

TRAINING SLIDE-SHOW



"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...

Just Precipitation!



Rain



Hail



Snow

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

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

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

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

Welcome to CoCoRaHS

Main Menu

- ◆ [Home](#)
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- ◆ [Join Cocorahs](#)
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Resources

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Key
CoCoRaHS State
Pending State



Join CoCoRaHS
Click Here

weatherwise

Read the
"CoCoRaHS Article"
in the July/August 2007
Issue of
Weatherwise Magazine

Things to know about...

- **Rain**
- ▲ **Hail**
- ✖ ✖ **Snow**



**COCORAHS
WELCOMES
NORTH CAROLINA
& NEW YORK**



CoCoRaHS's main focus is to provide:

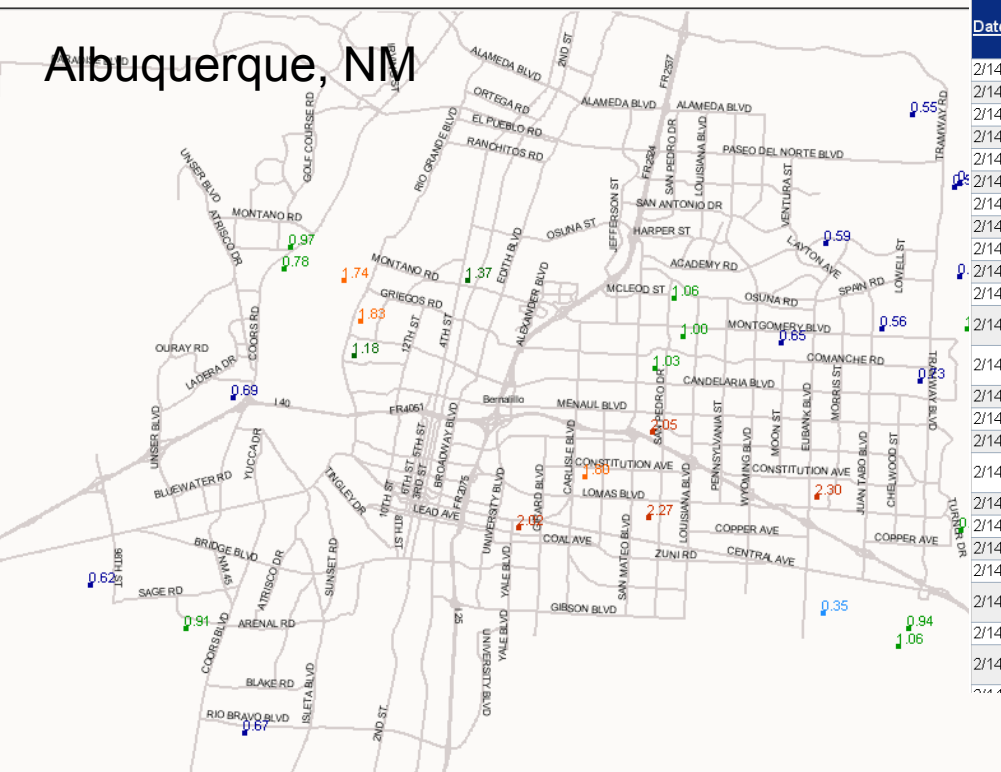
precipitation data . . .

Daily Precipitation (inches x.xx), for the 24 hour period ending ~7:00 am

Albuquerque, New Mexico 8/1/2006

0.0 Trace 0.01 - 0.38 0.38 - 0.77 0.77 - 1.15 1.15 - 1.53 1.53 - 1.92 1.92 - 2.30

Albuquerque, NM



Date	Time	Station Number	Station Name	Total Precip .in	New Snow .in	Total Snow .in	State	County	View
2/14/2007	7:00 AM	MD-GR-1	Mc Henry 4.0 SSE	2.85	6.7	12.5	MD	Garrett	View
2/14/2007	11:59 PM	MD-MG-8	Gaithersburg 2 WNW	2.80	4.2	4.0	MD	Montgomery	View
2/14/2007	10:00 AM	MD-CR-7	Westminster 1.0 W	2.10	5.5	5.5	MD	Carroll	View
2/14/2007	7:40 AM	MD-MG-1	Montgomery Village 1.3 SSW	2.05	4.1	3.0	MD	Montgomery	View
2/14/2007	5:44 AM	MD-WH-1	Williamsport 2.8 ENE	1.92	2.6	5.0	MD	Washington	View
2/14/2007	7:15 AM	MD-CR-3	Mount Airy 0.2 SE	1.90	5.1	5.0	MD	Carroll	View
2/14/2007	7:00 AM	MD-CR-6	Taneytown 3.2 NE	1.83	5.0	NA	MD	Carroll	View
2/14/2007	7:00 AM	MD-HW-2	Sykesville 1.7 SSE	1.78	5.0	5.0	MD	Howard	View
2/14/2007	7:00 AM	MD-HW-12	Sykesville 2.6 SE	1.61	0.0	NA	MD	Howard	View
2/14/2007	8:00 AM	MD-MG-3	Potomac 0.9 NNW	1.54	3.2	NA	MD	Montgomery	View
2/14/2007	7:00 AM	MD-MG-2	Redland 0.8 NNE	1.52	4.5	4.5	MD	Montgomery	View
2/14/2007	7:00 AM	MD-PG-37	Brandywine 6.7 ESE	1.49	T	T	MD	Prince George's	View
2/14/2007	7:00 AM	MD-PG-1	Bowie 0.5 E	1.47	1.0	1.5	MD	Prince George's	View
2/14/2007	7:00 AM	MD-SM-3	Leonardtown 0.6 NE	1.42	0.0	NA	MD	St. Mary's	View
2/14/2007	7:00 AM	MD-CH-7	Waldorf 3.2 SW	1.40	0.8	0.7	MD	Charles	View
2/14/2007	7:00 AM	MD-HW-11	Columbia 1.7 W	1.40	3.2	3.5	MD	Howard	View
2/14/2007	7:00 AM	MD-PG-7	Camp Springs 1.6 NNW	1.38	1.8	NA	MD	Prince George's	View
2/14/2007	4:00 PM	MD-BL-7	White Hall 3.5 NE	1.38	NA	NA	MD	Baltimore	View
2/14/2007	7:00 AM	MD-CV-1	Marlton 6.0 E	1.37	0.3	0.0	MD	Calvert	View
2/14/2007	7:00 AM	MD-SM-4	Charlotte Hall 3.6 ENE	1.37	0.3	T	MD	St. Mary's	View
2/14/2007	7:00 AM	MD-MG-24	White Oak 1.2 N	1.35	2.5	2.0	MD	Montgomery	View
2/14/2007	7:00 AM	MD-PG-35	Brandywine 2.5 NNW	1.35	1.0	1.4	MD	Prince George's	View
2/14/2007	7:00 AM	MD-WC-1	Vienna 11.3 SSW	1.35	0.0	NA	MD	Wicomico	View
2/14/2007	7:00 AM	MD-PG-6	Friendly 1.0 N	1.32	2.4	1.8	MD	Prince George's	View
2/14/2007	7:00 AM	MD-MG-5	Nashville 1.0 SE	1.31	3.1	3.5	MD	Montgomery	View

Daily data
in table form

Daily precipitation maps:
Rainfall, Hail and Snowfall

This data allows CoCoRaHS to supplement existing networks and provide many useful results to scientists, resource managers, decision makers and other end users on a timely basis.

. . . as well as educational opportunities

[illegible]



COMMUNITY COLLABORATIVE RAIN, HAIL & SNOW NETWORK
"Disseminating what works"

Home | Stories | News Data | Maps | My Data | My Account | Admin | Logout

Main Menu

- Home
- Stories
- News
- Resources

Resources

- Early Warning
- Insurance
- Insurance Claims Process
- Insurance Claims
- Insurance Claims

Insurance Claims

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- Insurance Claims
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Hail Pad Examples

Rain Drops



Soft Hail Stones



Small Hail Stones





The image shows three vertical panels, each representing a different weather type. The top panel is blue with a white icon of a rain cloud and a raindrop, the word 'Rain' in white, and a list of links: Overview, Weather Radar, and Measuring Rain. The middle panel is light blue with a white icon of a hail cloud and a hailstone, the word 'Hail' in white, and a list of links: Overview, Hail Facts, Hail Figures, CoCoRaHS & Hail, Hail Pad Examples, and Measuring Hail. The bottom panel is light blue with a white icon of a snow cloud and three snowflakes, the word 'Snow' in white, and a list of links: Overview and Measuring Snow.

