CoCoRaHS Ice Accretion Update

Noah Newman

WERA 1012 Meeting
Estes Park, Colorado
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Colorado State University

CoCoRaHS Ice Accretion - History

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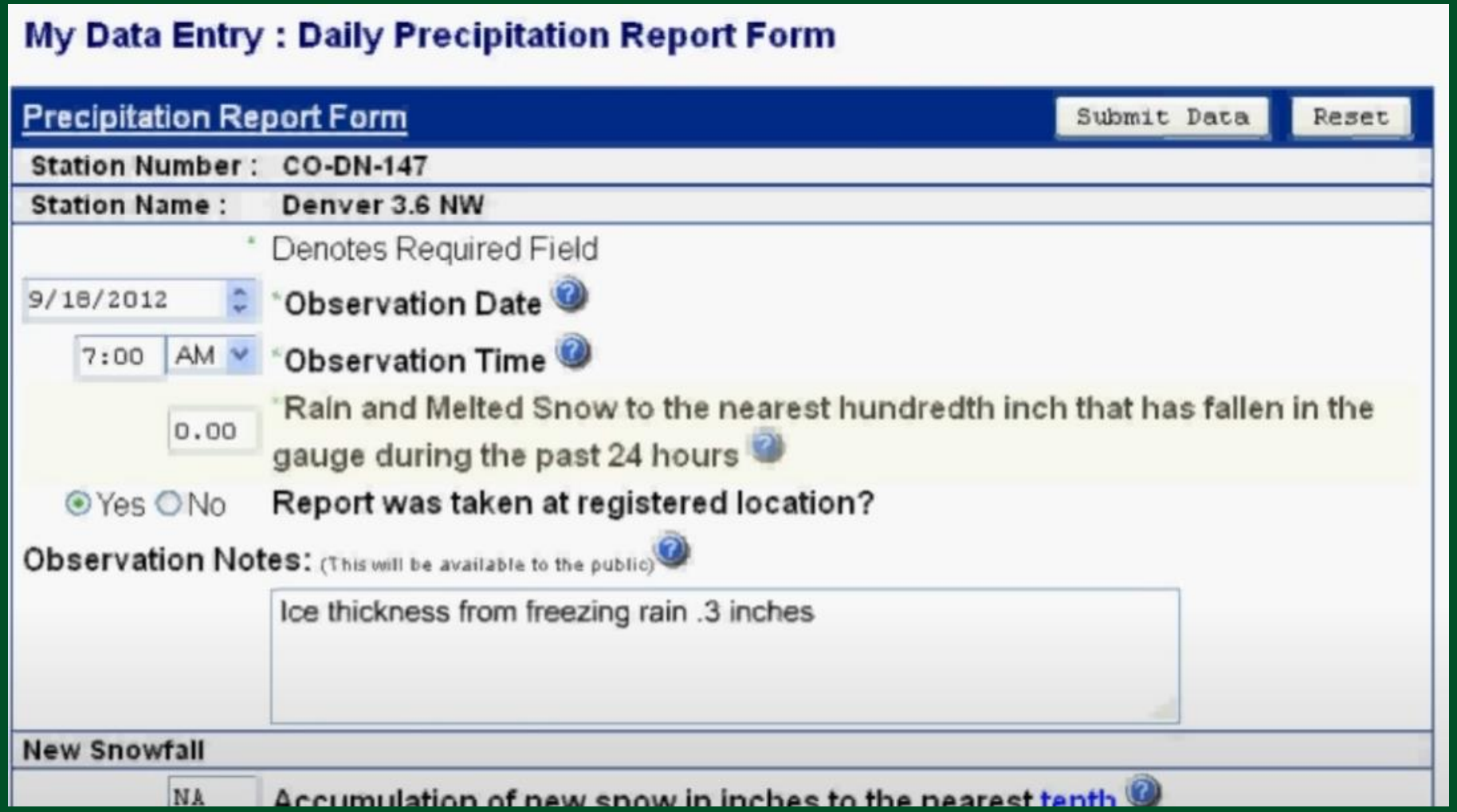
Photo: Neil Stuart NWS Albany 1/15/07

