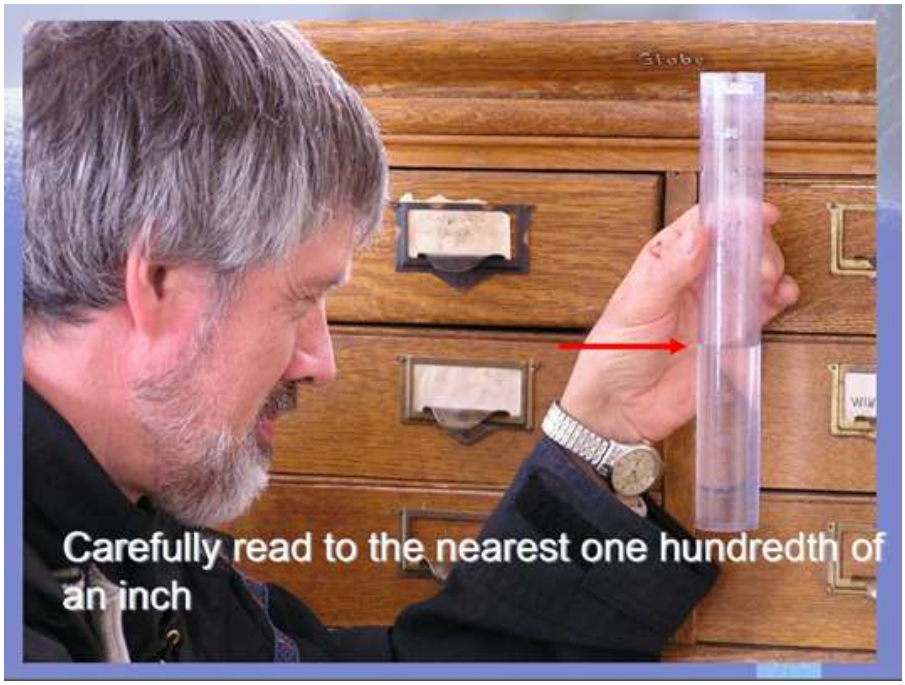
Observer Information Packet

Temperature & Precipitation

24 Hour Observation

- Your weather observation is based on a 24 hour period
- Usually from 7am this morning to 7am tomorrow morning but can be a time of your choosing
- Report rainfall, snowfall, snow depth, and the liquid water content of the snowfall

    - Rainfall
        - Read your rain gauge at nearly the same time every morning
        - Report the total amount of rainfall that occurred over the last 24 hours to the nearest hundredth (0.01) of an inch.
        - Please do not round to the nearest tenth or to whole or half inches
        - Empty your gauge and return it to its holder in preparation for the next 24 hours

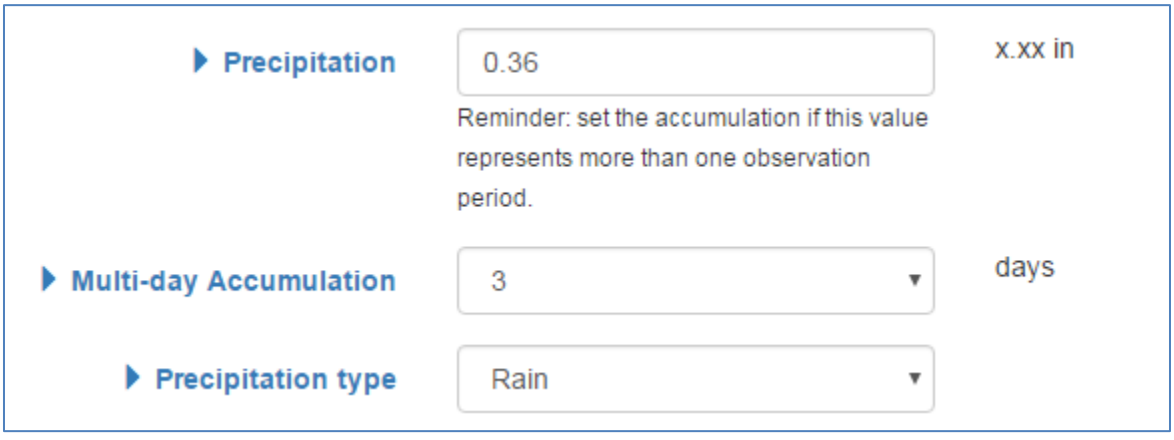


4 inch Rain Gauge

8 Inch Rain Gauge Stick

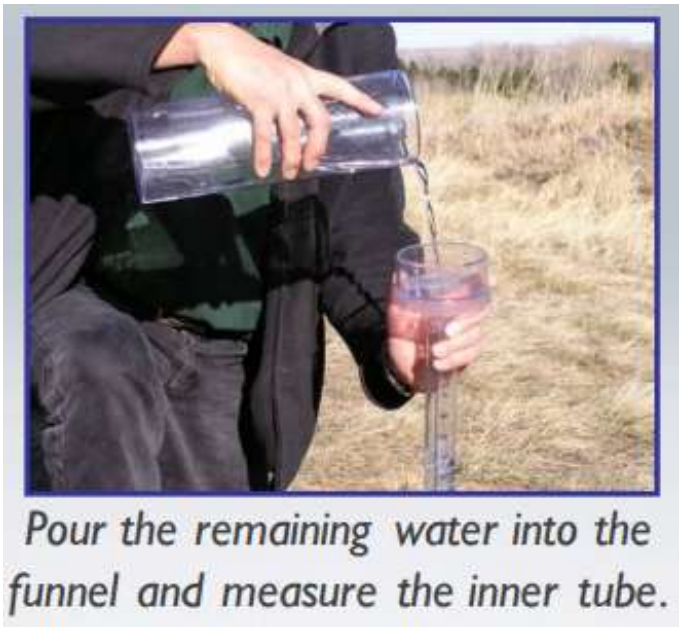
- Your most common observation will be 0.00. Please report 0.00 when no rain has occurred. It is just as important for us to know that it didn't rain in your area…especially if we forecast it nearby.