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

Home / Status / View Data / Maps / My Data / My Account / Admin / Support

My Data Entry : View Daily Precipitation Report

New Reports

[Add New Report](#)
[View All Reports](#)
[My Reports](#)
[Add New Report](#)
[View All Reports](#)

(1) Message of the Day:

Don't forget to remove the funnel and inner tube from your rain gauge if freezing weather is expected.

We realize that many of you have had to reenter your login information to get into our system recently. Apparently the server configuration changed with it caused a change in our cookies, which caused your saved login information to be lost. We apologize for the inconvenience and would like to thank everyone for the patience.

Now would be a good time to print out and save your login information in case this ever happens again. You can always have your user name and password sent to your e-mail address by clicking on the "Find your login info" link on the Login page.

Thanks

(2) Confirmation:

- The Daily Precipitation Report was saved.

Daily Precipitation Report Edit

Station Number: CD-LR-610 Station Name: Port Carbon, PA BR

Observation Date 1/27/2006 7:30 AM

Submitted 1/27/2006 9:43 AM

Model Name: Model 610



***“HELPING TO PROVIDE THE PUBLIC WITH A
BETTER UNDERSTANDING OF WEATHER”***

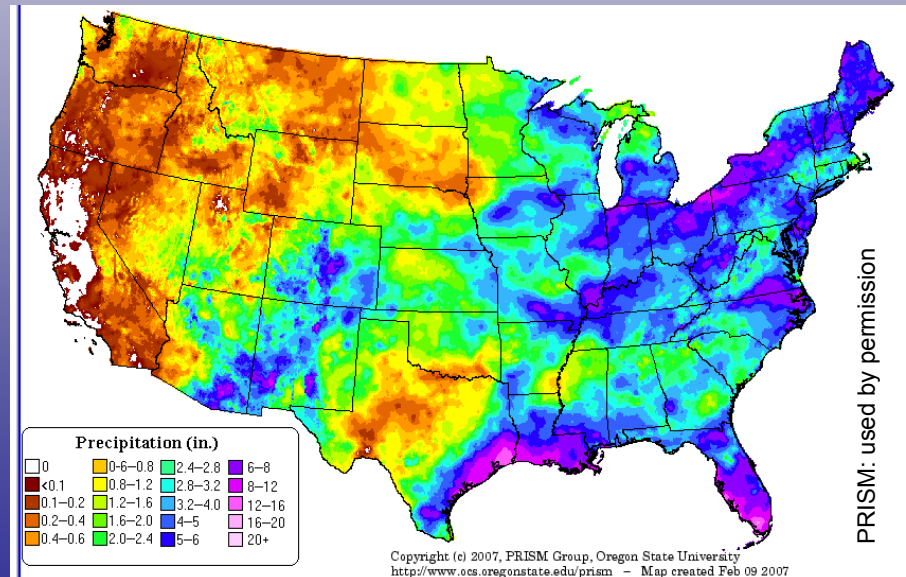
WHY CoCoRaHS ??

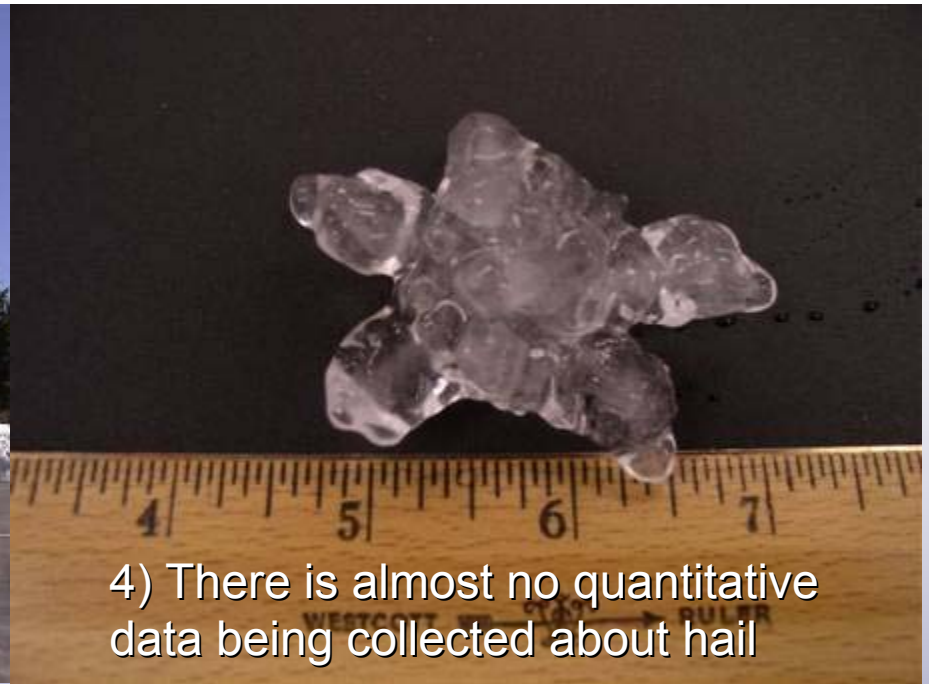


1) Precipitation is important and highly variable



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





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.

Wednesday
COLORADOAN
City death toll at 5; damage in millions

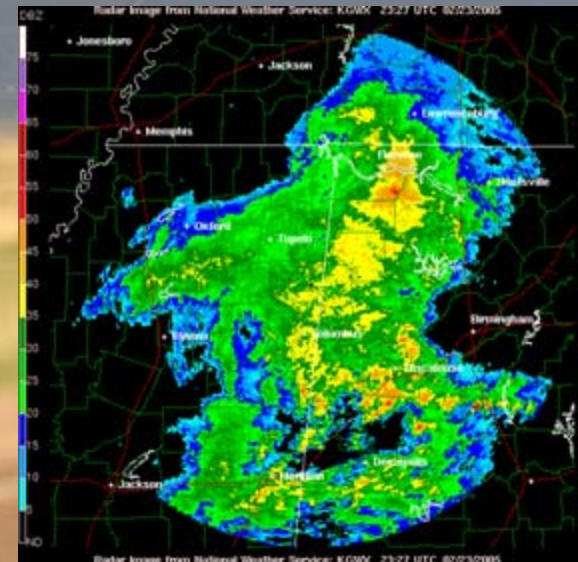
July 30th 1997

CSU's book losses speak volumes



CoCoRAHS DATA IS USED BY MANY

- 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
- Farm Service Agency
- 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 and other universities

USDA, BLM, Cooperative Extension

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

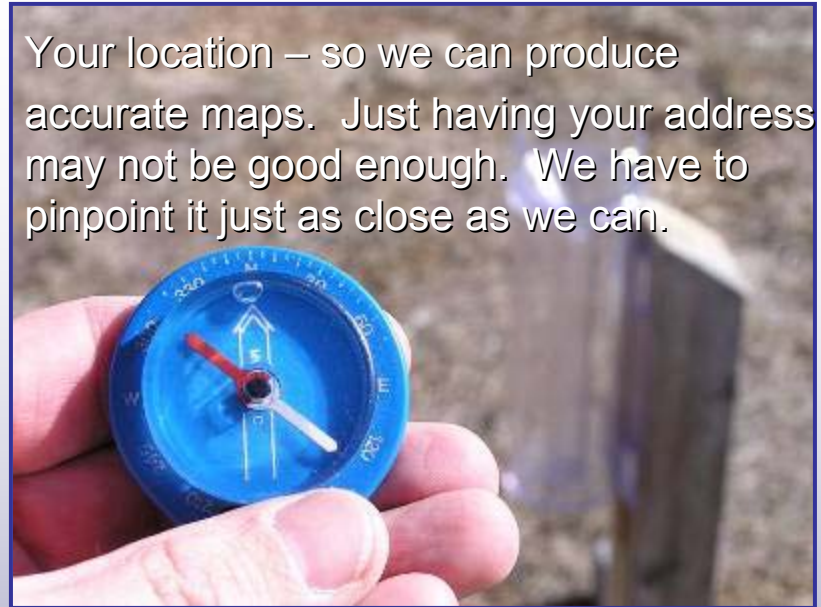
a) What *we will need from you*
before you can participate as an
observer:

CoCoRaHS

& 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

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#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 header includes the CoCoRaHS logo and the text "COMMUNITY COLLABORATIVE RAIN, HAIL & SNOW NETWORK" with the tagline "Because every drop counts". Navigation links include Home, States, View Data, Maps, My Data Entry, and Login. The left sidebar contains a Main Menu with links to Home, About Us, Join CoCoRaHS, and Contact Us, and a Resources section with links to FAQ/Help, Education, Volunteer Coordinators, Mail List, Distribution/Sign-up, Help Needed, and Backup Forms. The main content area is titled "Login" and contains a login form with fields for Username (containing "username") and Password (containing "*****"), a "Save Login" checkbox, and a "Log In" button. Below the form are links to "Find your login info." and "Apply to be a CoCoRaHS observer."