Photo: Neil Stuart NWS Albany 12/11/08

CoCoRaHS Ice Accretion - History



CoCoRaHS Ice Accretion – History

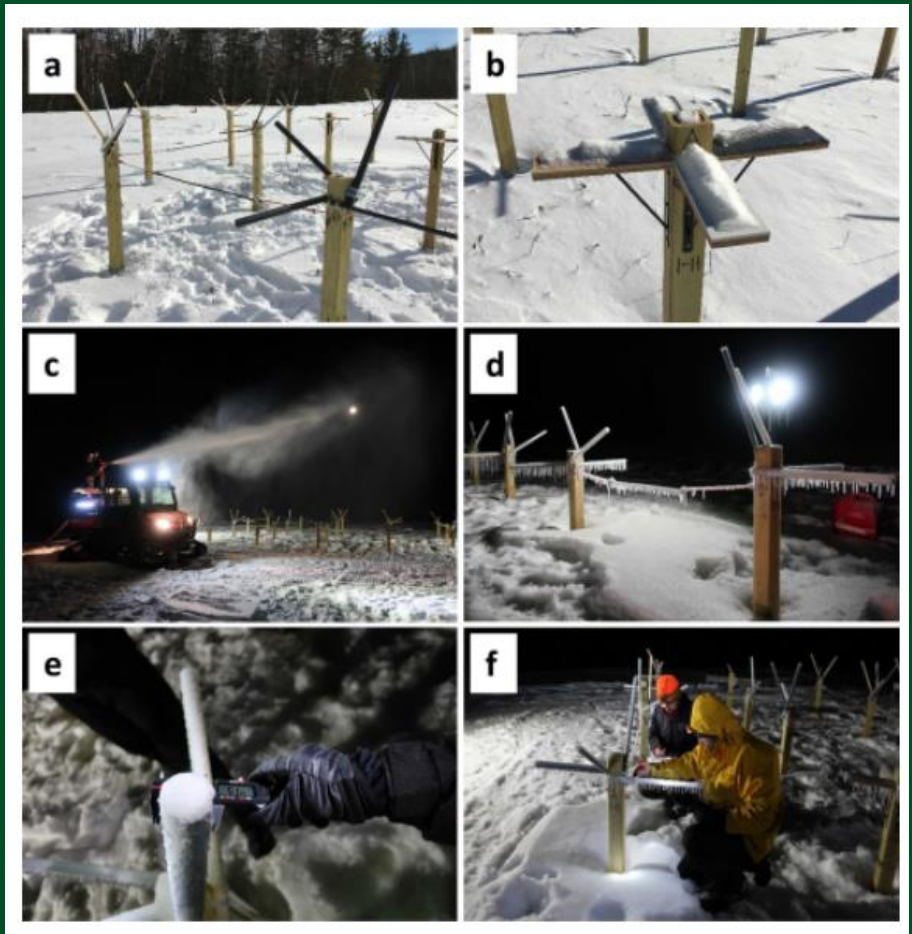
Hubbard Brook Ice Storm Experiment

NSF Funded

Watch the 3-minute video here:
https://youtu.be/GrWg9krspXQ

Hubbard Brook Ice Storm Experiment

AMS Journal of Applied Meteorology and Climatology



Journal link:
https://journals.ametsoc.org/view/journals/apme/59/9/jamcD190280.xml

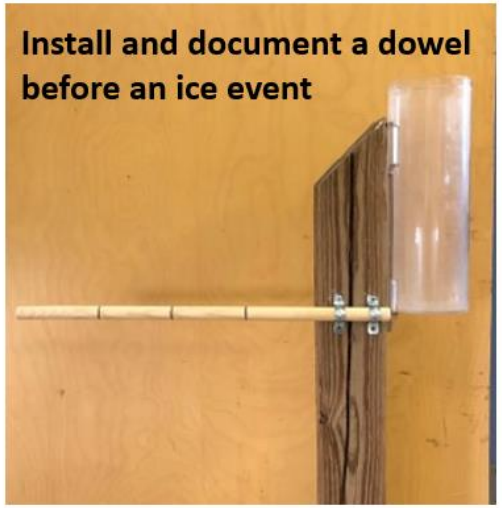
CoCoRaHS Ice Accretion Pilot

New!