- Report T for a trace of precipitation if there are just a few drops in your gauge or the amount is well less than 0.01 and you feel you shouldn't round up to 0.01
- If you will be missing a few days of observations due to vacation, etc. you can make what is called a multi-day observation. For example, if you're gone for the weekend and return on Sunday afternoon, on Monday morning at your normal observation time report the amount in your gauge and indicate that it is a 3 day report for Saturday, Sunday and Monday



- When the amount of rainfall overflows your gauge, empty the inner tube, place the funnel on top of the inner tube and carefully pour the amount in the outer can into the inner can. Do this with either the large 8 inch can or the smaller 4 inch plastic gauge, depending on which one you have

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



Pour the remaining water into the funnel and measure the inner tube.

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

Preparing for snow and freezing precipitation

- Prior to the onset of frozen or freezing precipitation, remove the funnel and inner tube from your rain gauge and store them inside

- This will allow snow, sleet and freezing rain to collect in the outer tube
  - We melt down what has fallen in the gauge to get our liquid equivalent of the snow, sleet and/or ice and report it in the precipitation box
  - Note that if it is very windy, snow will not collect in your outer tube as in the picture above and will not be representative of the actual snowfall. In this case you will have to take a snow core or use the included chart to estimate your liquid equivalent

- Do not use your measuring stick to measure the amount of snow that has fallen in your outer gauge.

- Snowfall and Snow Depth
  - **Snowfall** is the maximum accumulation of snow that has fallen within your 24 hour period (new snow only)
  - **Snow depth** is simply the total amount of snow on the ground at your designated observation time (new and old snow combined as well as ice)
  - Find an open area away from trees and buildings to place your snow board and make sure you mark it so you can find it

  - Measure the accumulated snow on your snow board as soon as it stops snowing if possible but do not wipe it clean
  - At your normal observation time, measure the snow on the board again to see if any more snow has fallen over night

- Report the single largest measurement taken during your 24 hour period
- Wipe the snow board clean and place it on top of the old snow in preparation for your next 24 hour observation.

- In windy conditions the snow on your snowboard may not be representative of what actually fell. If this is the case make multiple measurements and average them together to get your snowfall amount
- Stay away from obvious drifts of snow or any locations that may be impacted by a heat source that may have caused melting
- You may use picnic tables, patio decks or other wood structures if you believe they have not been impacted by nearby structures which could have blocked snowfall
- Do not take your measurement on dark pavement or concrete structures unless you have no alternative because of conditions
- Measure to the nearest tenth of an inch (0.1) for **snowfall**
- Do not add multiple snowfall amounts to get one large snowfall amount

- Only report the largest amount of snow that has accumulated during your 24 hour period
- Round to the nearest whole inch for **snow depth**

Example = total 24 hour snowfall is 2.4 inches with a 7am snow depth of 1 inch

- Mixed precipitation (rain, sleet, snow)
  - Sleet IS reported as snowfall
  - Report "T" for snowfall if sleet fell but did not accumulate
  - Report sleet amount to the nearest 0.1 if it did accumulate
  - Melt what collected in your outer gauge and pour amount back into inner tube to get your precipitation amount
- Freezing rain should NOT be reported as snowfall
  - Remove funnel and inner tube prior to event
  - Melt what is frozen in your outer gauge

- Carefully pour that amount into your inner tube
- Report this amount as precipitation

- Snowfall Water Equivalent
  - This is the liquid equivalent found in the snowfall and reported as precipitation
  - Once your snowfall amount is determined take a “core sample” from an area with that amount or use the included chart

Capturing the core

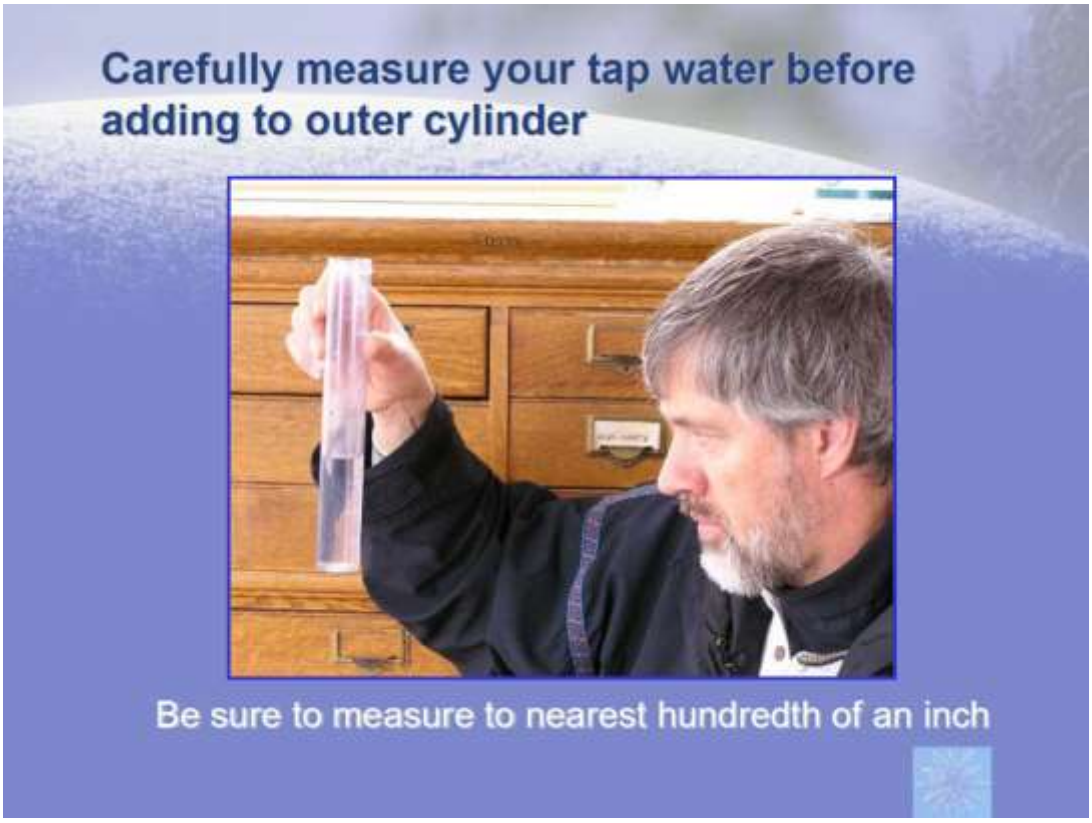
Slide snow-swatter (spatula works, too) under gauge

