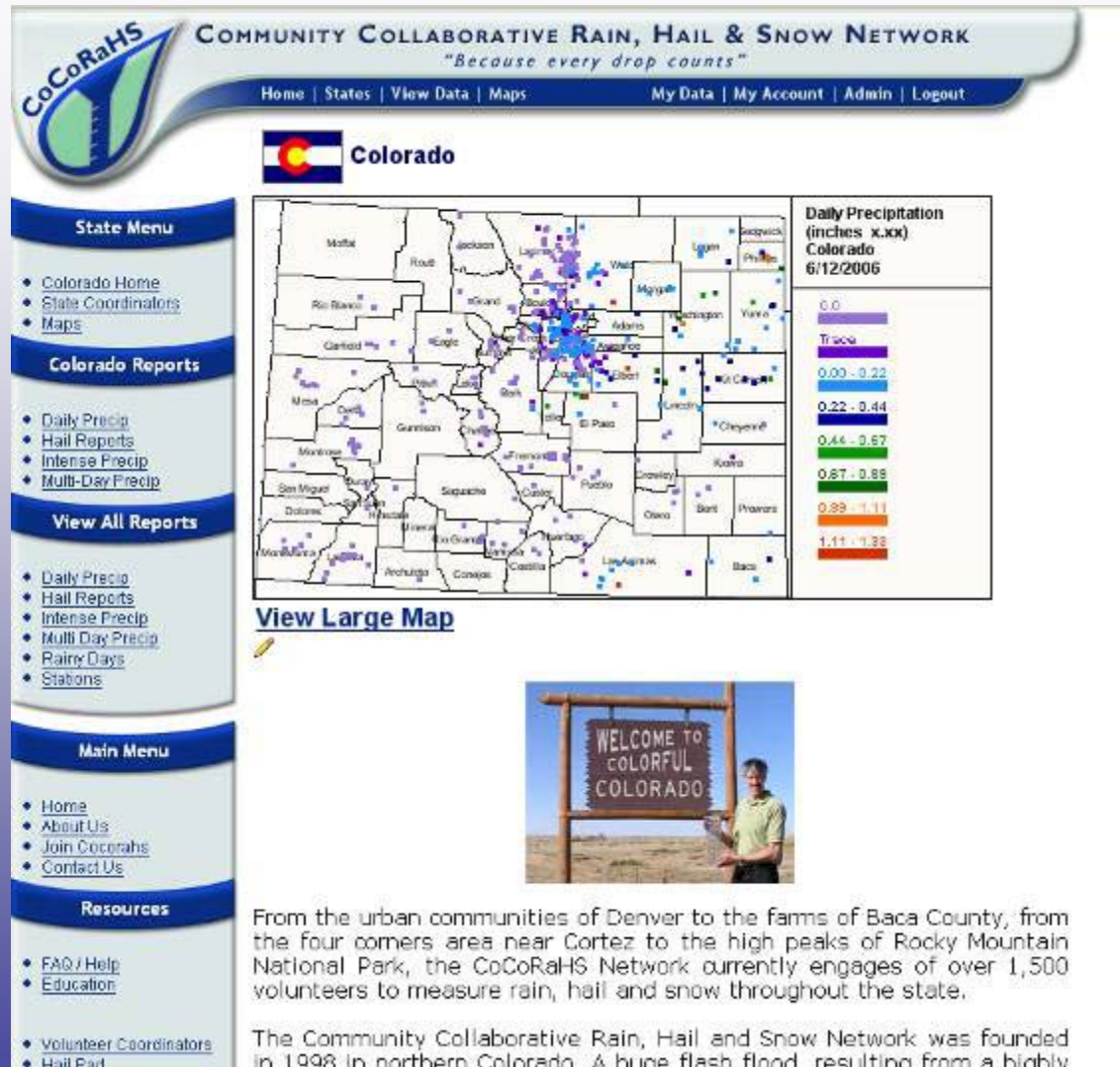
- Daily Precipitation
- Hail
- Intense Precipitation
- Multi-Day Accumulation

