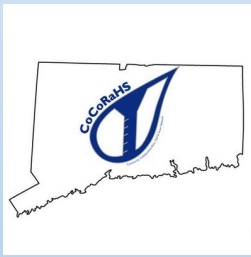
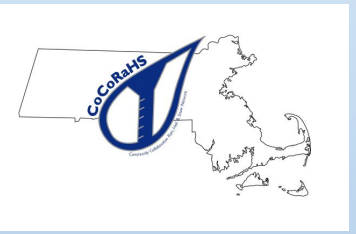
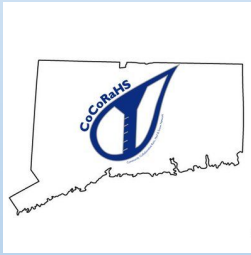
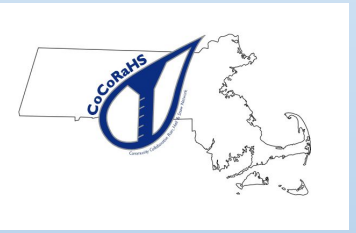
Southern New England CoCoRaHS


Winter Weather Reporting Guide

Main Points


- **Do your best!**
  - If you don't want to measure snow, that's fine. Just report what fell in your gauge.
  - If you only want to report snowfall and/or snow depth and not have to worry about melting the snow, that's fine too!
  - Just do what you can
- **You can always contact Joe** if you have questions and report later (jdellica@gmail.com)