Carefully lift and get ready to flip the gauge

Bring the sample inside to melt

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

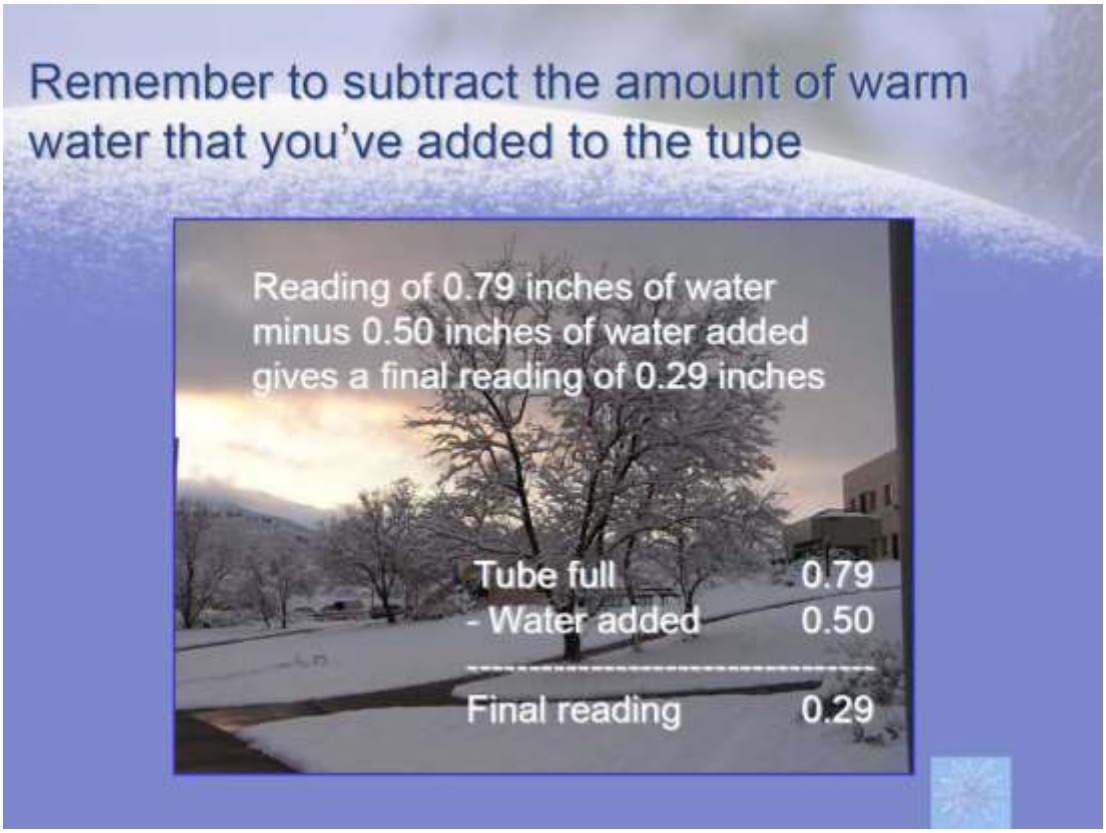
Add a known amount of hot water to your core sample