Precipitation Report Form	
Station Number :	CO-LR-610
Station Name :	Fort Collins 3.5 SW
* Denotes Required Field	
6/12/2006	* Observation Date ?
7:00 AM	* Observation Time ?
0.05	* Total Rain and Melted Snow in gauge in inches to the nearest hundredth ?
<input checked="" type="radio"/> Yes <input type="radio"/> No	Report was taken at registered location?
Observation Notes: (This will be available to the public) ?	
Brief, but intense thunderstorm at 8PM last night. Several branches broken on tree due to gusty winds.	
New Snow	
0.0	Depth of new snow in inches to the nearest tenth ?
NA	Melted value from core to the nearest hundredth ?
Total Snow on Ground	
NA	Depth of total snow in inches to the nearest half inch ?
NA	Melted value from core to the nearest hundredth ?
Duration Information	
If a time is unknown or the storm has not ended leave it blank.	
Precipitation Began	<input type="text"/> <input type="radio"/> AM <input type="radio"/> PM
Precipitation Ended	<input type="text"/> <input type="radio"/> AM <input type="radio"/> PM
Heaviest Precipitation Began	<input type="text"/> <input type="radio"/> AM <input type="radio"/> PM
Heaviest Precipitation Lasted	<input type="text"/> minutes
These times are:	Select Time Accuracy <input type="text"/>

Submit Data **Reset**

Click "Submit" and your data is recorded on our site

To See Your Report on the Map



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Colorado

Daily Precipitation (inches x.xx) Colorado 6/12/2006

0.0
Trace
0.00 - 0.22
0.22 - 0.44
0.44 - 0.67
0.67 - 0.89
0.89 - 1.11
1.11 - 1.33

[View Large Map](#)



From the urban communities of Denver to the farms of Baca County, from the four corners area near Cortez to the high peaks of Rocky Mountain National Park, the CoCoRaHS Network currently engages of over 1,500 volunteers to measure rain, hail and snow throughout the state.

The Community Collaborative Rain, Hail and Snow Network was founded in 1998 in northern Colorado. A huge flash flood, resulting from a highly

State Menu

- Colorado Home
- State Coordinators
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Colorado Reports

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- Hail Reports
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- Multi-Day Precip