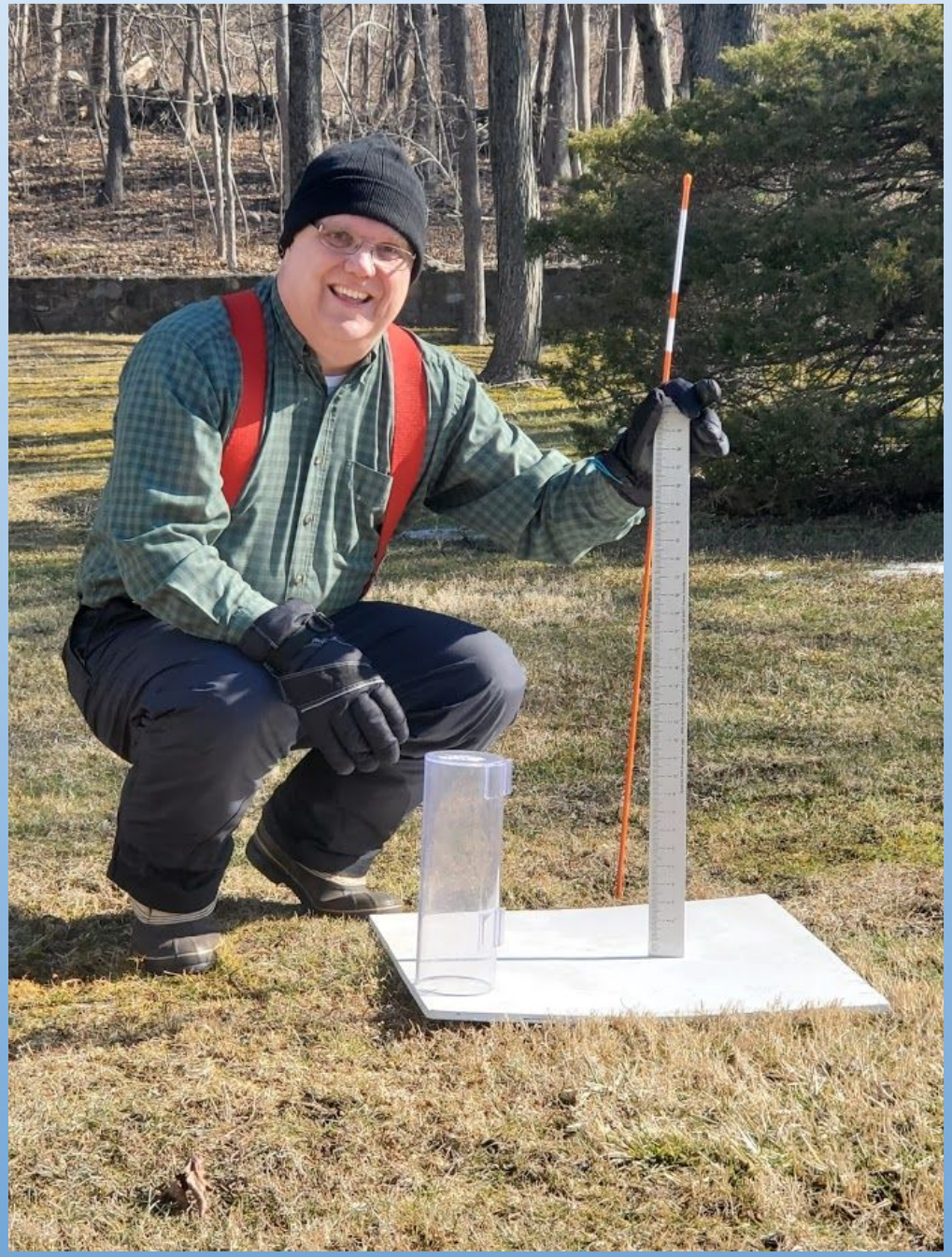

Quick Tips

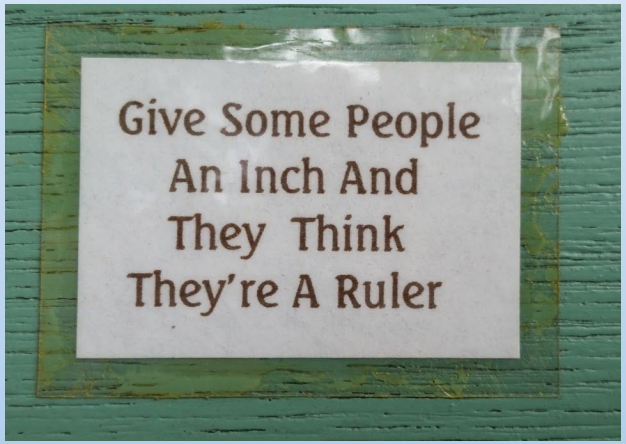
Snow flurries:

- **Trace for precipitation.**
- **Trace for new snow.**
- **You can report a "trace" even if you only see a few snowflakes falling.**

Snow melts as it falls:

- **Report melted precipitation.**
- **Trace for new snow.**
- **Add a Comment:**
  "Snow melted as it fell."





Be ready to measure and report snowfall and snow depth, every day, all year round.

Most days, there won't be any snow to measure. Report zero!

We are the Rulers of the Snow!

Job #1: Focus on the Gauge Catch, what falls in the gauge.

Ours is a precipitation network. The *liquid content* of what falls in your gauge is added to all of your other precipitation measurements.

Funnel and inner cylinder are indoors. They can be damaged in cold weather

Tools in the other hand.

A metal ruler.

A metal spatula.

Why metal tools? Ice happens!

“Tools of the Trade”

Job #2: Measure the depth of new snow.

Walk around and take a few measurements. Average your results.

Job #2: Measure the depth of new snow.

To the nearest 0.1”. Average a few measurements. Be away from the buildings and trees. Sweep your snowboard every 6 hours (or so), or immediately after snow stops.

Take a core sample for the water content of new snow.

We can tell when you do not, and report the same as the Gauge Catch!

Finding the water content of snow.

For depths less than 5”, about 0.50” of hot tap water in the inner cylinder.

For depths more than 5”, use 1.00” of hot tap water in the inner cylinder.

Why? It makes pouring and subtracting MUCH easier.

Whatever you pour in, WRITE IT DOWN before your pour.

Having a 2nd set of hands… does help!

Having a 2nd outer cylinder… does help!

Measuring with Nolan…. priceless!

Don’t have enough time? A weigh scale helps. Know the tare weight of your outer cylinder(s).

1.00” of liquid = 201g

You can build your own tube stand.

Write down your numbers!

Job #3. Measure the Total depth of snow and ice. To the nearest 0.5”

Average a few measurements. Snow does settle.

4” PVC can be cut and sharpened to cut through the icy snow.

This isn’t plumbing! This is citizen science!

SNOW DEPTH IS THE AVERAGE DEPTH OF SNOW (INCLUDING OLD SNOW AND ICE AS WELL AS NEW) THAT REMAINS ON THE GROUND AT OBSERVATION TIME.