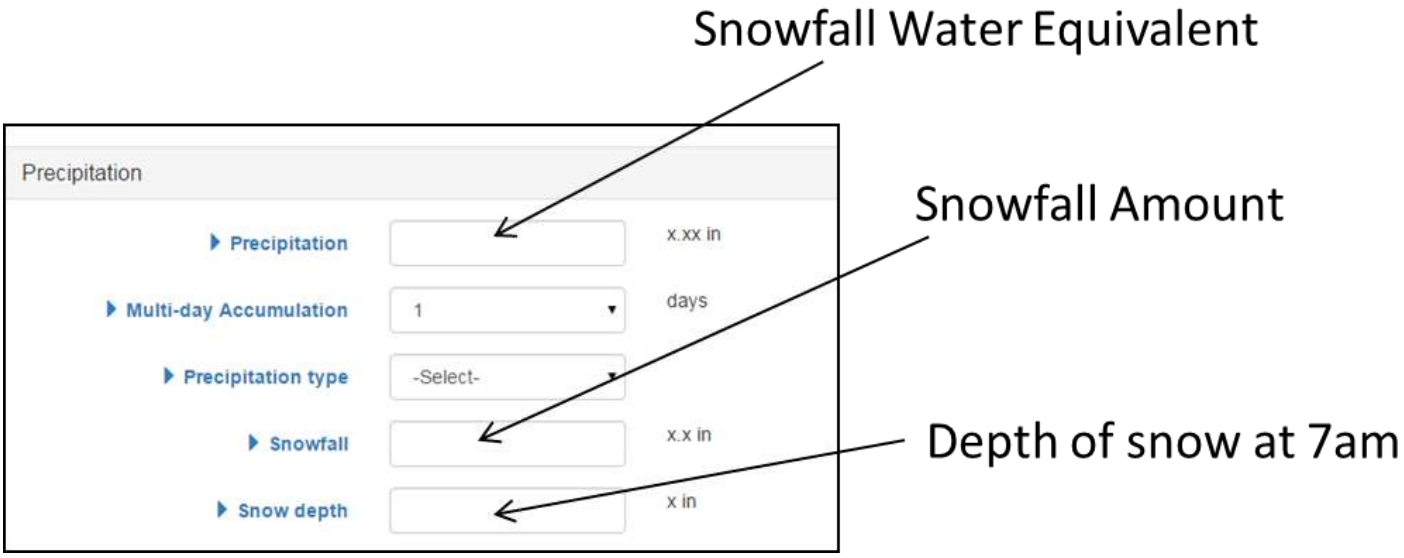


Measure the liquefied snowfall sample

Pour snow sample into smaller tube

Remember "Every drop counts!"


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

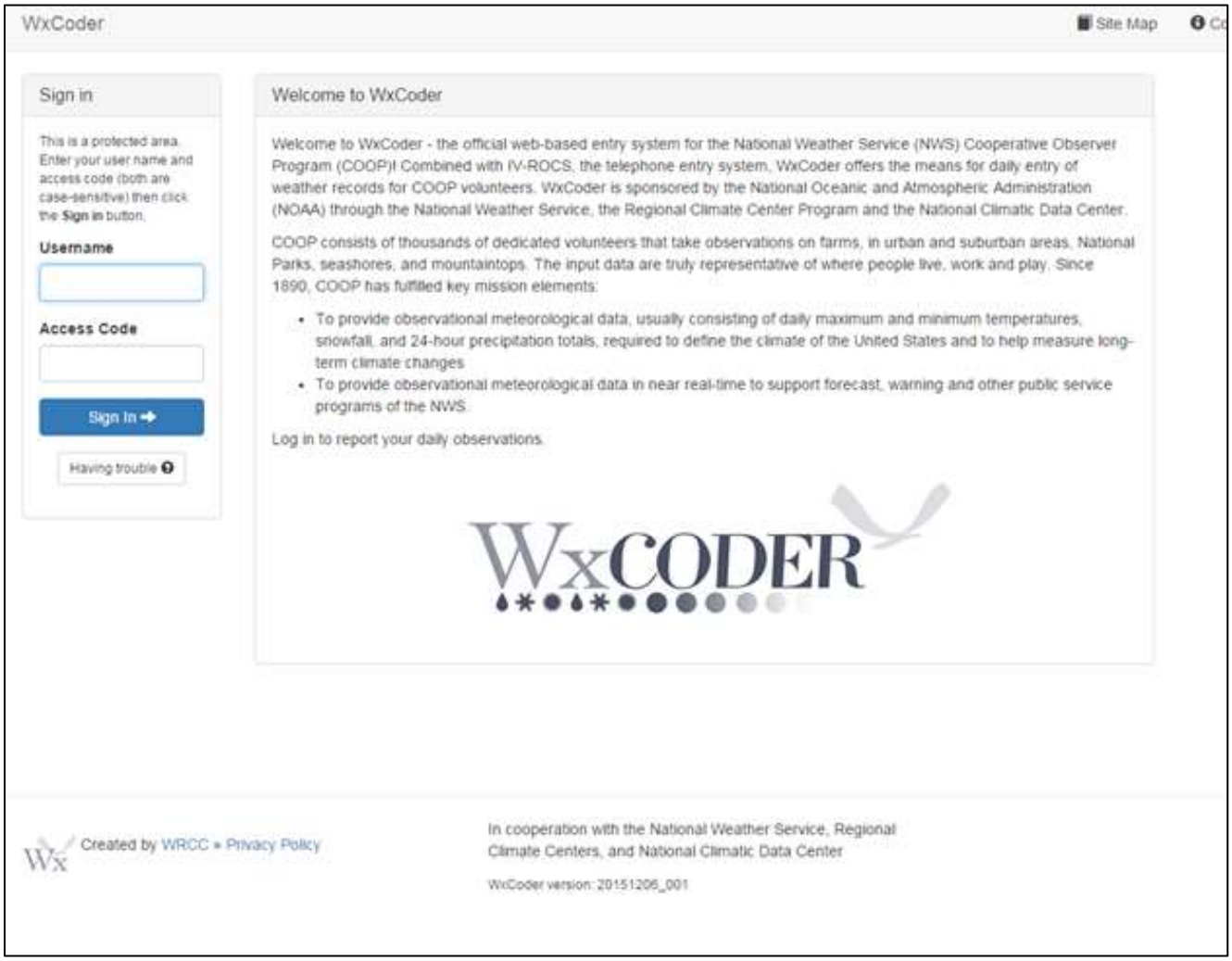

Snowfall Water Equivalent
Snowfall Amount
Depth of snow at 7am
Precipitation
Precipitation
x.xx in
Multi-day Accumulation
1
days
Precipitation type
-Select-
Snowfall
x.x in
Snow depth
x in