View All Reports

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Main Menu

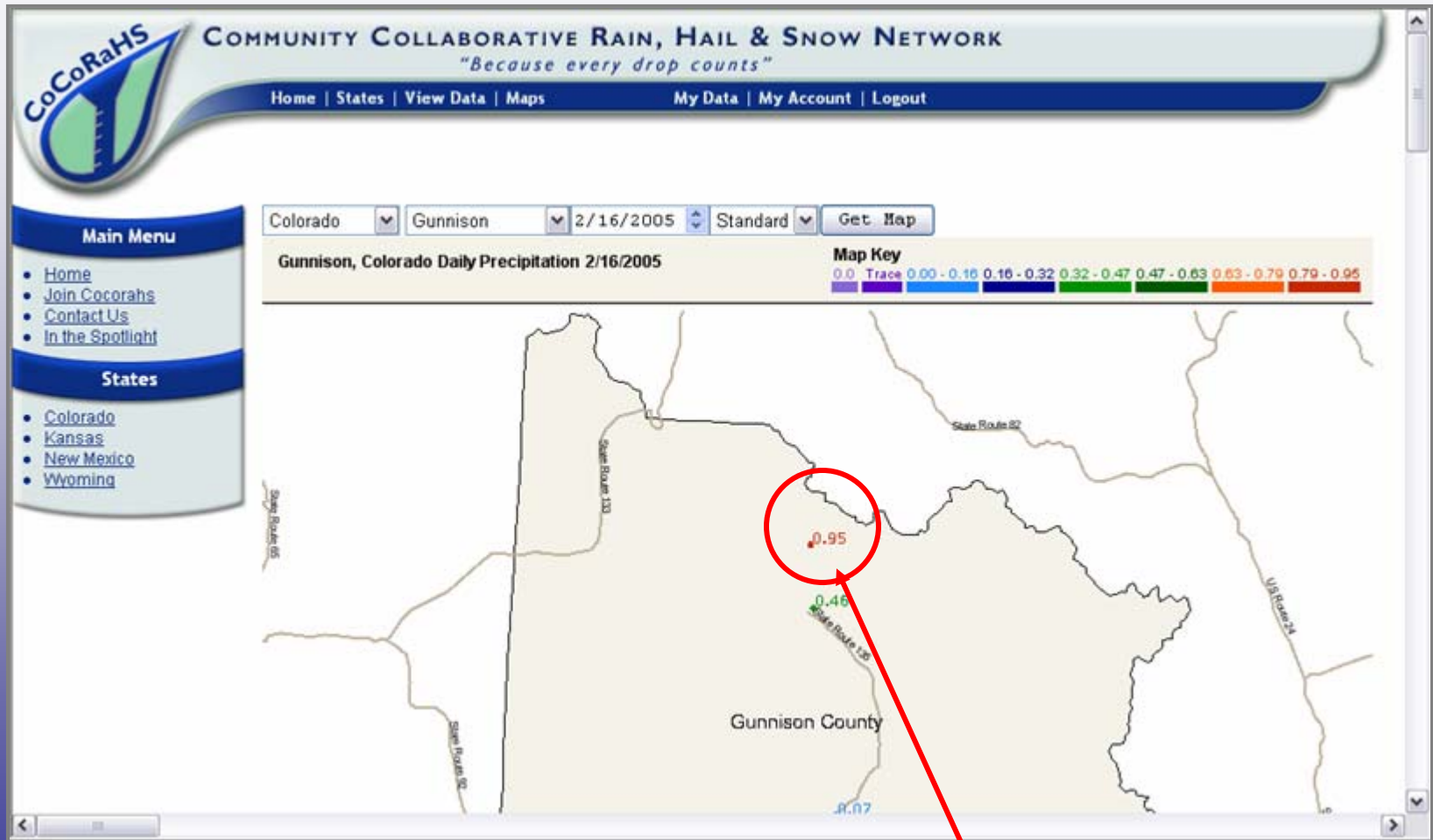
- Home
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- Contact Us

Resources

- FAQ/Help
- Education
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- Hail Pad

Go to your state page and then click on your county

Your Report on our Daily Map



The amount of precipitation you entered shows up at your location on the map

Your state's Page

The screenshot shows the CoCoRaHS website interface for the state of Indiana. At the top, the logo and tagline "COMMUNITY COLLABORATIVE RAIN, HAIL & SNOW NETWORK" are visible, along with navigation links like Home, Status, View Data, Maps, My Data, My Account, Admin, and Logout. The main content area features a map of Indiana with a color-coded legend for "Daily Precipitation (Inches x100) Indiana 11/2/2006". The legend includes categories: 0.0 (purple), Trace (blue), 0.01 - 0.05 (light blue), 0.06 - 0.12 (dark blue), 0.12 - 0.19 (green), 0.19 - 0.24 (yellow-green), 0.25 - 0.39 (orange), and 0.39 - 0.68 (red). A "View Large Map" link is provided below the map. To the left, a sidebar menu lists sections like State Menu, Indiana Reports, View All Reports, Main Menu, and Resources. Below the map, a red heading reads "Upcoming Training Sessions in the Hoosier State", followed by "Important Notes:" and text stating that all new observers must attend a training session. A note specifies that all observers must use a Standard 4 Inch Rain Gauge for Daily Reports. At the bottom, a yellow heading says "NEW ONLINE TRAINING IS NOW AVAILABLE AT THIS LINK:" with a blue link to <http://www.agry.purdue.edu/climate/cocorahs.asp>.

Each CoCoRaHS State has it's own page

Other Reports

- **Hail Report**
- **Intense Precipitation Report**
- **Monthly Zeros**
- **Multi-Day Precipitation Report**
- **Daily Precipitation Report**

Hail Report

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My Data Entry : Hail Report Form

Enter My New Reports

- Daily Precipitation
- **Hail**
- Intense Precipitation
- Multi-Day Accumulation
- Monthly Zeros

List/Edit My Reports

- Daily Precipitation
- Hail
- Intense Precipitation
- Multi-Day Accumulation

Hail Report Form

Station Number : CO-LR-610

Station Name : Fort Collins 3.5 SW

Denotes Required Field

6/13/2006 *Date of Hail Storm ?