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.

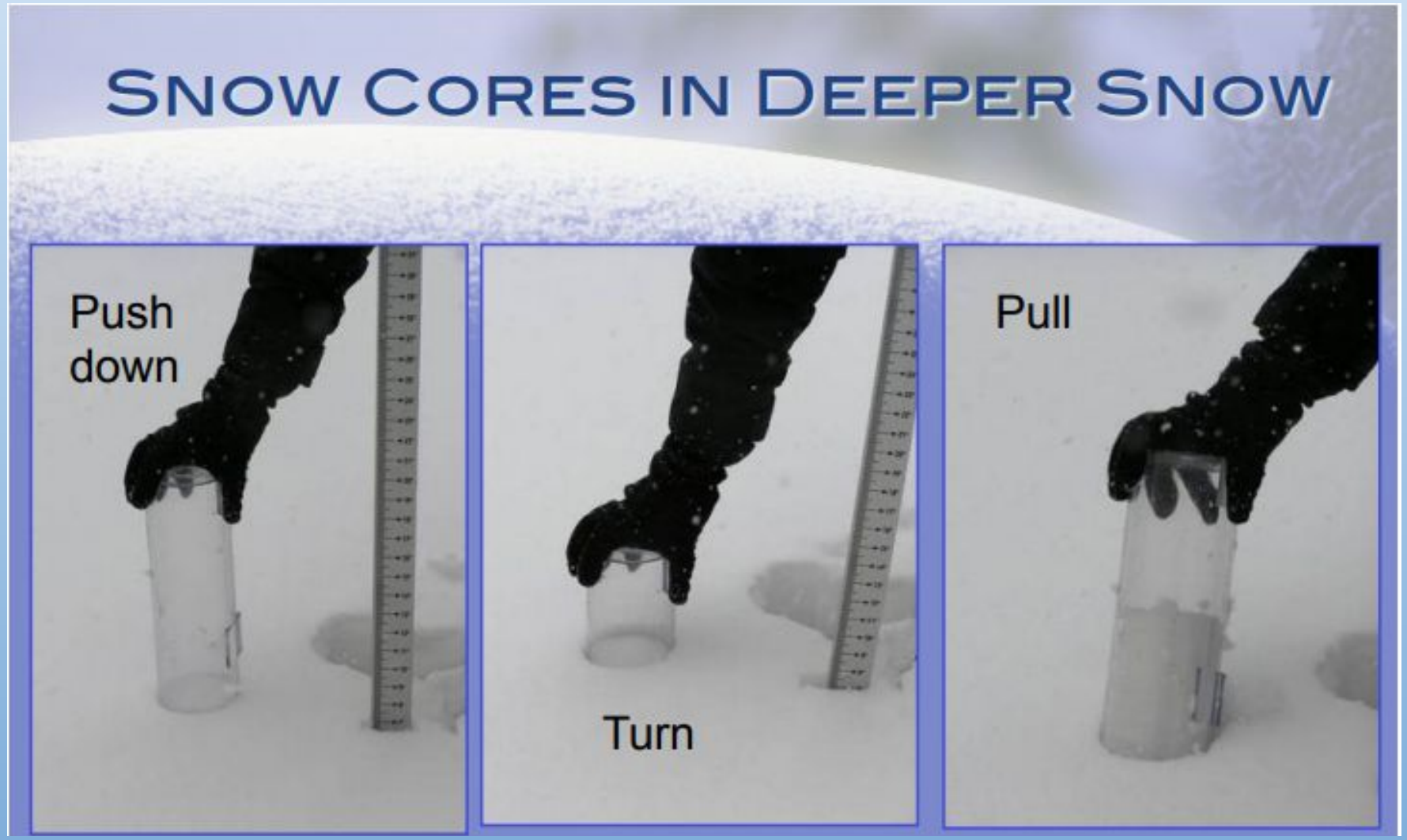
Capturing the Core

Slide snow-swatter (spatula works, too) under gauge

Carefully lift and get ready to flip the gauge

Bring the sample inside to melt

Snow Cores in Deeper Snow



Freezing rain…

… is measured and reported as plain rain.

Comments help.

Time, or hot tap water, is needed to melt the contents AND wipe off the outside.