Report impacts

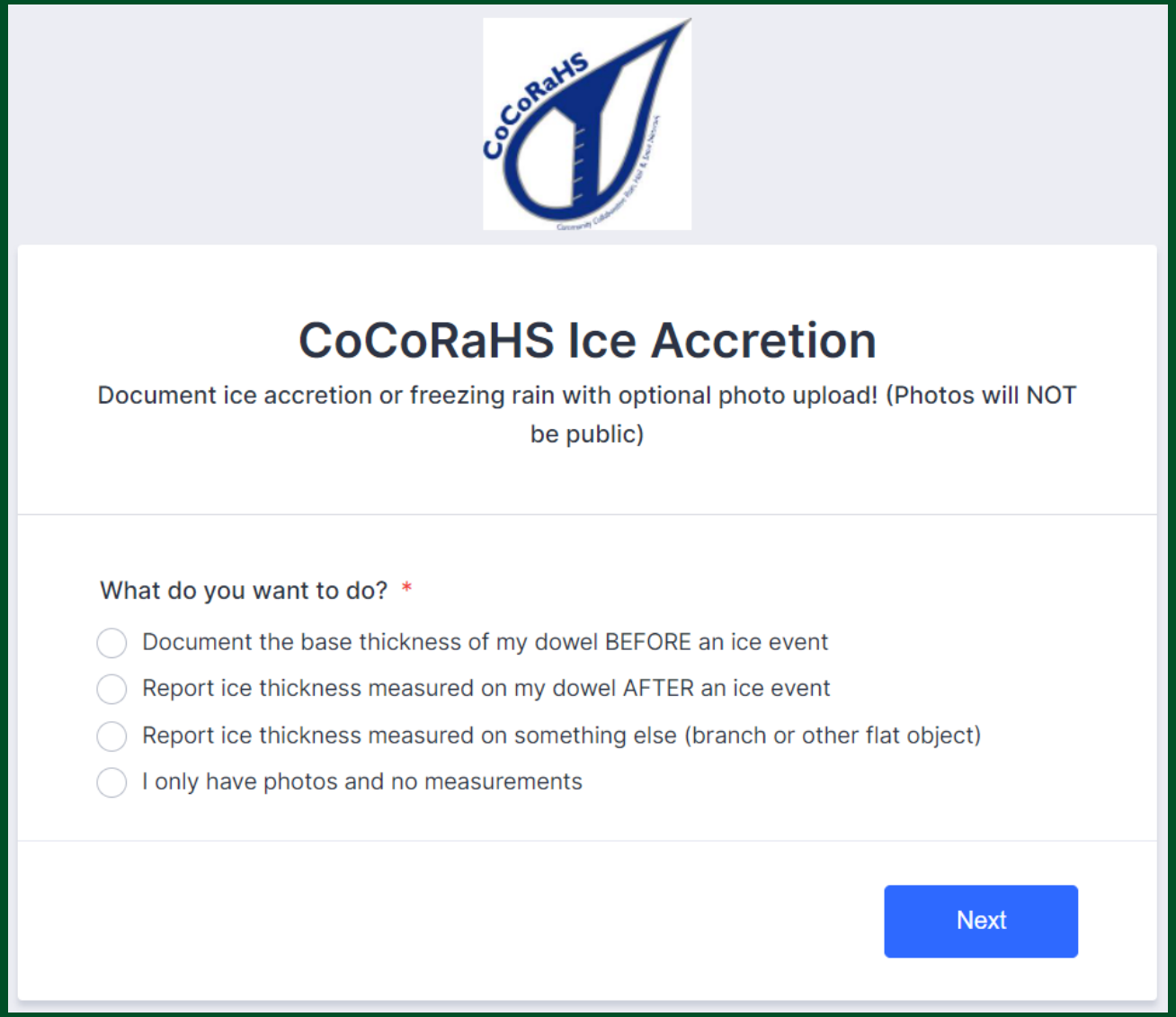
Submit photos

Category	Descriptions of Impacts
0	No ice or a trace
1	Enough to be annoying/need scraping off your car. Looks pretty on bushes, shrubs. Dangerous to walk or drive.
2	Shrubs and other non-native shrubbery weighed down, trees manage ok
3	Small tree branches start to bend
4	Small and medium branches bend, a few small branches may fail
5	Birch trees are starting to bend, minor branch damage to weak trees
6	Birch trees sag moderately, small and large limbs start to break, ~5-10% branch loss
7	Birch trees bent nearly completely, ~10-20% branch loss on small and large limbs
8	Moderate to significant tree damage, most trees have some damage
	Credit: Jason Shafer, Northern Vermont University-Lyndon