CoCoRaHS

#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*



a) Placement of your rain gauge



**Location! Location!
Location!**

COCO RaHS

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!

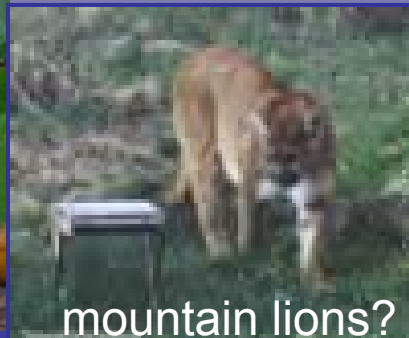


Avoid placing it
under trees or
any structure



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

Also avoid placing your gauge near:



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Snow Net

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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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”

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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& Snow Network

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

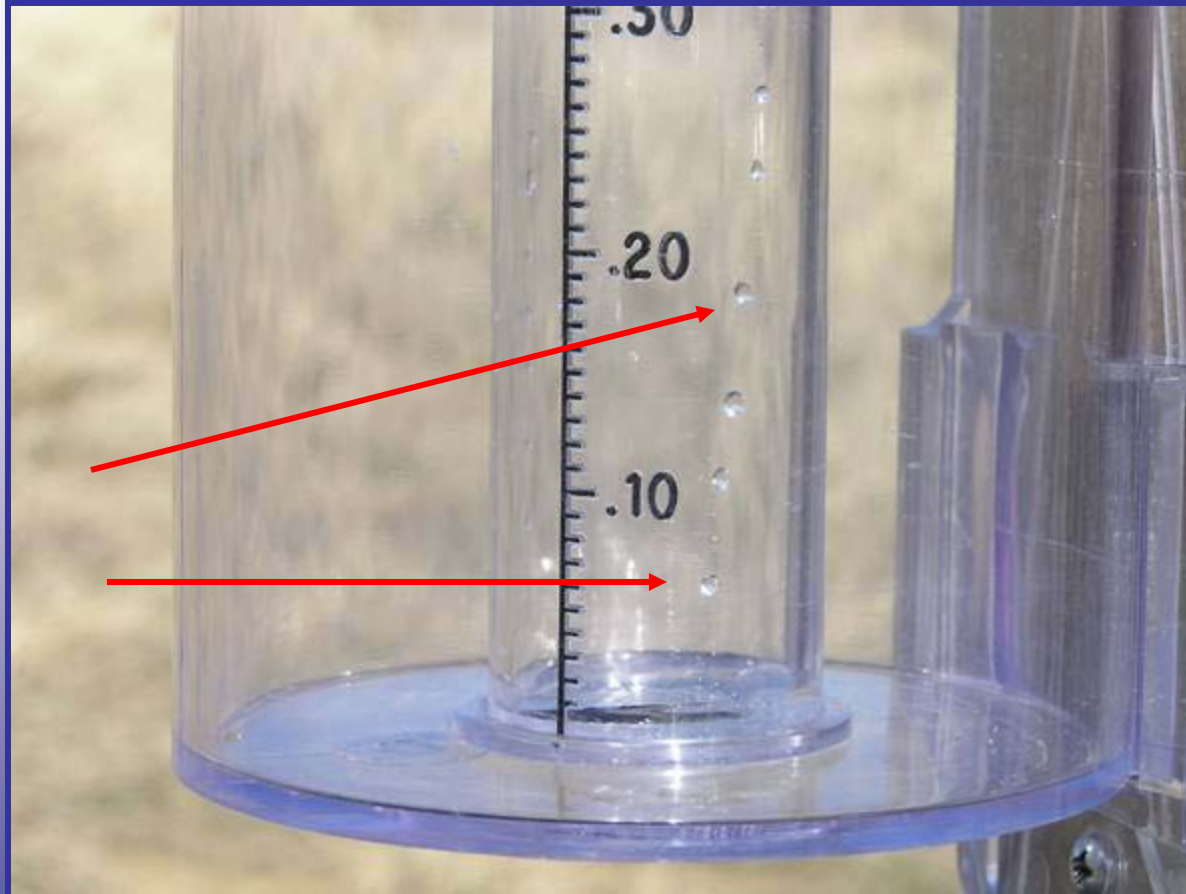


. . . will be zero, (0.00), nada, nothing, zilch!

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



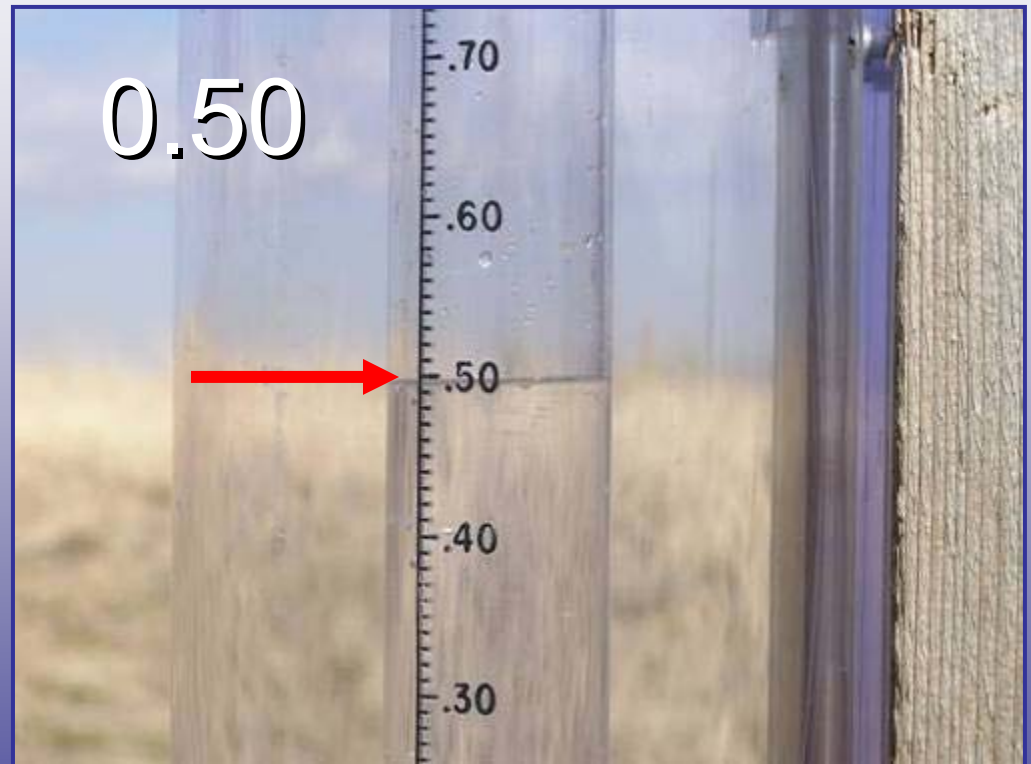
The surface of the water in the gauge looks curved. How do I know where to read?

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.

