

SURFRAD User Survey

Dear SURFRAD data user,

NOAA's surface radiation (SURFRAD) budget network has been operating continuously for 25 years and has acquired a diverse clientele. A measure of its success is the exponential growth in the number of peer-reviewed publications that result from use of SURFRAD data.

The estimated time to complete this survey is 30 minutes. Your identity will remain confidential in any analysis that emerges from this survey.

If you know of someone who has used SURFRAD data and should receive this survey, please let me know.

Thank you for your time,

John Augustine
SURFRAD Lead

Please contact john.a.augustine@noaa.gov if you have clarifying questions about this survey.

* Required

1a. How did you become aware of SURFRAD data? Select as many as apply. *

Check all that apply.

- ☐ Word of mouth
- ☐ Conference presentation
- ☐ Online search
- ☐ Publications
- ☐ Database search
- ☐ NOAA website
- ☐ Discussion with SURFRAD manager
- ☐ Baseline Surface Radiation Network (BSRN)
- ☐ Other

1b. If you answered "other" to question 1a, please add your answer here.

2a. How do you access SURFRAD data? *

Check all that apply.

- ☐ NOAA Global Monitoring Laboratory website
- ☐ National Center for Environmental Information (NCEI)
- ☐ Baseline Surface Radiation Network (BSRN)
- ☐ NASA Langley ordering tool (hourly data)
- ☐ World Radiation Data Center

Other: ☐ _____

2b. If you answered "other" to question 2a, please add your answer here.

3a. What SURFRAD products do / would you find most useful? *

Check all that apply.

- ☐ Aerosol optical depth
- ☐ Surface radiation budget components
- ☐ Monthly averages
- ☐ Ceilometer measurements (in development)
- ☐ Spectral albedo (in development)
- ☐ RadFlux calculations (e.g., clear-sky equivalent)
- ☐ Web-based data plots

Other: ☐ _____

3b. If you answered "other" to question 3a, please add your answer here.

4a. Would you recommend SURFRAD data to a colleague? *

Mark only one oval.

- ☐ Yes
- ☐ No
- ☐ Maybe

4b. Please state why you answered 'yes', 'no', or 'maybe' to answer 4. *

5. How many hours do you spend on a weekly basis to extract, process, and/or analyze SURFRAD data? *

Mark only one oval.

- ☐ < 1 hour
- ☐ 1-3 hours
- ☐ 4-6 hours
- ☐ 7-8 hours
- ☐ 9-10 hours
- ☐ 10-15 hours
- ☐ >15 hours
- ☐ Automated process so no personal time dedicated
- ☐ Other: _____

6. What is the role of the person who extracts SURFRAD data from a data archive to enable your use of the data? *

Check all that apply.

- ☐ Management
- ☐ Scientist/Engineer
- ☐ Statistician
- ☐ Analyst
- ☐ GIS expert
- ☐ Economist
- ☐ K-12 educator
- ☐ Advanced educator
- ☐ Contractor

Other: ☐ _____

7a. What are your specific uses of SURFRAD data? Check all that apply. *

Check all that apply.

- ☐ Modeling validation/comparison
- ☐ Model assimilation
- ☐ Satellite validation
- ☐ Satellite algorithm development/improvement
- ☐ Agriculture
- ☐ Renewable energy
- ☐ Education

Other: ☐ _____

7b. If you answered "other" to question 7a, please add your answer here.

8a. How has SURFRAD been used to improve your products? Check all that apply. *

Check all that apply.

- ☐ Data assimilation
- ☐ Verification
- ☐ Comparisons
- ☐ Algorithm development
- ☐ Research

Other: ☐ _____

8b. If you answered "other" to question 8a, please add your answer here.

9. Would latent and sensible heat flux measurements at SURFRAD sites be of value to your analysis? *

Mark only one oval.

- ☐ Yes
- ☐ No
- ☐ Not sure

10. For what purpose(s) would the addition of latent and sensible heat flux measurements at SURFRAD sites be of value to your analysis?. *

Check all that apply.

- ☐ Boundary layer processes
- ☐ Understanding of drought
- ☐ Completion of the surface energy budget
- ☐ Cloud formation

Other: ☐ _____

11. Do you have a plan to continue using SURFRAD for your applications and development of value-added products? *

Mark only one oval.

☐ Yes

☐ No

12. What did you use for radiation data before you were aware of SURFRAD?

13. Without SURFRAD data, what would you likely not be able to achieve?

14. Please share information about any other known users (general categories of users or points of contact) of SURFRAD data.

15. Which sectors have you addressed in papers that you've published with SURFRAD data? Check all that apply. *

Check all that apply.

- ☐ Agriculture (pest damage/herbivory; nutrient response to runoff; agricultural yield)
- ☐ Renewable energy (wind and solar forecasting; demand loads; biofuels productivity)
- ☐ Commercial building design and energy use patterns
- ☐ Outdoor materials degradation & weathering
- ☐ Toxicology (phototoxicity in marine species)
- ☐ Novel food sources (e.g., microalgae)
- ☐ Human health (e.g., melanoma)
- ☐ Weather
- ☐ Climate
- ☐ Wildfire applications
- ☐ Manufacturing industries
- ☐ Utilities
- ☐ Transportation
- ☐ Defense Industry
- ☐ Arts, entertainment, recreation, accommodation, and food services
- ☐ Educational services, health care, social assistance
- ☐ Finance, insurance, real estate, rental, and leasing
- ☐ I haven't published papers with SURFRAD data

Other: ☐ _____

16a. Select any value-added applications related to your use of SURFRAD measurements?

Check all that apply.

- ☐ Improvement of model performance or accuracy
- ☐ Improved algorithm development
- ☐ Better forecasts
- ☐ Better services for customers

Other: ☐ _____

16b. If you answered 'other' to question 16a, please add your answer here.

17. What are key outcomes / achievements from your use of SURFRAD data? Please list up to three. *

18. What additional collocated measurements or instruments would be of value at SURFRAD sites to support your further use of the SURFRAD data?

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