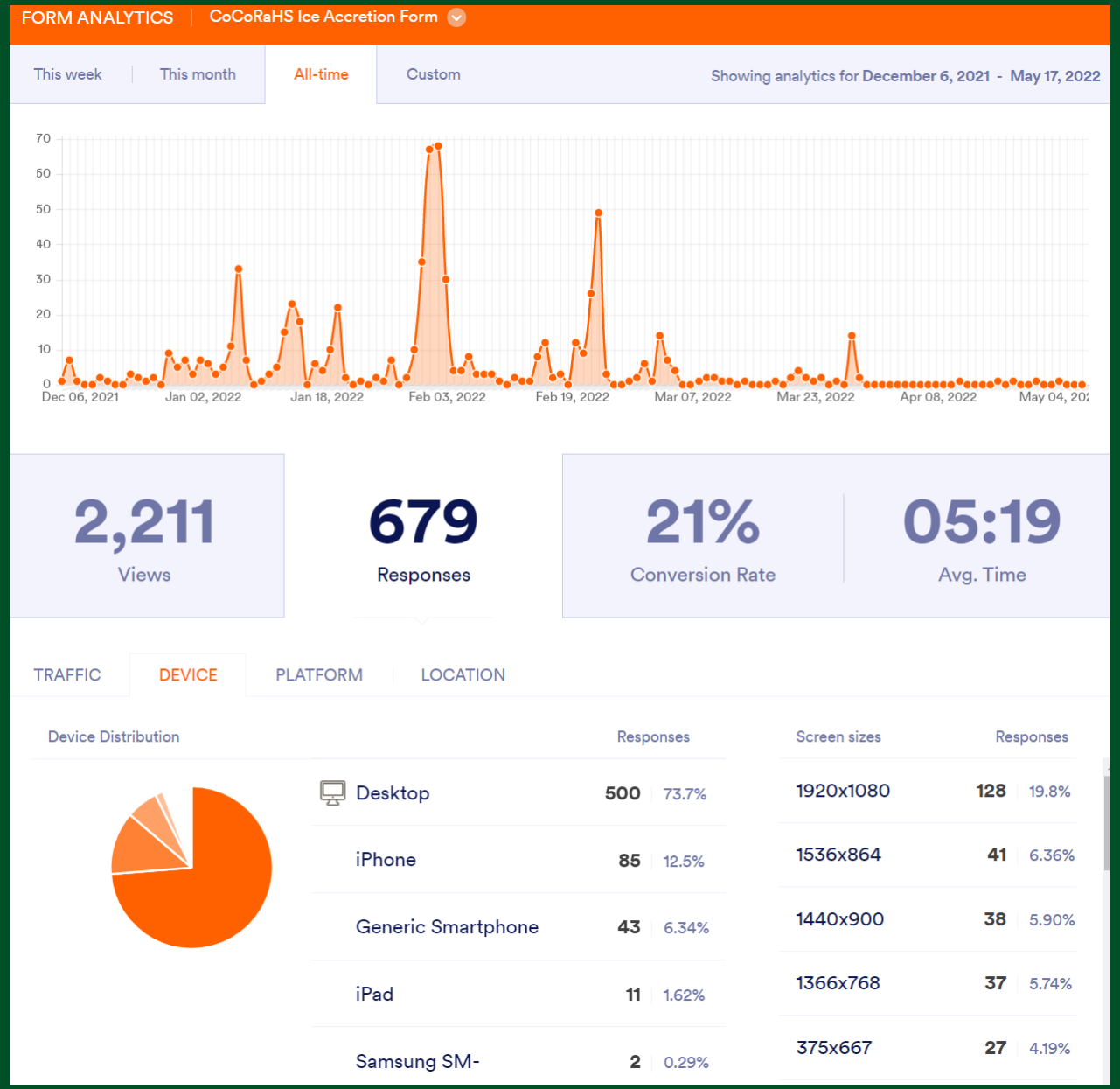


Measure and report ice accretion on branches or other flat objects

CoCoRaHS Ice Accretion Pilot

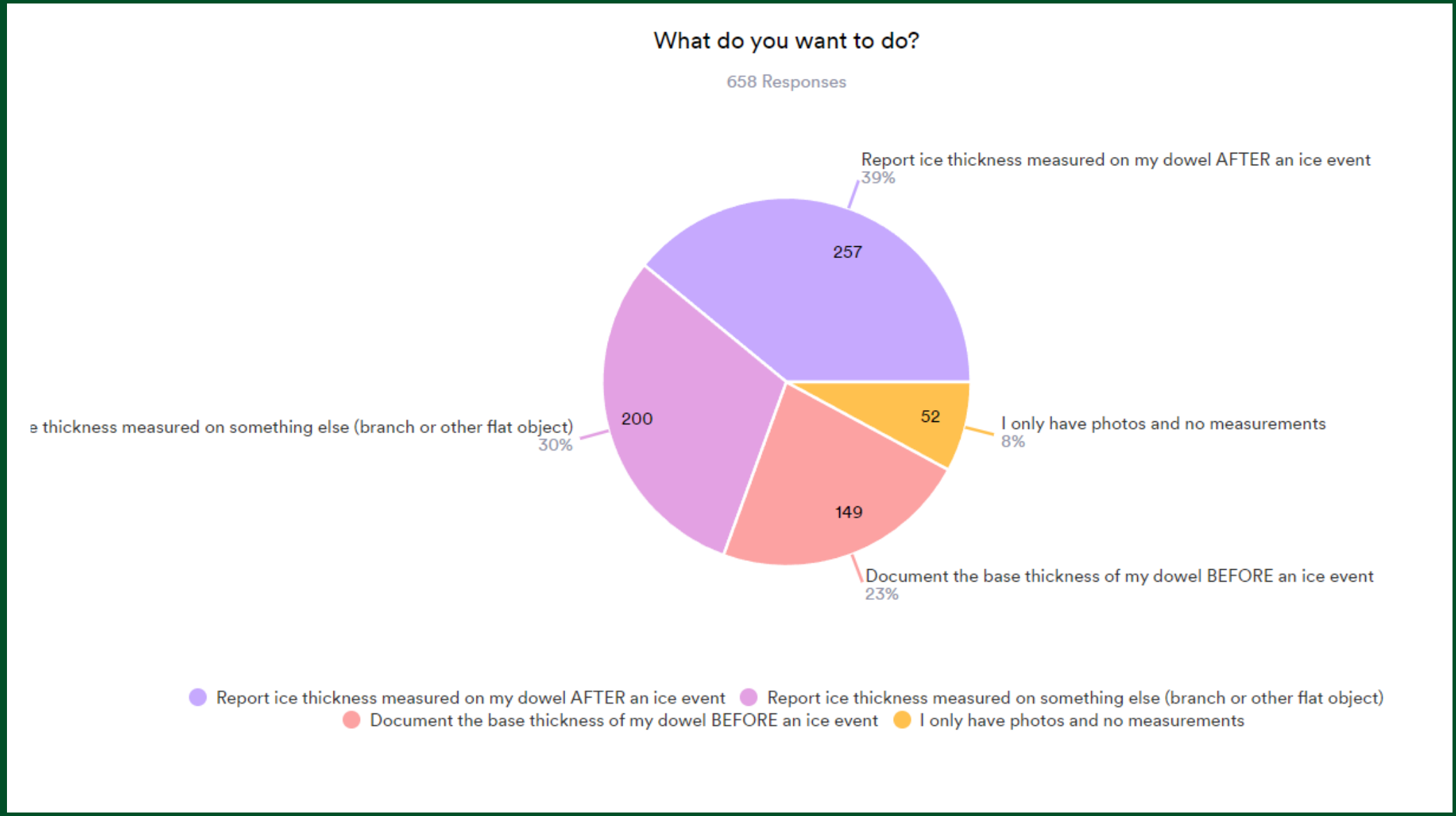


CoCoRaHS Ice Accretion Pilot



273 reports included at least one photo

CoCoRaHS Ice Accretion Pilot



CoCoRaHS Ice Accretion Pilot

Enter your CoCoRaHS Station Number

652 Responses- 6 Empty

Data	Responses
KY-FR-1	12
PA-BT-47	10
PA-HN-3	7
MO-PT-8	7
OH-FR-111	7
MA-HD-33	6
PA-CN-32	6
NC-YD-5	6
NC-CM-93	6