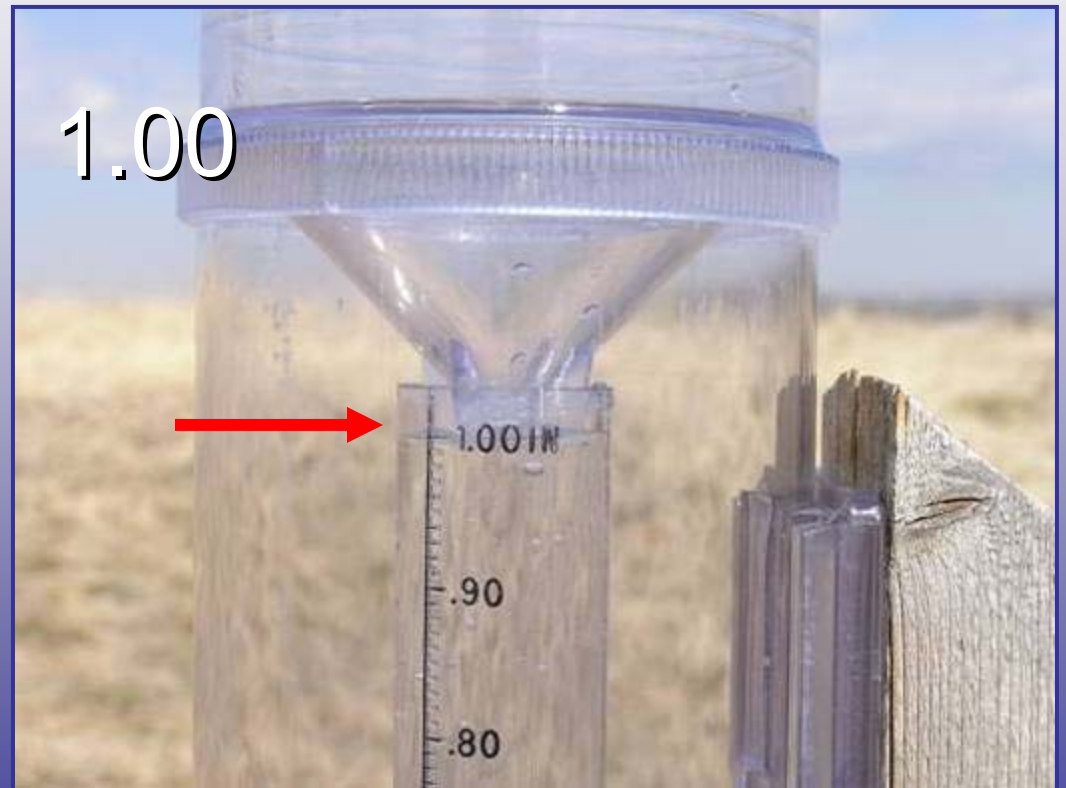


A nice soaking rain



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.

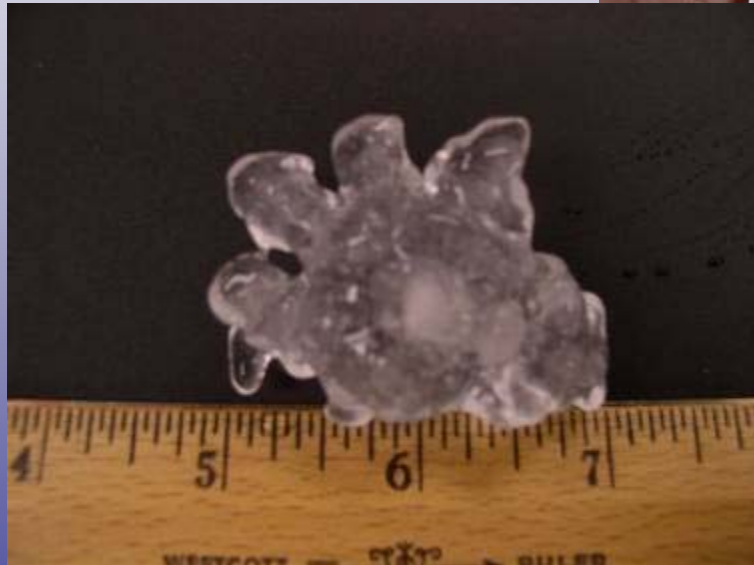


Then add up all of your measurements

$1.00 \text{ inch} + 0.97 \text{ inches} + 0.88 \text{ inches} + 0.92 \text{ inches} = 3.77 \text{ inches}$

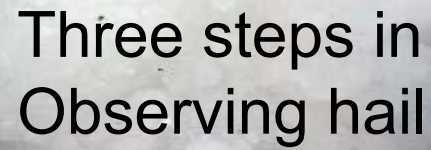
Total = 3.77"

c) Observing Hail



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As hail is falling

[illegible]

d.

#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' for the CoCoRHS (Community Collaborative Rain, Hail & Snow Network). The form includes fields for Station Number (CO-LR-610), Station Name (Fort Collins 3.5 SW), Date of Hail Storm (6/13/2006), Time Hail Storm Began (AM), and a checkbox for 'Report was taken at registered location?'. It also has sections for 'Size of hailstones' (Smallest, Average, Largest) and 'Hail lasted' (Minutes). There are checkboxes for 'Hailfall was:' (Continuous or Intermittent) and 'Hailstones were:' (Hard, Soft, Mixed, Clear ice, White ice). A section asks 'Was there more rain than hail?' with Yes/No options. The form also includes 'Hail started:' and 'Largest Hail Started:' with checkboxes for timing and size relative to the hail.



The screenshot shows a 'Severe Thunderstorm Warning' from the National Weather Service for the Wind River Basin, WY. The warning is issued at 3:46 PM MDT on Tuesday, July 25, 2006. It includes a 'SEVERE WEATHER STATEMENT' and a 'PRELIMINARY STATEMENT'. The warning is for a severe thunderstorm capable of producing golf ball size hail and damaging winds in excess of 60 mph. The storm is located over south central Fremont County, about 27 miles southeast of Lander, and is moving southeast at 15 mph. The warning remains in effect for south central Fremont County until 4:30 PM MDT.

#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

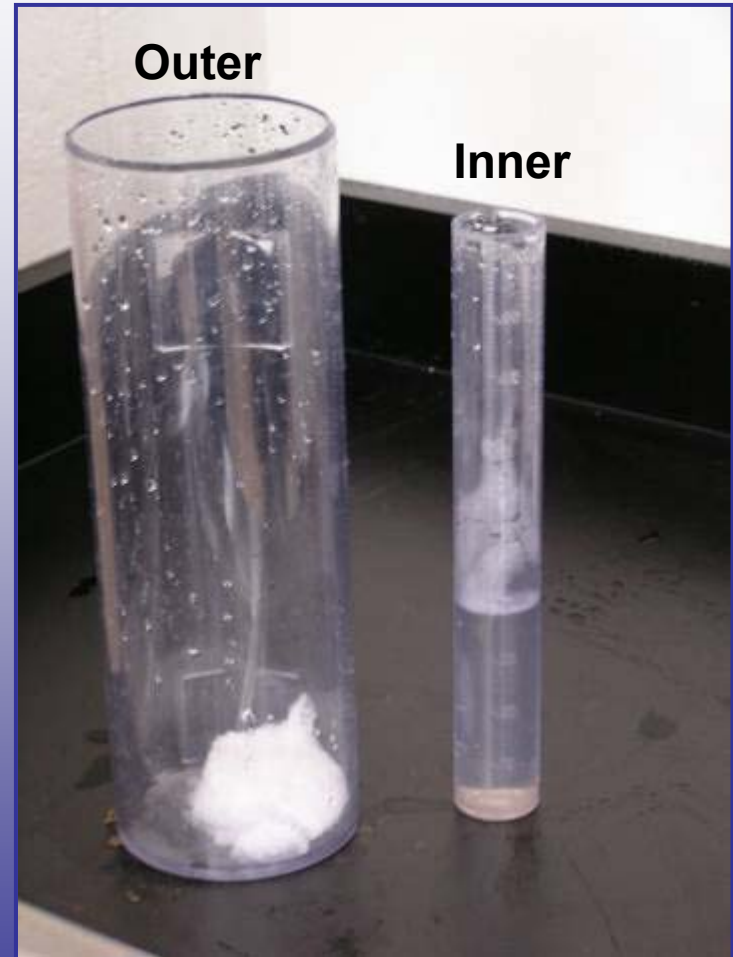


We will disregard the snow that lands outside the gauge.