Do not use a microwave. EVER!

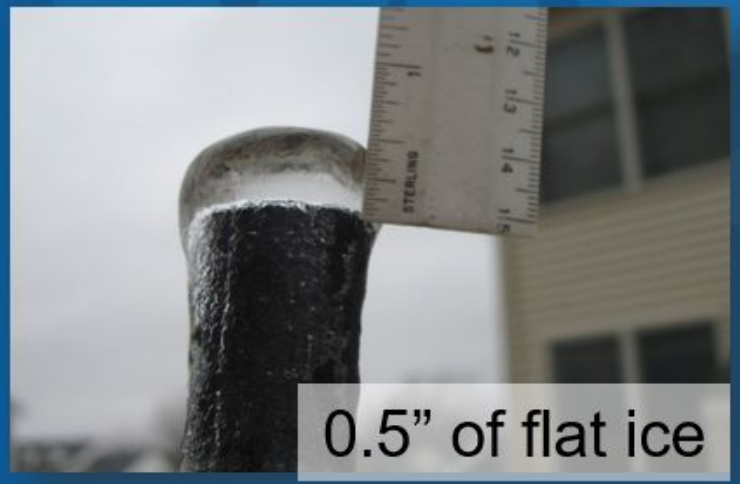
Freezing rain and snow mix!

Focus on the Gauge Catch.

Gauge Catch and core measurement will likely be different.

10:1 ratio of snowfall to liquid does NOT always happen. Your experiences will vary.

Ice Accretion Examples



Two ways to measure ice: radial surface (such as from a tree branch) or flat surface (such a metal post).

NWS forecasts FLAT ICE accretion.

If you measure ice from a radial object (i.e tree branch), you can convert to flat ice by dividing by 0.4.

Example: In top left picture, 0.3” of ice on the top side of the branch + 0.1” on the bottom side of branch divided by 2 equals 0.2” of radial ice.

To convert to flat ice, 0.2” / 0.4 = 0.50”

Preferred flat surfaces for measurements

Bottom Photo: Neil Stuart - NWS Albany, NY
Jan 15, 2007

Step 1: Observe

- **Water Equivalent of New Snow:** Melt the amount of ***new*** snow that fell in your gauge during the last 24 hours. Measure the amount of liquid to the nearest hundredth of an inch (such as 0.38").

- **New Snowfall:** Measure the depth of ***new*** snow to the nearest tenth of an inch (such as 4.7") on your snow board.

- **Melted new snowfall snow core (use if it is windy):**

⇒ Place your gauge upside down on your **snow board**, firmly push down and "cut a biscuit".
⇒ Carefully turn the gauge right side up trying not to let any snow spill.
⇒ Be sure to clear the snow off your snow board and place it back on the ground.
⇒ Take the gauge inside and allow the snow to melt. Measure the amount of liquid to the nearest hundredth of an inch (such as 0.38").

- **Total Snow and Ice on the Ground (Snow Depth):** Measure the depth of ***total*** snow to the nearest half an inch (such as 5.5") on the ground. You may need to take several measurements and average them to get your total depth of snow.

- **Snow Water Equivalent of Total Snow and Ice on the Ground (Mondays):**

⇒ Place your gauge upside down on **the ground**, firmly push down and "cut a biscuit".
⇒ Carefully turn the gauge right side up trying not to let any snow spill.
⇒ Take the gauge inside and allow the snow to melt. Measure the amount of liquid to the nearest hundredth of an inch (such as 0.38").

Accuracy matters!

Mistakes happen with reporting, not with measuring.

Water Equivalent of New Snow:

Also rainfall or freezing rain

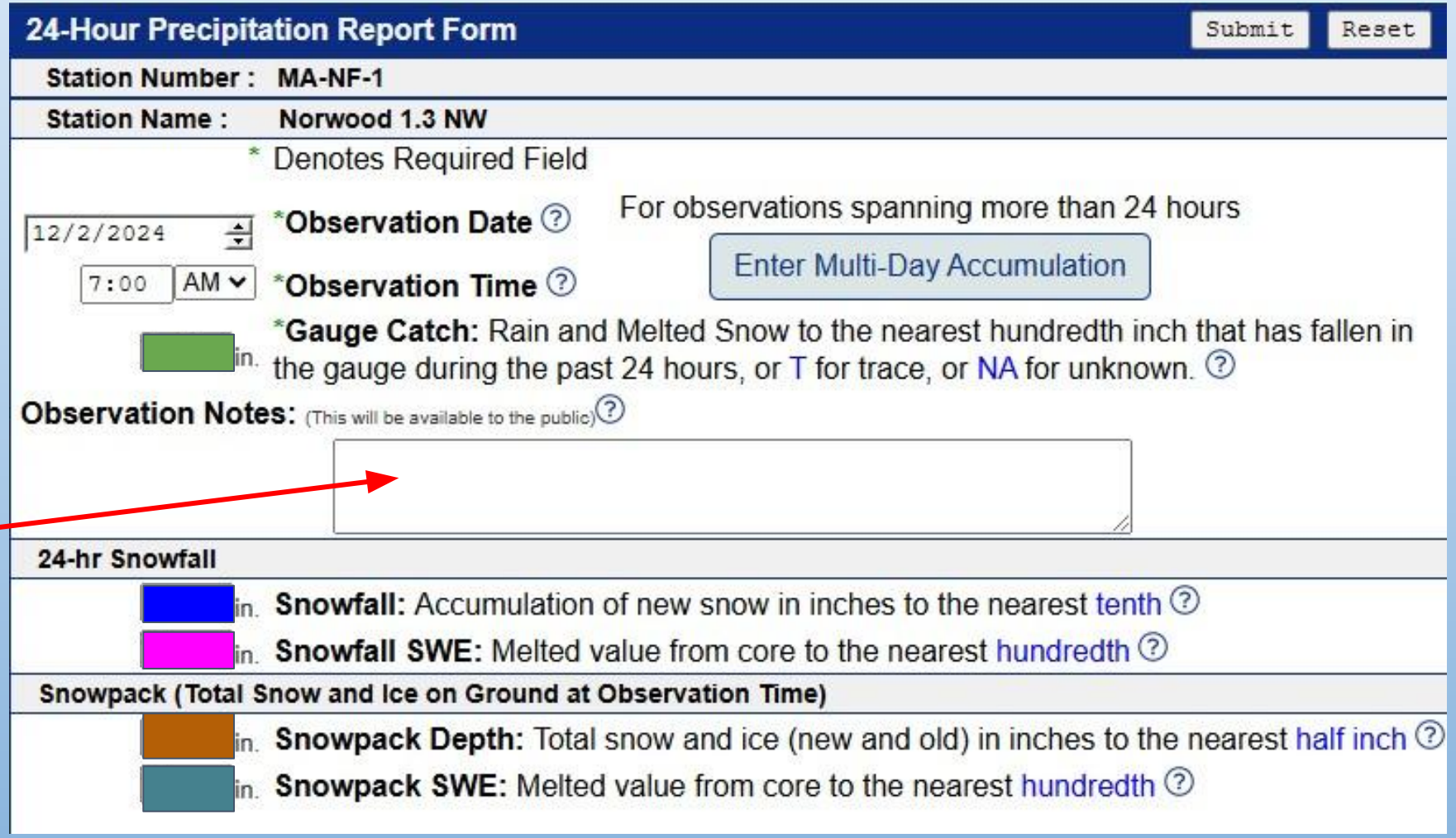
Comments help!

New Snowfall:

Melted new snowfall snow core

Total Snow and Ice on the Ground (Snow Depth)

Snow Water Equivalent of Total Snow and Ice on the Ground (Mondays):



Tips.

Safety first. None of this is worth getting hurt for.

Multiple measurements may be needed within 24 hours.

Write your measurements down. Subtract the amounts your pour in.

Avoid reporting new snow in the 1st value, and other decimal point errors. Accuracy matters.