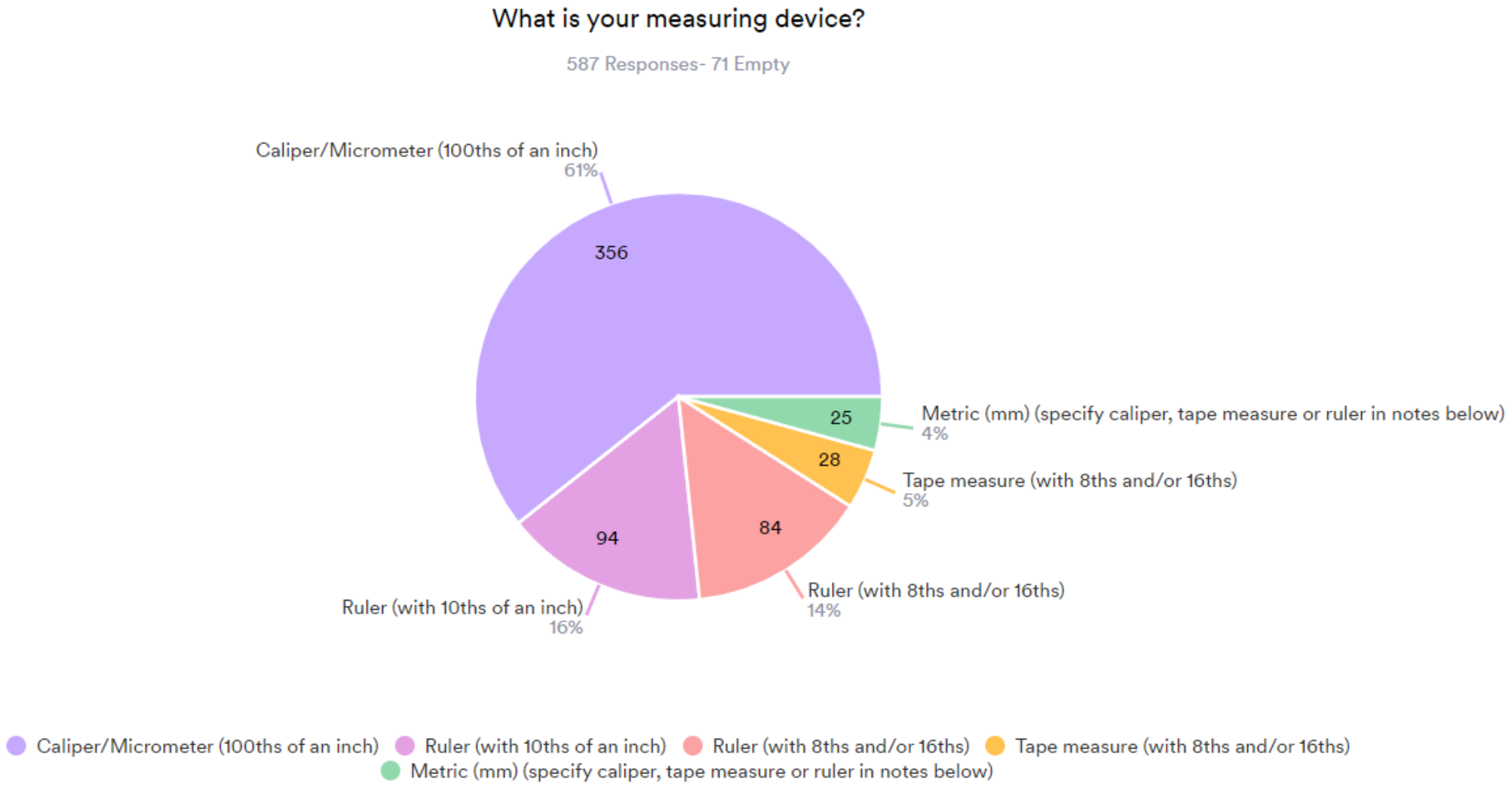
CoCoRaHS Ice Accretion Pilot

Time of Observation

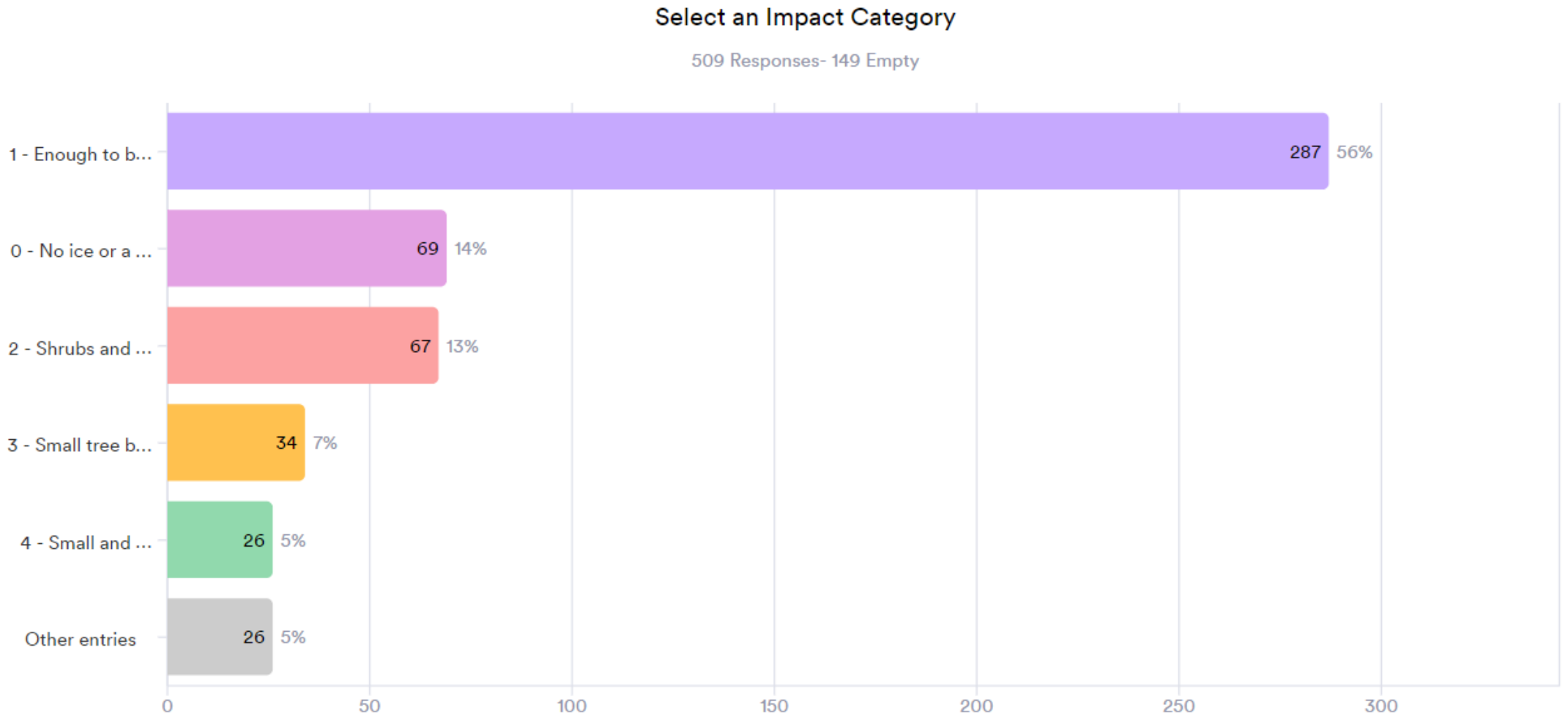
658 Responses

Data	Responses
07:00 AM	146
08:00 AM	67
07:30 AM	25
09:00 AM	22
07:15 AM	16
08:30 AM	15
11:00 AM	15
10:00 AM	11
03:00 PM	9

CoCoRaHS Ice Accretion Pilot



CoCoRaHS Ice Accretion Pilot



CoCoRaHS Ice Accretion Pilot

Plans for the future

- Convene with coauthors and review the protocol, data and feedback
- Refine the pilot protocol for next season
- Ideally, we will implement a finalized protocol into the CoCoRaHS website and database

CoCoRaHS Ice Accretion Pilot

Main Considerations

- Impact scale for more tree types
- Improvements on descriptions and instructions for radial vs. flat measurements
- Review all volunteer and coordinator feedback (https://form.jotform.com/213515317481149)

THANK YOU

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