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
<hr/>	
Final reading	0.29

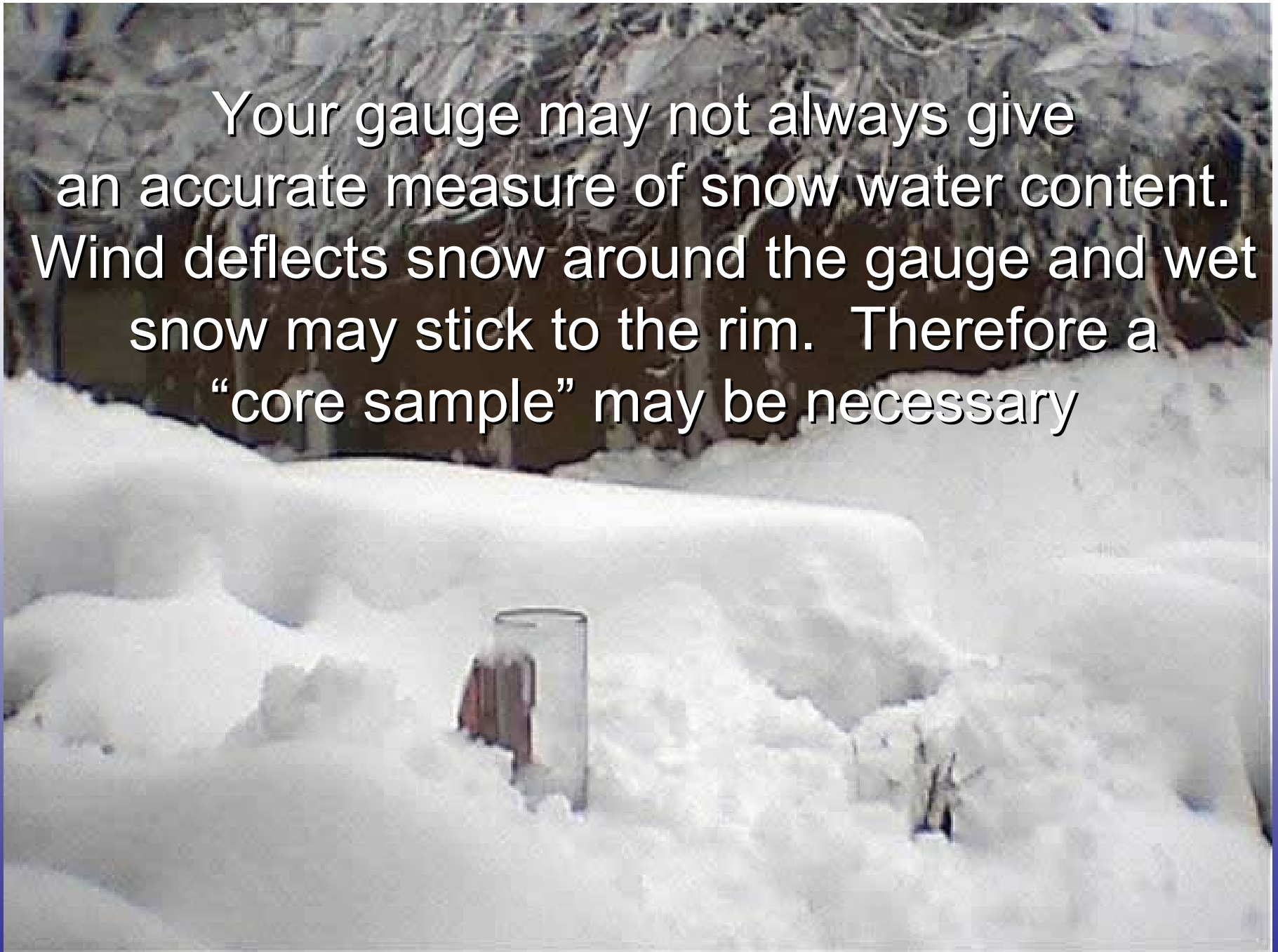
Measuring liquid water content from a core sample



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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



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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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

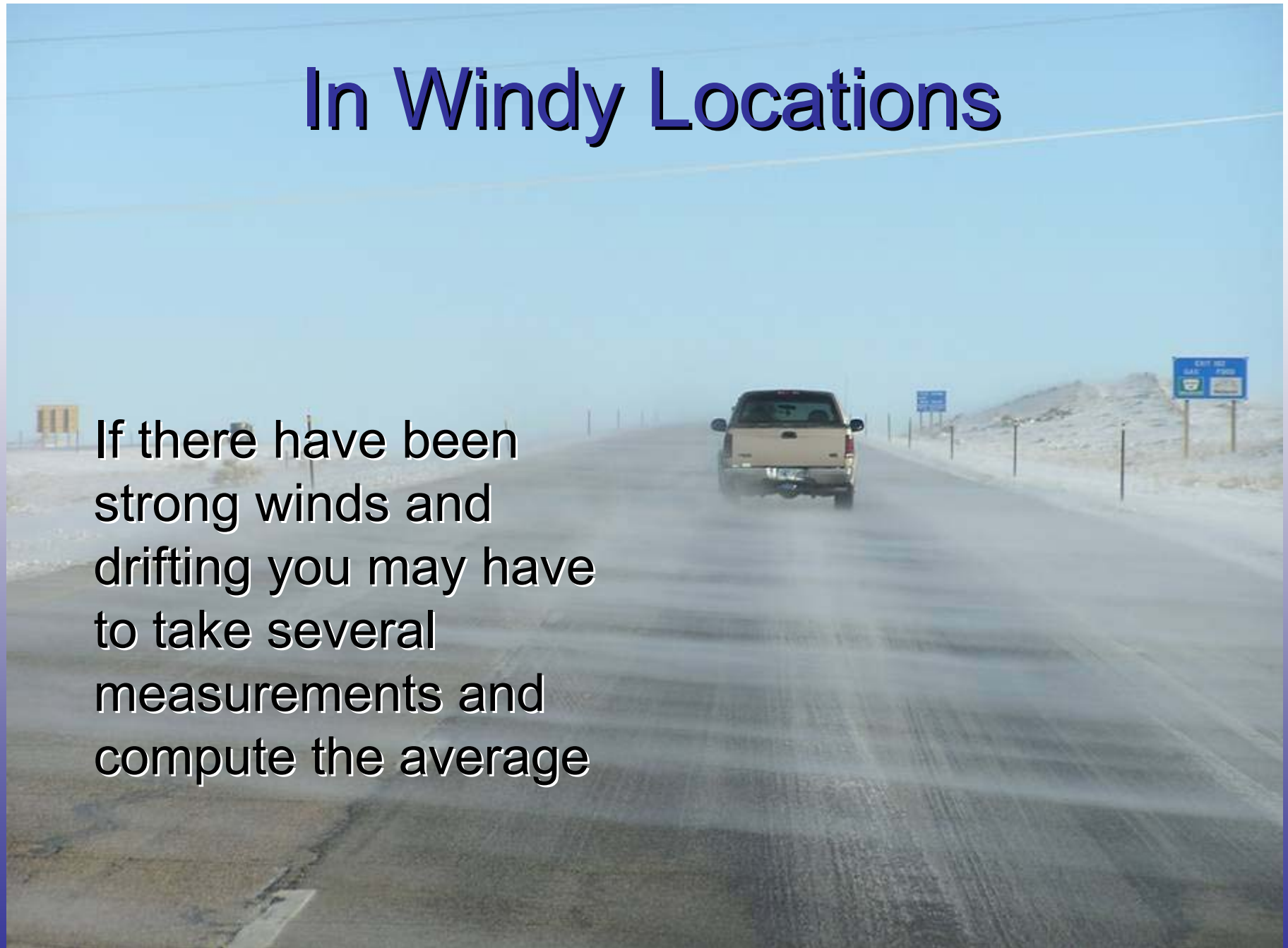
Replace the Board



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

CocoRaHS

Mail & Snow Network

The CoCoRaHS Web site

www.cocorahs.org

The screenshot shows the CoCoRaHS website interface. At the top is the CoCoRaHS logo, a stylized blue and green raindrop with the text 'CoCoRaHS' inside. To its right is the header 'COMMUNITY COLLABORATIVE RAIN, HAIL & SNOW NETWORK' with the tagline 'Because every drop counts'. Below this is a navigation bar with links: Home | States | View Data | Maps | My Data | My Account | Admin | Logout.

The main content area is titled 'Welcome to CoCoRaHS'. It features a map of the United States where states are color-coded: green for CoCoRaHS member states and blue with diagonal stripes for pending states. The green states include WA, OR, ID, MT, ND, MN, WI, MI, NY, PA, NJ, CT, RI, MA, NH, ME, VT, DE, MD, VA, WV, OH, IN, IL, MO, KS, NE, SD, WY, CO, UT, NV, CA, AZ, NM, TX, LA, AR, MS, AL, GA, SC, NC, TN, KY, and WV. The blue-striped states are FL and AL. A key indicates that green represents a 'CoCoRaHS State' and blue stripes represent a 'Pending State'.