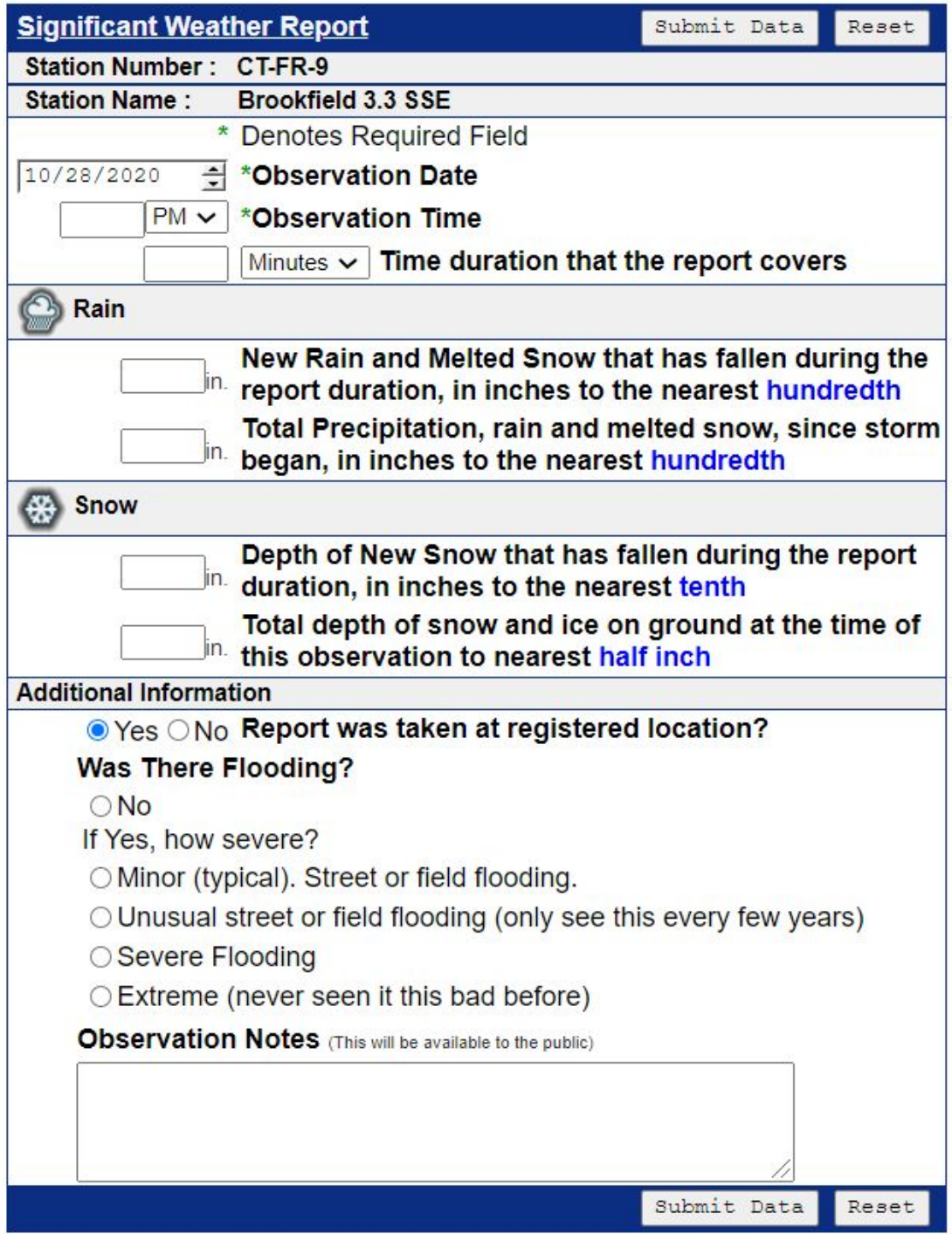
Tips.

Snow flurries: Trace for precipitation. Trace for new snow.

Snow melts as it falls: Report melted precipitation. Trace for new snow.

Have a 2nd outer cylinder? Cold-soak it! Leave it outdoors, but out of the precipitation. Snow does not stick to cold gauges.

For all of the scenarios we did not think of…. Do the best that you can.