MELT WATER EQUIVALENT (INCHES)	NEW SNOWFALL (INCHES)						
	Temperature (°F)						
	34 to 28	27 to 20	19 to 15	14 to 10	9 to 0	-1 to -20	-21 to -40
trace	trace	0.1	0.2	0.3	0.4	0.5	1.0
.01	0.1	0.2	0.2	0.3	0.4	0.5	1.0
.02	0.2	0.3	0.4	0.6	0.8	1.0	2.0
.03	0.3	0.5	0.6	0.9	1.2	1.5	3.0
.04	0.4	0.6	0.8	1.2	1.6	2.0	4.0
.05	0.5	0.8	1.0	1.5	2.0	2.5	5.0
.06	0.6	0.9	1.2	1.8	2.4	3.0	6.0
.07	0.7	1.1	1.4	2.1	2.8	3.5	7.0
.08	0.8	1.2	1.6	2.4	3.2	4.0	8.0
.09	0.9	1.4	1.8	2.7	3.6	4.5	9.0
.10	1.0	1.5	2.0	3.0	4.0	5.0	10.0
.11	1.1	1.7	2.2	3.3	4.4	5.5	11.0
.12	1.2	1.8	2.4	3.6	4.8	6.0	12.0
.13	1.3	2.0	2.6	3.9	5.2	6.5	13.0
.14	1.4	2.1	2.8	4.2	5.6	7.0	14.0
.15	1.5	2.3	3.0	4.5	6.0	7.5	15.0
.16	1.6	2.4	3.2	4.8	6.4	8.0	16.0
.17	1.7	2.6	3.4	5.1	6.8	8.5	17.0
.18	1.8	2.7	3.6	5.4	7.2	9.0	18.0
.19	1.9	2.9	3.8	5.7	7.6	9.5	19.0
.20	2.0	3.0	4.0	6.0	8.0	10.0	20.0
.21	2.1	3.1	4.2	6.3	8.4	10.5	21.0
.22	2.2	3.3	4.4	6.6	8.8	11.0	22.0
.23	2.3	3.4	4.6	6.9	9.2	11.5	23.0
.24	2.4	3.6	4.8	7.2	9.6	12.0	24.0
.25	2.5	3.8	5.0	7.5	10.0	12.5	25.0
.30	3.0	4.5	6.0	9.0	12.0	15.0	30.0
.35	3.5	5.3	7.0	10.5	14.0	17.5	35.0
.40	4.0	6.0	8.0	12.0	16.0	20.0	40.0
.45	4.5	6.8	9.0	13.5	18.0	22.5	45.0
.50	5.0	7.5	10.0	15.0	20.0	25.0	50.0
.60	6.0	9.0	12.0	18.0	24.0	30.0	60.0
.70	7.0	10.5	14.0	21.0	28.0	35.0	70.0
.80	8.0	12.0	16.0	24.0	32.0	40.0	80.0
.90	9.0	13.5	18.0	27.0	36.0	45.0	90.0
1.00	10.0	15.0	20.0	30.0	40.0	50.0	100.0
2.00	20.0	30.0	40.0	60.0	80.0	100.0	200.0
3.00	30.0	45.0	60.0	90.0	120.0	150.0	300.0

This table can only be used in determining amounts of newly fallen snow. It cannot be used for determining the water equivalency (933RRR) of "old" snow. Packing and melting/refreezing have substantial effects on the density of the snow pack and are not accounted for by this table.