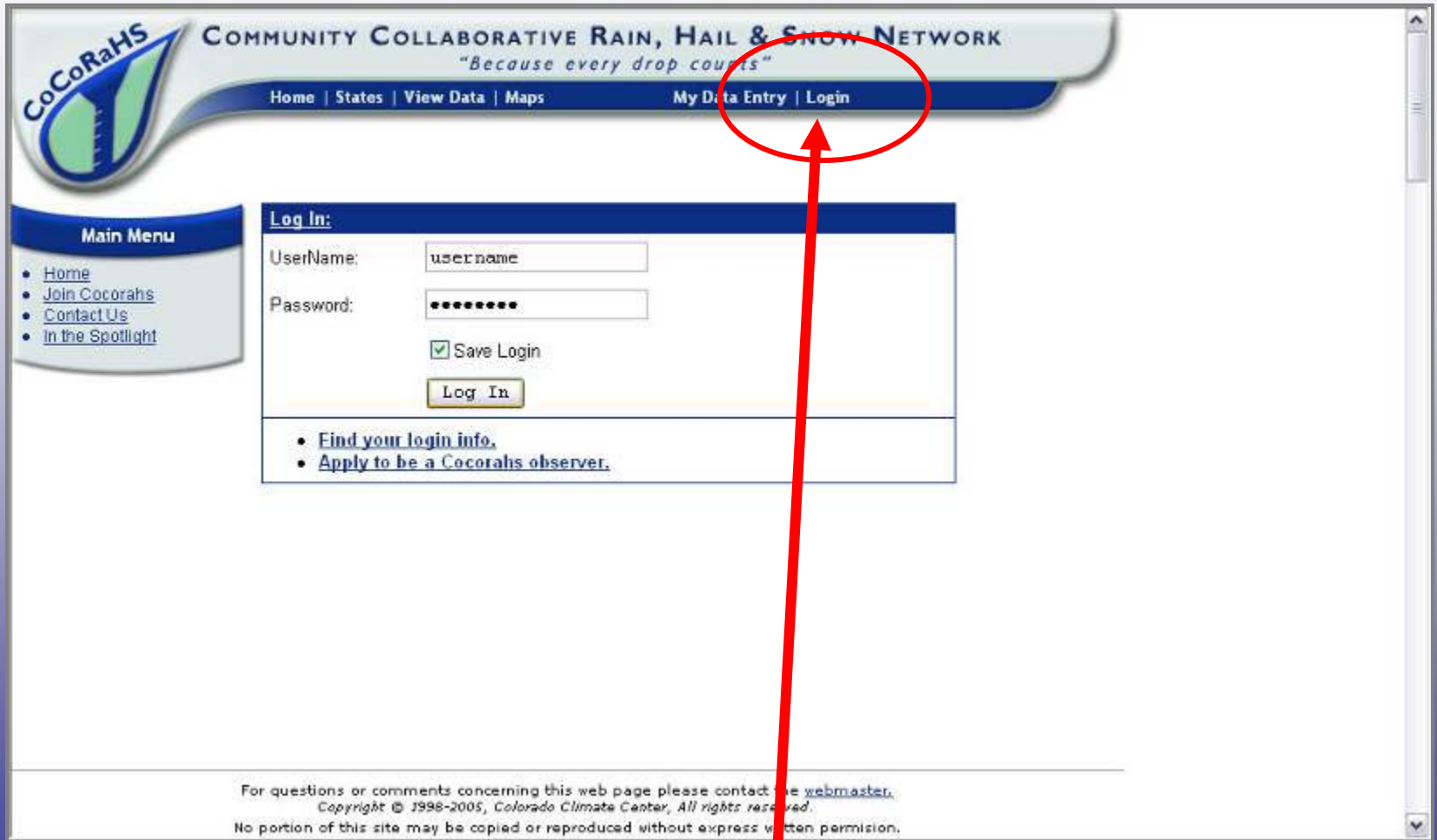
On the left side, there is a 'Main Menu' with links: Home, About Us, Join Cocorahs, and Contact Us. Below this is a 'Resources' section with links: FAQ / Help, Education, Training Slide-Show (PDF), Volunteer Coordinators, Hail Pad, Distribution/Drop-off, Help Needed, and Printable Forms. At the bottom of the menu are links for CoCoRaHS Store, Calendar, The Catch, Message of the Day, Sponsors, Presentations, and Links.

On the right side, there is a circular logo with the text 'Join CoCoRaHS Click Here'. Below it is a 'weatherwise' box with the text: 'Read the "CoCoRaHS Article" in the July/August 2007 Issue of Weatherwise Magazine'. At the bottom right is a 'Things to know about...' box with icons for Rain (a raindrop), Hail (a triangle with a dot), and Snow (three asterisks).

At the bottom of the main content area, there is a banner with the text 'COCORAHS WELCOMES NORTH CAROLINA & NEW YORK'. The banner includes images of a lighthouse and the Statue of Liberty.

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 **Submit Data** **Reset**

Station Number : CO-LR-610

Station Name : Fort Collins 3.5 SW

* Denotes Required Field

Observation Date 6/12/2006

Observation Time 7:00 AM

Total Rain and Melted Snow in gauge in inches to the nearest hundredth 0.05

☒ 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 0.0

Melted value from core to the nearest hundredth NA

Total Snow on Ground

Depth of total snow in inches to the nearest half inch NA

Melted value from core to the nearest hundredth NA

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: Select Time Accuracy

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"

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My Data Entry : Daily Precipitation Report Form

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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 **Submit Data** **Reset**

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: ☐ Select Time Accuracy

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"

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

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 **Submit Data** **Reset**

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)
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 AM PM
Precipitation Ended AM PM
Heaviest Precipitation Began AM PM
Heaviest Precipitation Lasted minutes
These times are: Select Time Accuracy

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
"Because every drop counts"

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My Data Entry : Daily Precipitation Report Form

Enter My New Reports

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- Hail
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- Multi-Day Accumulation
- Monthly Zeros


List/Edit My Reports

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- Hail
- Intense Precipitation
- Multi-Day Accumulation

Precipitation Report Form		Submit Data	Reset
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="radio"/> AM <input type="radio"/> PM	
Precipitation Ended		<input type="radio"/> AM <input type="radio"/> PM	
Heaviest Precipitation Began		<input type="radio"/> AM <input type="radio"/> PM	
Heaviest Precipitation Lasted		minutes	
These times are: Select Time Accuracy			

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

To See Your Report on the Map



COMMUNITY COLLABORATIVE RAIN, HAIL & SNOW NETWORK

"Because every drop counts"

[Home](#) | [States](#) | [View Data](#) | [Maps](#) | [My Data](#) | [My Account](#) | [Admin](#) | [Logout](#)

State Menu

- [Colorado Home](#)
- [State Coordinators](#)
- [Maps](#)

Colorado Reports

- [Daily Precip](#)
- [Hail Reports](#)
- [Intense Precip](#)
- [Multi-Day Precip](#)

View All Reports


- [Daily Precip](#)
- [Hail Reports](#)
- [Intense Precip](#)
- [Multi-Day Precip](#)
- [Rainy Days](#)
- [Stations](#)

Main Menu

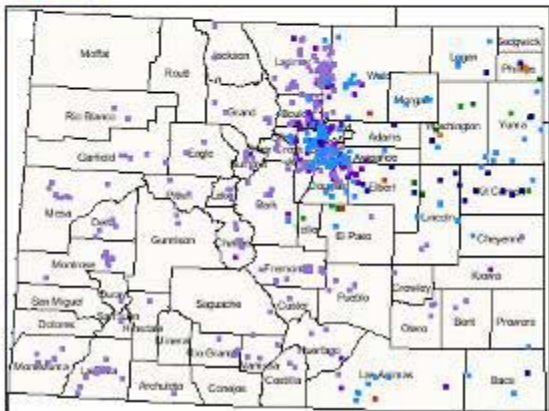
- [Home](#)
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Resources

- [FAQ / Help](#)
- [Education](#)
- [Volunteer Coordinators](#)
- [Hail Pad](#)




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](#)