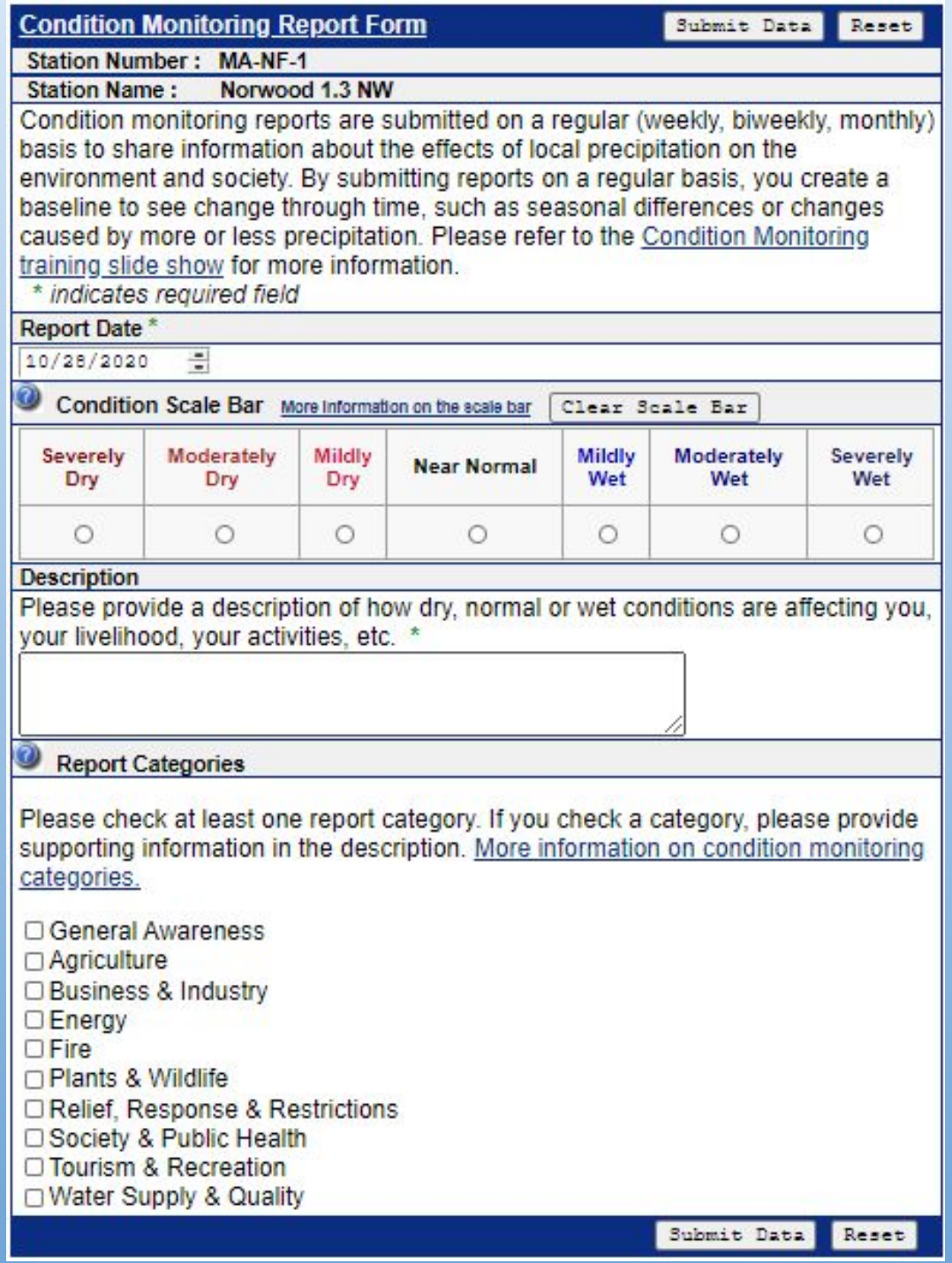
Supplemental Reports.

Significant Weather Reports. From the website.

Real time reporting that alerts a NWS Forecast Office.

Winter Criteria:

- **1”+ snowfall in one hour or less**
- **3” snowfall, then final total**
- **Change in precipitation type**
- **Anything else you feel is important**



Condition Monitoring Report Form

Submit Data Reset

Station Number : MA-NF-1

Station Name : Norwood 1.3 NW

Condition monitoring reports are submitted on a regular (weekly, biweekly, monthly) basis to share information about the effects of local precipitation on the environment and society. By submitting reports on a regular basis, you create a baseline to see change through time, such as seasonal differences or changes caused by more or less precipitation. Please refer to the Condition Monitoring training slide show for more information.