Table 2-14. New Snowfall to Estimated Meltwater Conversion Table

Weather Coder

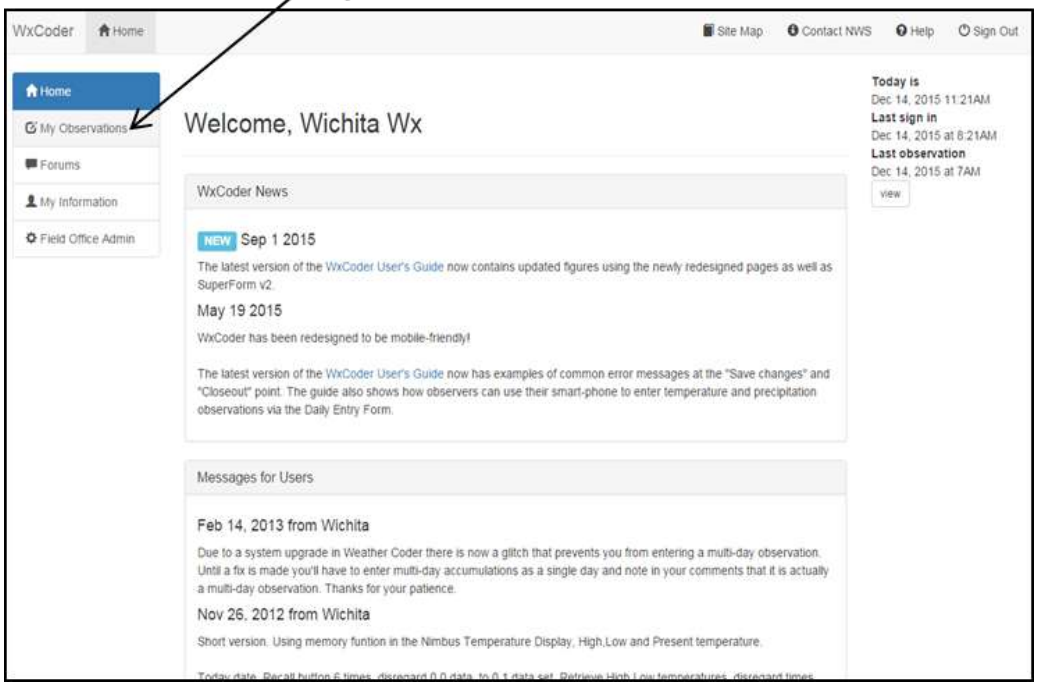


www.wxcoder.org

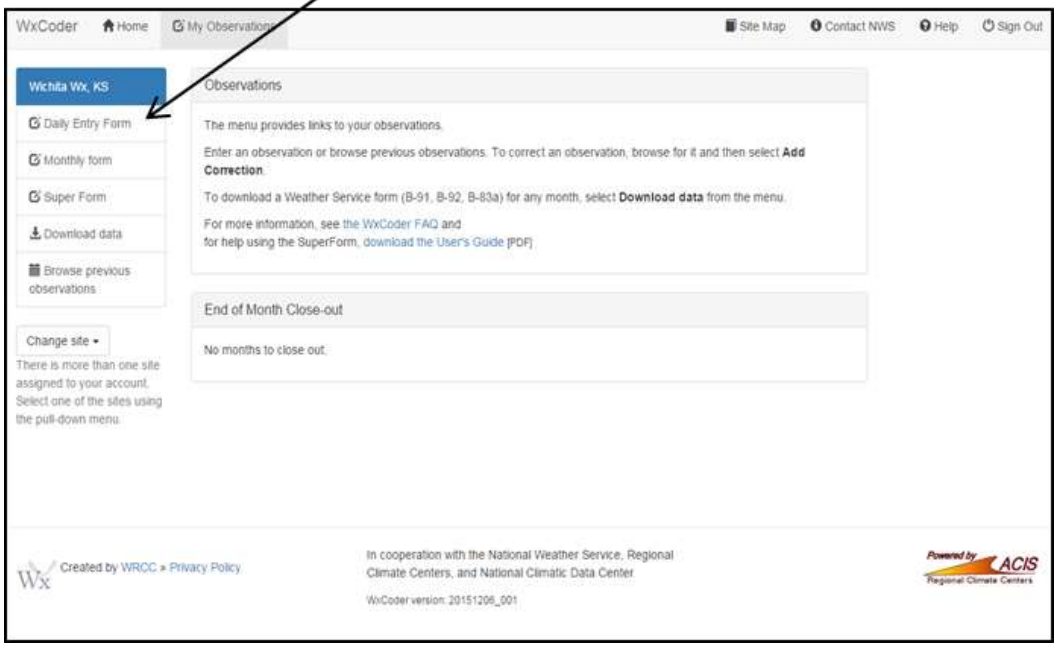
- Username:

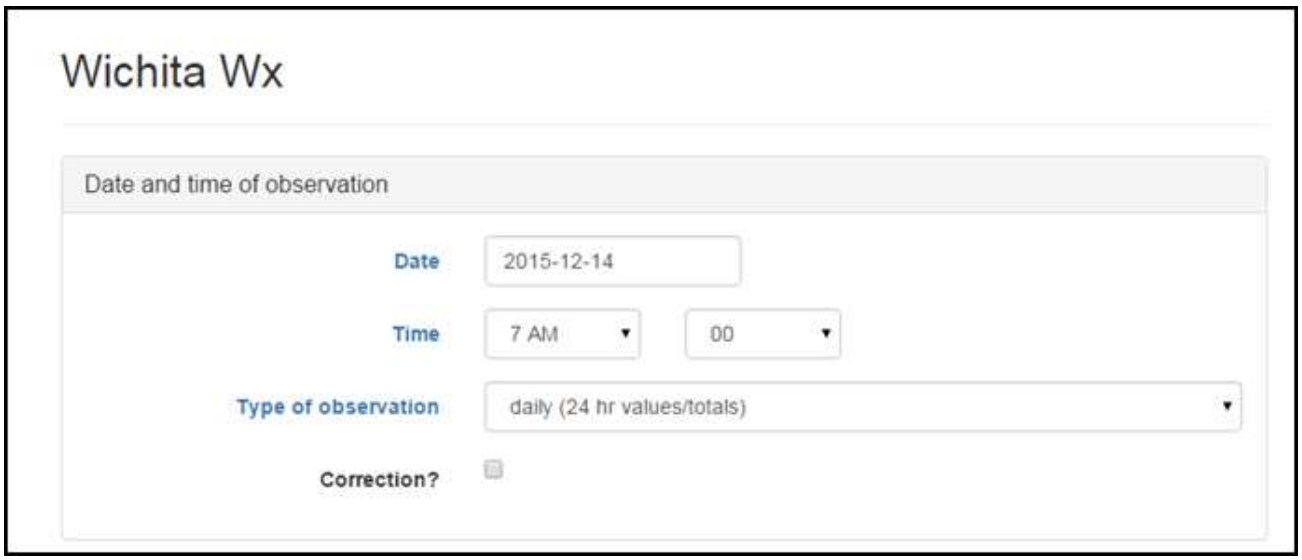
- Access Code:

Click My Observations

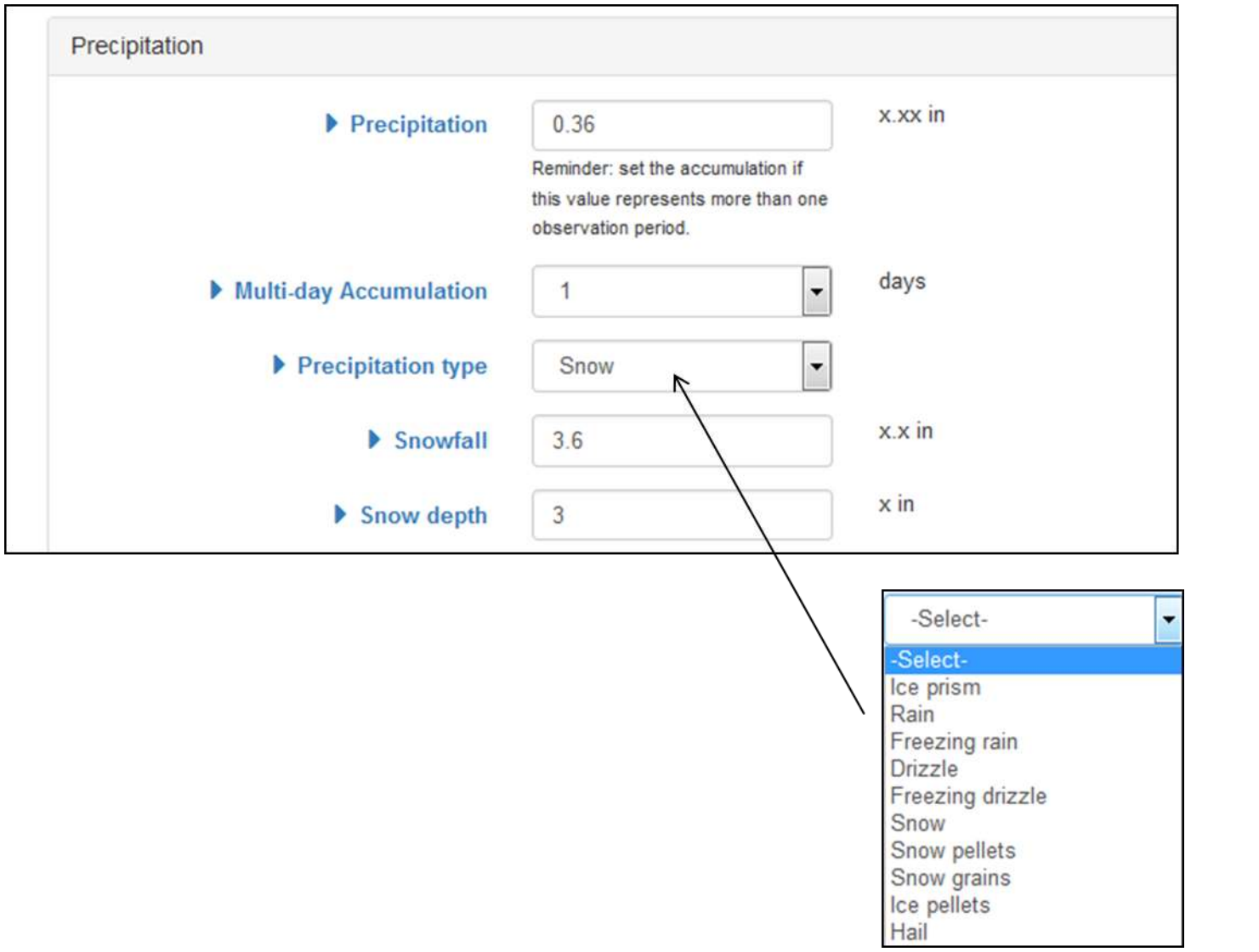


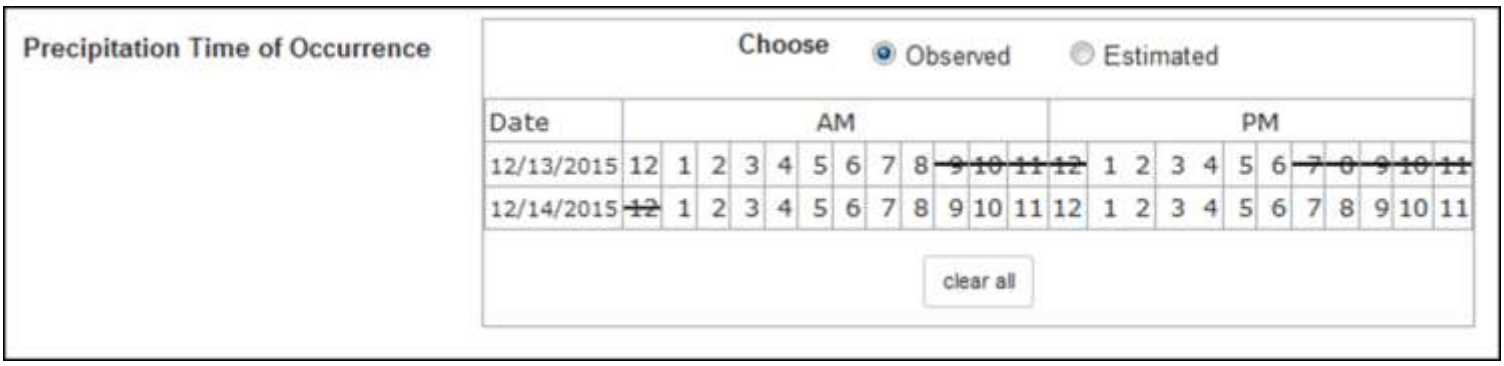
Click Daily Entry Form

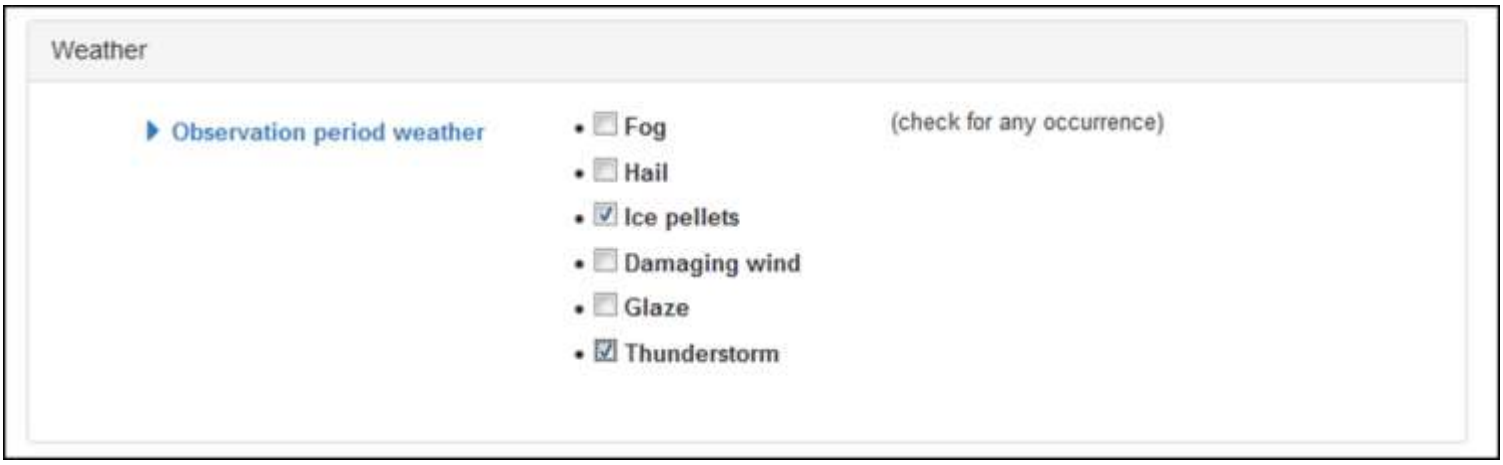


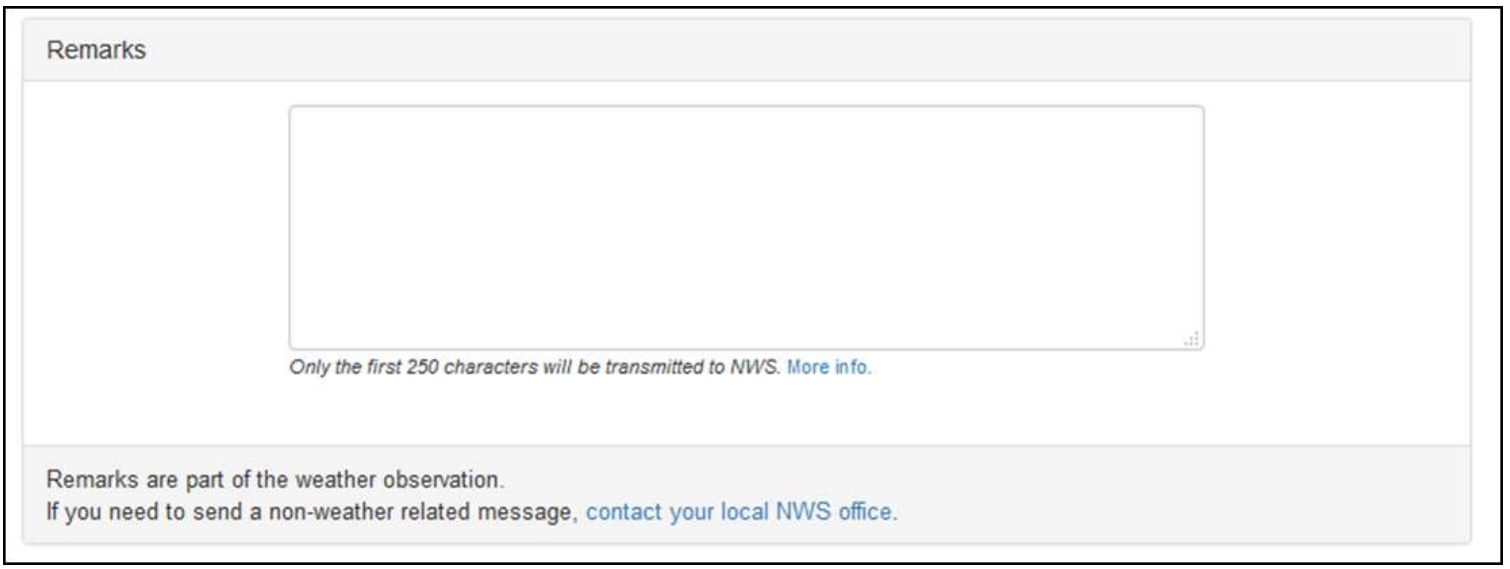

Wichita Wx
Date and time of observation
Date
2015-12-14
Time
7 AM
00
Type of observation
daily (24 hr values/totals)
Correction?


Air Temperature
Max temperature
45
x °F
Min temperature
29
x °F
At observation
30
x °F


Precipitation
Precipitation
0.36
x.xx in
Reminder: set the accumulation if this value represents more than one observation period.
Multi-day Accumulation
1
days
Precipitation type
Snow
Snowfall
3.6
x.x in
Snow depth
3
x in
-Select-
-Select-
Ice prism
Rain
Freezing rain
Drizzle
Freezing drizzle
Snow
Snow pellets
Snow grains
Ice pellets
Hail


Precipitation Time of Occurrence
Choose
Observed
Estimated
Date
AM
PM
12/13/2015 12 1 2 3 4 5 6 7 8 9 10 11 12 1 2 3 4 5 6 7 8 9 10 11
12/14/2015 12 1 2 3 4 5 6 7 8 9 10 11 12 1 2 3 4 5 6 7 8 9 10 11
clear all


Weather
Observation period weather
Fog
Hail
Ice pellets
Damaging wind
Glaze
Thunderstorm
(check for any occurrence)


Remarks
Only the first 250 characters will be transmitted to NWS. More info.
Remarks are part of the weather observation.
If you need to send a non-weather related message, contact your local NWS office.


Submit
You will need to Confirm on the next page.

Confirm observation for [redacted]

Carefully review your observation. If everything looks good, click the **Confirm** button below. Otherwise, click **Make corrections** to go back and make changes. If not confirmed below, this observation will not be saved.

Observation time	December 14, 2015 at 05:00AM
Observation type	daily (24 hr values/totals)
Max temperature	45 degrees F
Min temperature	29 degrees F
At observation	30 degrees F
Precipitation	0.36 inch
Multi-day Accumulation	No
Precipitation type	Snow
Snowfall	3.6 inch
Snow depth	3 inch
Precipitation Time of Occurrence (previous day)	Observed: 9 am - 1 pm, 7 pm - midnight
Precipitation Time of Occurrence	Observed: 12 am - 1 am
Observation period weather	Ice pellets, Thunderstorm

Remark

Make corrections | Confirm

Done! Your observation for **Dec. 14, 2015** has been saved and will automatically be sent to NWS in the next 5 minutes.

View it | Enter previous day | Enter next day