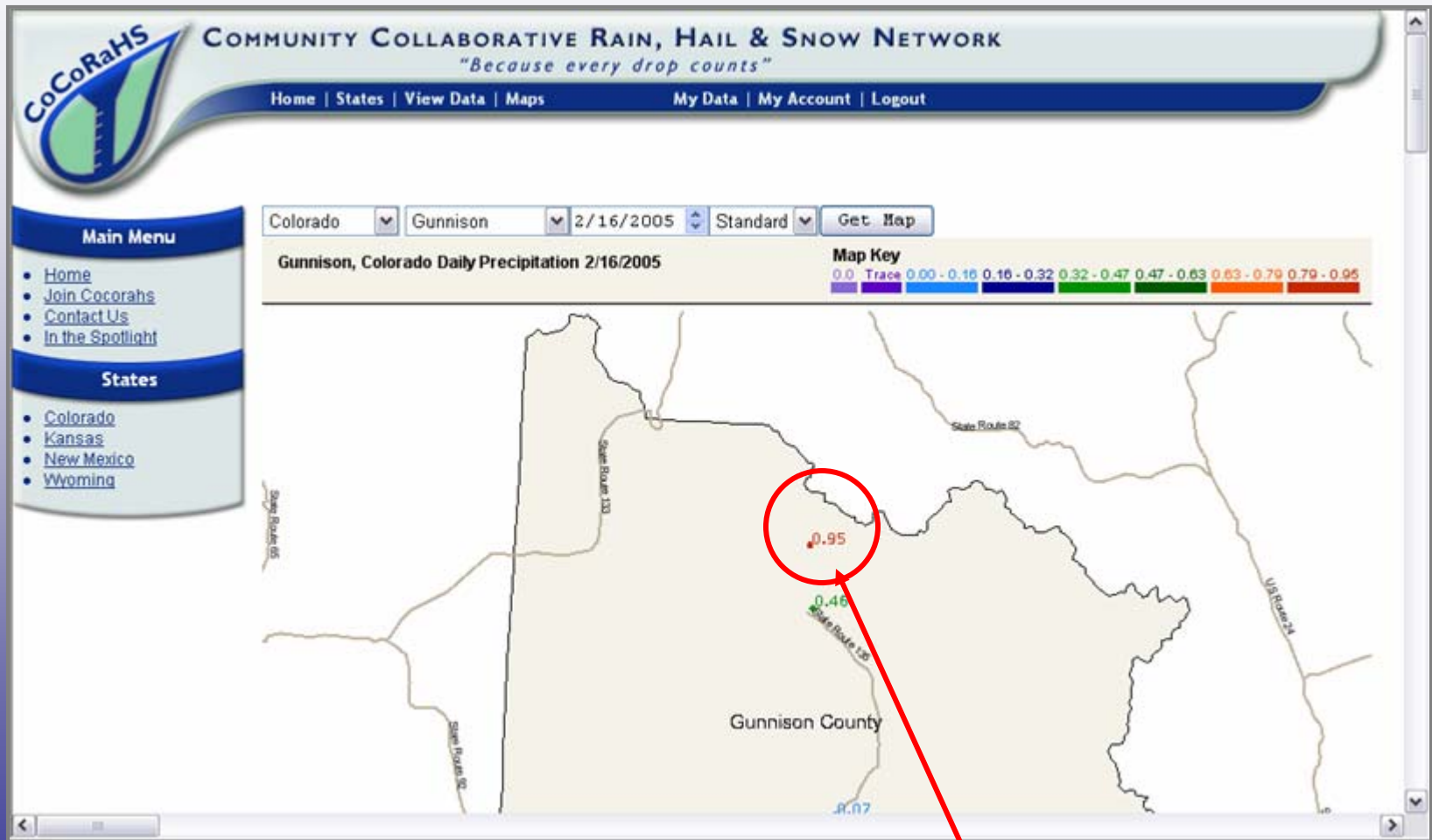


From the urban communities of Denver to the farms of Baca County, from the four corners area near Cortez to the high peaks of Rocky Mountain National Park, the CoCoRaHS Network currently engages of over 1,500 volunteers to measure rain, hail and snow throughout the state.

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

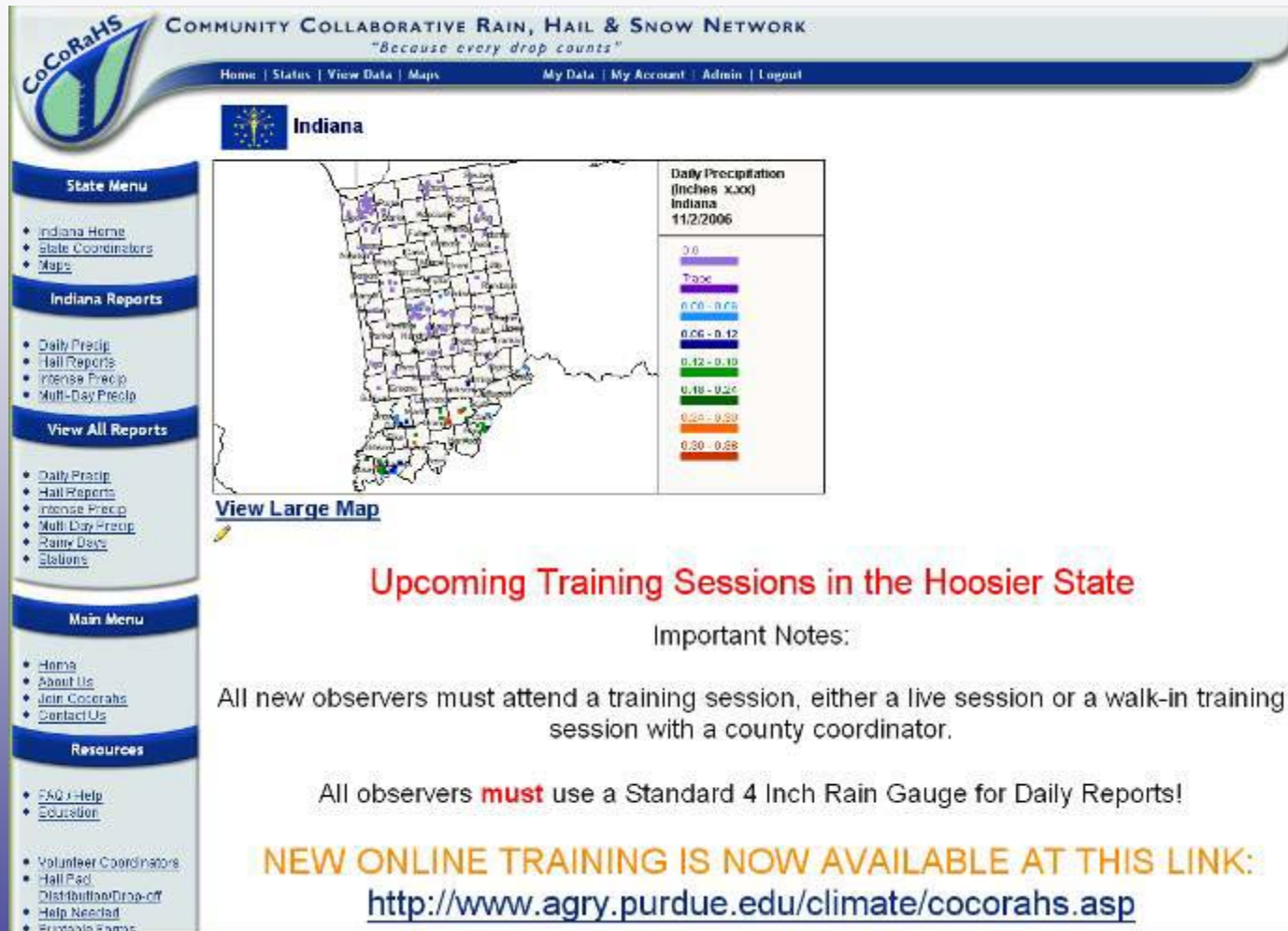
Go to your state page and then click on your county

Your Report on our Daily Map



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

Your state's Page



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

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

Enter My New Reports

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- [Multi-Day Accumulation](#)
- [Monthly Zeros](#)

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- [Multi-Day Accumulation](#)

Hail Report Form [Submit Data](#) [Reset](#)

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

6/13/2006 AM **Date of Hail Storm** **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