AM Time Hail Storm Began ?

Yes No Report was taken at registered location?

Size of hailstones

Smallest: Not Selected

Average: Not Selected

Largest: Not Selected

Hail Lasted

Minutes This time is accurate within Select Accuracy

Hailfall was: Continuous Intermittent

Hailstones were:

(Check all that apply)

Hard Soft Mixed (Hard & Soft) Clear Ice White Ice

Was there more rain than hail? Yes No

Hail Started:

Before rain After rain Same time as rain

Largest Hail Started

Before smaller hail After smaller hail Same time as smaller hail

Remarks:

Click here to access a Hail Report

Intense Precipitation Report

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Home | States | View Data | Maps | My Data | My Account | Admin | Logout

My Data Entry : Intense Precipitation Report Form

Intense Precipitation Report

Station Number : CO-LR-610
Station Name : Fort Collins 3.5 SW

* Denotes Required Field
Observation Date
Observation Time

Total Precipitation since rain began (in inches)
(X.XX) inches of rain has fallen in the past
Minutes

Yes No Report was taken at registered location?

Was There Flooding?
 No
If Yes, how severe?
 Minor (typical). Street or field flooding.
 Unusual street or field flooding (only see this every few years)
 Severe Flooding
 Extreme (never seen it this bad before)

Observation Notes (This will be available to the public)

Click here to access the Intense Precipitation Report

Monthly Zeros



COMMUNITY COLLABORATIVE RAIN, HAIL & SNOW NETWORK
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Data Entry : Monthly Zeros Form

Enter New Reports

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- ◆ [Hail](#)
- ◆ [Intense Precipitation](#)
- ◆ [Multi-Day Accumulation](#)
- ◆ [Monthly Zeros](#)

PA FROST Reports

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- ◆ [Intense Precipitation](#)
- ◆ [Multi-Day Accumulation](#)

<u>Monthly Zeros</u> <input type="button" value="Submit"/> <input type="button" value="Reset"/>								
Station Number : CO-LR-133			Station Name : WEL 8 SW					
June 2006								
<	Sun	Mon	Tue	Wed	Thu	Fri	Sat	>
28	29	30	31	1	2	3		
				<input type="checkbox"/> 0.0 Precip	<input type="checkbox"/> 0.0 Precip	<input type="checkbox"/> 0.0 Precip		
4	5	6	7	8	9	10		
<input type="checkbox"/> 0.0 Precip	<input type="checkbox"/> 0.0 Precip	<input type="checkbox"/> 0.0 Precip	<input type="checkbox"/> 0.0 Precip	<input type="checkbox"/> 0.0 Precip	<input type="checkbox"/> 0.0 Precip	<input type="checkbox"/> 0.0 Precip		
11	12	13	14	15	16	17		
<input type="checkbox"/> 0.0 Precip	<input type="checkbox"/> 0.0 Precip	<input type="checkbox"/> 0.0 Precip						
18	19	20	21	22	23	24		
25	26	27	28	29	30	1		
2	3	4	5	6	7	8		

You can go back in and enter days of zero precipitation on one "simple to use" page

Multi-Day Precipitation

CoCoRaHS COMMUNITY COLLABORATIVE RAIN, HAIL & SNOW NETWORK
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My Data Entry : Multi-Day Precipitation Report Form

Multiple Day Accumulation Form

Station Number : CO-LR-610
Station Name : Fort Collins 3.5 SW

6/1/2006 First day of accumulation period. This day should be one day after your last report.

6/7/2006 Date the rain gauge was emptied.

8:45 AM Time the rain gauge was emptied.

Yes No Report was taken at registered location?

0.75 Multi Day Precipitation (in inches)
Total Depth of Snow on Ground (in inches)
Core Precipitation (in inches)

Notes

I was away for a week and read the accumulation in my gauge when I returned.