* indicates required field

Report Date *

10/28/2020

Condition Scale Bar More information on the scale bar Clear Scale Bar

Severely Dry	Moderately Dry	Mildly Dry	Near Normal	Mildly Wet	Moderately Wet	Severely Wet
○	○	○	○	○	○	○

Description

Please provide a description of how dry, normal or wet conditions are affecting you, your livelihood, your activities, etc. *

Report Categories

Please check at least one report category. If you check a category, please provide supporting information in the description. More information on condition monitoring categories.

- ☐ General Awareness
- ☐ Agriculture
- ☐ Business & Industry
- ☐ Energy
- ☐ Fire
- ☐ Plants & Wildlife
- ☐ Relief, Response & Restrictions
- ☐ Society & Public Health
- ☐ Tourism & Recreation
- ☐ Water Supply & Quality

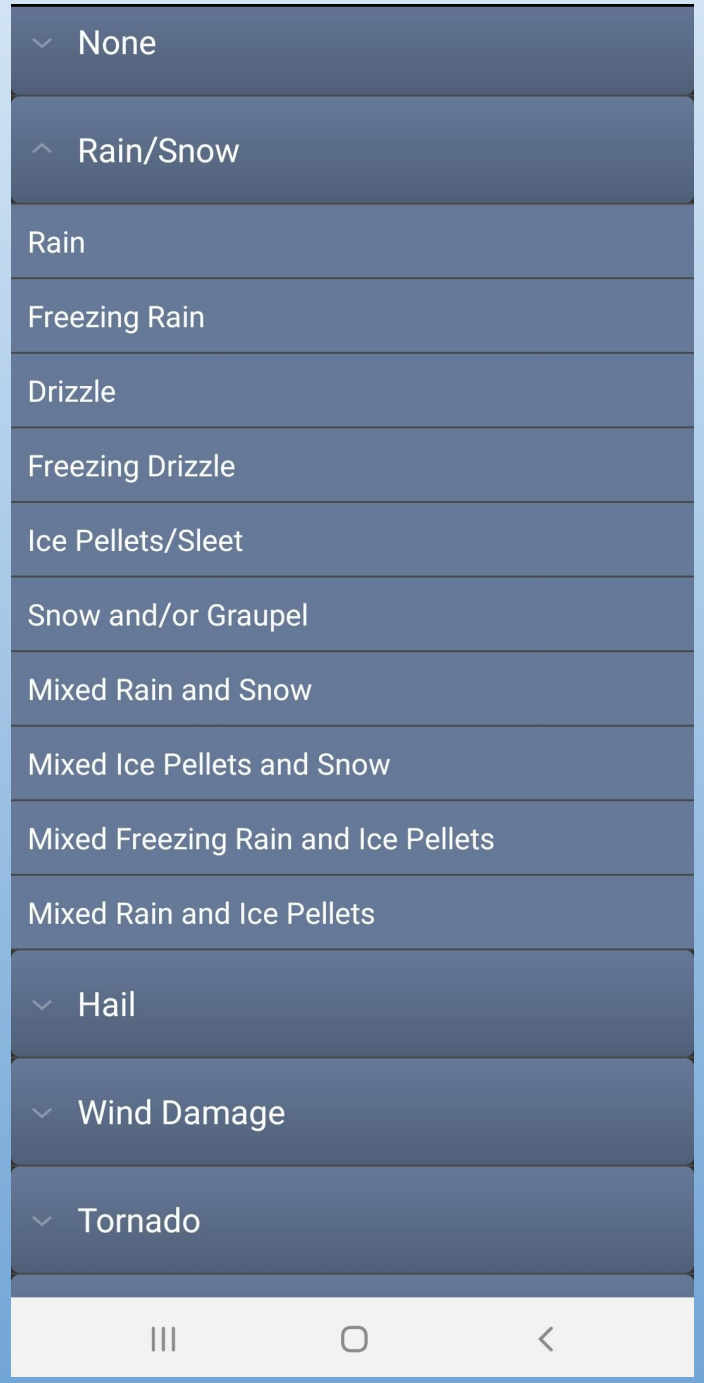
Submit Data Reset

Supplemental Reports.

Condition Monitoring Reports. From the website.

“A report a week is all we seek”

Used for real-time monitoring for drought and flooding conditions (even in winter)



mPING

Download and use the app for Apple and Android (free).

Real time reporting from a GPS–enabled mobile device.