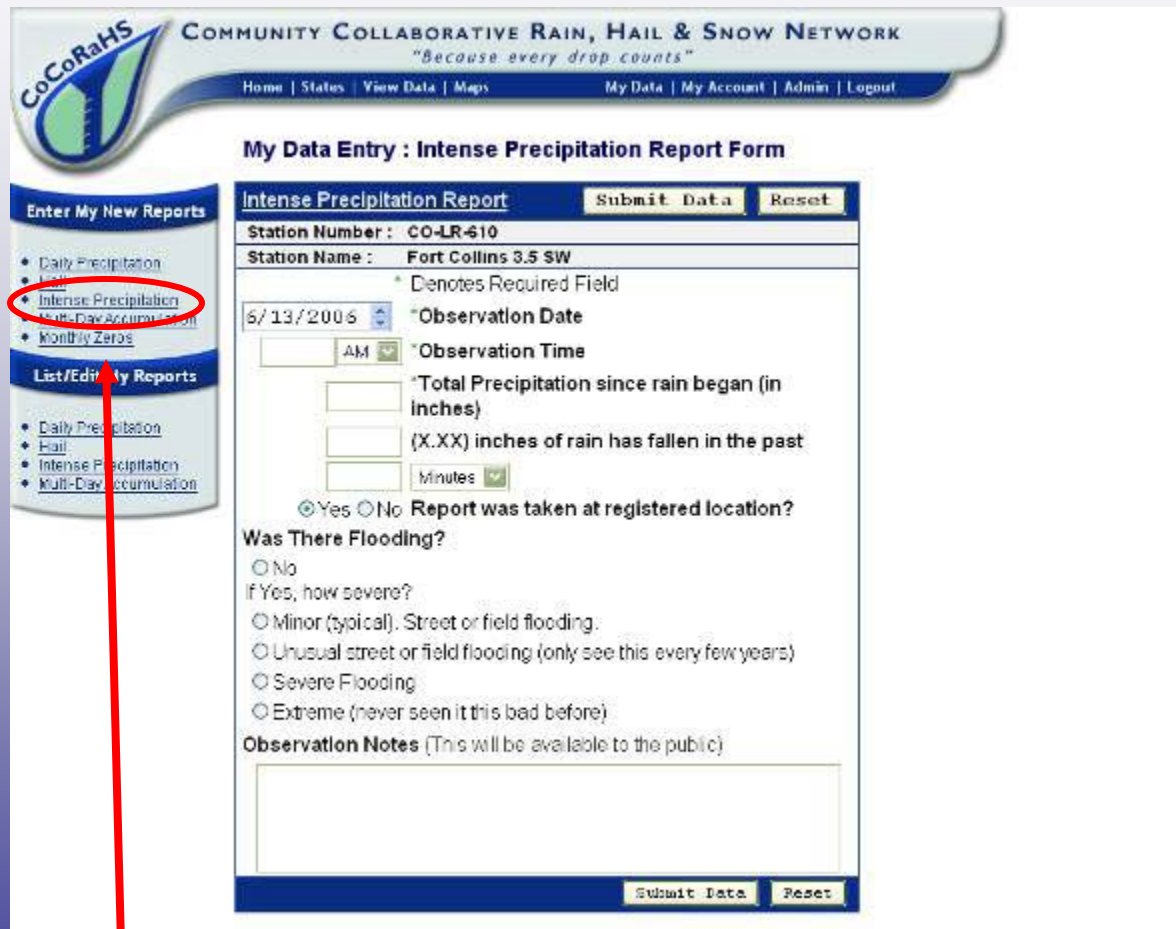
Was there more rain than hail? ☐ Yes ☐ No

Hail Started:
☐ Before rain ☐ After rain ☐ Same time as rain

Largest Hail Started
☐ Before smaller hail ☐ After smaller hail ☐ Same time as smaller hail

Click here to access a Hail Report

Intense Precipitation Report



CoCoRaHS COMMUNITY COLLABORATIVE RAIN, HAIL & SNOW NETWORK
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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 [Submit Data](#) [Reset](#)

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

6/13/2006 AM * 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)

[Submit Data](#) [Reset](#)

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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- [Frost](#)
- [Snowflake](#)
- [Thunder](#)

List/Edit Reports

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- [Hail by Station](#)
- [Intense Precipitation](#)
- [Multi-Day Accumulation](#)

Monthly Zeros

Station Number : CO-LR-133 Station Name : WEL 8 SW

June 2006								
≤	Sun	Mon	Tue	Wed	Thu	Fri	Sat	≥
28		29	30	31	1 <input type="checkbox"/> 0.0 Precip	2 <input type="checkbox"/> 0.0 Precip	3 <input type="checkbox"/> 0.0 Precip	
4 <input type="checkbox"/> 0.0 Precip	5 <input type="checkbox"/> 0.0 Precip	6 <input type="checkbox"/> 0.0 Precip	7 <input type="checkbox"/> 0.0 Precip	8 <input type="checkbox"/> 0.0 Precip	9 <input type="checkbox"/> 0.0 Precip	10 <input type="checkbox"/> 0.0 Precip		
11 <input type="checkbox"/> 0.0 Precip	12 <input type="checkbox"/> 0.0 Precip	13 <input type="checkbox"/> 0.0 Precip	14	15	16	17		
18	19	20	21	22	23	24		
25	26	27	28	29	30			
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
"Because every drop counts"

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

My Data Entry : Multi-Day 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

Multiple Day Accumulation Form **Submit Data** **Reset**

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

Submit Data **Reset**

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
6/12/2006	7:04 AM	CO-WE-285	Keenesburg 4.6 E	1.33	0.0	NA	CO	Weld	
6/12/2006	7:00 AM	CO-EP-12	Colorado Springs 18.7 N	1.20	0.0	0.0	CO	El Paso	
6/12/2006	7:00 AM	CO-LA-44	Engleville 7.9 E	1.20	0.0	NA	CO	Las Animas	
6/12/2006	7:00 AM	CO-EL-9	Kiowa 14 ENE	1.13	0.0	NA	CO	Elbert	
6/12/2006	7:00 AM	CO-PH-27	Holyoke 16 SSW	1.06	0.0	NA	CO	Phillips	
6/12/2006	7:00 AM	CO-WA-54	Lindon 10.9 NNW	0.92	0.0	NA	CO	Washington	
6/12/2006	7:00 AM	CO-PH-14	Holyoke .59 SW	0.85	0.0	NA	CO	Phillips	
6/12/2006	7:15 AM	CO-WA-19	Otis 5.0 NW	0.85	0.0	NA	CO	Washington	
6/12/2006	6:15 AM	CO-EL-2	Agate 8.6 SE	0.82	0.0	NA	CO	Elbert	
6/12/2006	7:00 AM	CO-WA-55	Woodrow 4.6 SE	0.75	0.0	NA	CO	Washington	
6/12/2006	8:00 AM	CO-LN-38	Limon 0.9 SSW	0.75	0.0	NA	CO	Lincoln	
6/12/2006	6:35 AM	CO-PH-33	Holyoke 13 SE	0.73	0.0	NA	CO	Phillips	
6/12/2006	7:00 AM	CO-EP-17	Monument 2.1 ENE	0.68	0.0	0.0	CO	El Paso	
6/12/2006	8:00 AM	CO-WE-275	Hudson 1.8 SE	0.68	0.0	NA	CO	Weld	
6/12/2006	7:00 AM	CO-LN-37	Limon 0.3 NW	0.66	0.0	NA	CO	Lincoln	
6/12/2006	7:00 AM	CO-PH-19	Holyoke 4 SW	0.64	0.0	NA	CO	Phillips	

View Data

- Daily Precip Reports
- Daily Comments Reports
- Intense Precip Reports
- Multiple Day Reports
- Days with Hail
- Search Hail Reports
- Station Hail Reports
- Station Precip Summary
- Station Snow Summary
- Rainy Days Report
- Total Precip Summary
- List Stations

PA FROST Data

- Frost
- Optics
- Snowflake
- Thunder

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Resources

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- Education
- Volunteer Coordinators
- Hail Pad

SECTION FOUR:

Frequently Asked Questions

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

CocoRaHS

Mail & 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.

***I have an automated weather station with a rain gauge.
Can I use that instead of the CoCoRaHS gauge?***

Answer: In order to accurately compare CoCoRaHS reports, all observers must use the 4 inch CoCoRaHS gauge. Automated rain gauges tend to underestimate a heavy rainfall and do not accurately measure water equivalent of snow. You are welcome to place the automated gauge beside the 4 inch gauge to compare measurements, but report what falls in the 4 inch gauge





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