You can even enter information after you've been away for several days

Daily Precipitation Reports



COMMUNITY COLLABORATIVE RAIN, HAIL & SNOW NETWORK

"Because every drop counts"

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View Data : List Daily Precipitation Reports

Search Daily Precipitation Reports

Station Fields: Station Number Station Name

Location: Colorado ALL COUNTIES

Date Range:

Start Date: 6/12/2006 End Date: 6/12/2006

Precip Value: All Precip Values Operator

Searched: Stations in Colorado. Report date on 6/12/2006.

Showing 1 - 50 of 498 Records. [<Back](#) Page 1 [Next>](#)

Date	Time	Station Number	Station Name	Total Precip In	New Snow In	Total Snow In	State	County	View
8/12/2006	7:04 AM	CO-WE-285	Keenesburg 4.6 E	1.33	0.0	NA	CO	Weld	v
8/12/2006	7:00 AM	CO-EP-12	Colorado Springs 18.7 N	1.20	0.0	0.0	CO	El Paso	v
8/12/2006	7:00 AM	CO-LA-44	Engleville 7.9 E	1.20	0.0	NA	CO	Les Animas	v
8/12/2006	7:00 AM	CO-EL-9	Kiowa 14 ENE	1.13	0.0	NA	CO	Elbert	v
8/12/2006	7:00 AM	CO-PH-27	Holyoke 16 SSW	1.06	0.0	NA	CO	Phillips	v
8/12/2006	7:00 AM	CO-WA-54	Lindon 10.9 NNW	0.92	0.0	NA	CO	Washington	v
8/12/2006	7:00 AM	CO-PH-14	Holyoke .59 SW	0.85	0.0	NA	CO	Phillips	v
8/12/2006	7:15 AM	CO-WA-19	Otis 5.0 NW	0.85	0.0	NA	CO	Washington	v
8/12/2006	6:15 AM	CO-EL-2	Agate 8.8 SE	0.82	0.0	NA	CO	Elbert	v
8/12/2006	7:00 AM	CO-WA-55	Woodrow 4.6 SE	0.75	0.0	NA	CO	Washington	v
8/12/2006	8:00 AM	CO-LN-38	Limon 0.9 SSW	0.75	0.0	NA	CO	Lincoln	v
8/12/2006	6:35 AM	CO-PH-33	Holyoke 13 SE	0.73	0.0	NA	CO	Phillips	v
8/12/2006	7:00 AM	CO-EP-17	Monument 2.1 ENE	0.68	0.0	0.0	CO	El Paso	v
8/12/2006	8:00 AM	CO-WE-275	Hudson 1.8 SE	0.68	0.0	NA	CO	Weld	v
8/12/2006	7:00 AM	CO-LN-37	Limon 0.3 NW	0.66	0.0	NA	CO	Lincoln	v
8/12/2006	7:00 AM	CO-PH-19	Holyoke 4 SW	0.64	0.0	NA	CO	Phillips	v

View Data

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- [Daily Comments Reports](#)
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- [Multiple Day Reports](#)

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- [Station Hail Reports](#)

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- [Station Snow Summary](#)
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PA FROST Data

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SECTION FOUR:

Frequently Asked Questions

In this section we will try to answer common questions asked by observers.

CoCoRaHS

Rail & Snow Network

Do I have to be home everyday to participate in CoCoRaHS?

Answer: No. Report when you are able. If you are gone, you may leave your gauge outside and report a multi-day total when you return.

What if I don't have a good place to put my gauge?

Answer: Few people have ideal locations. Do your best. Send site photos if possible to help interpret results.

What if it hails when I'm not at home?

Answer: We still would like your hail pad. Report as much info as you can find out from friends and neighbors.

Do I report morning dew that has collected in my rain gauge?

Answer: No. Dew is not precipitation, but you may note the dew in the comments.



How long is my commitment to CoCoRaHS?

Answer: Ideally, at least one season, but the longer you contribute, the more valuable the data become.

Thanks for joining us today!

You can find out more about the CoCoRaHS Network by visiting our web site or speaking with your local coordinator.



Just 5 minutes a day!

It's easy and fun!

We're Cuckoo For CoCoRaHS!

www.cocorahs.org

