

APPENDIX B

COMPREHENSIVE LIST OF METADATA

List of metadata fields, recommended units for each field, data type, and recommended file type for storing metadata.

Metadata field	Recommended Units	Data Type	Recommended File Type
Network	-	Text	Word, PDF, or website
Affiliation	-	Text	Word, PDF, or website
Mission and intended data application	-	Text	Word, PDF, or website
QA/QC protocols	-	Text	Word, PDF, or website
Thresholds	Units associated with each measurement type	Text	Word, PDF, or website
Removal of erroneous data	-	Text	Word, PDF, or website
Explanation of QC flags	-	Text	Word, PDF, or website
Installation protocol	-	Text, Photos	Word, PDF, or website
Operations and maintenance information	-	Text	Word, PDF, or website
Maintenance frequency	months	Numerical	Word, PDF, or website
Types of checks done during visits	-	Text	Word, PDF, or website
Metadata update schedule	months	Numerical	Word, PDF, or website
Contact information	-	Text, Numerical	Word, PDF, or website

Metadata field	Recommended Units	Data Type	Recommended File Type
Telemetry and latency	Telemetry: none, Latency: minutes	Text, Numerical	Word, PDF, or website
Frequency of all measurement types	minutes	Numerical	Word, PDF, or website
Photos	-	Image	Word, PDF, or website
Station name/ID	-	Text, Numerical	Spreadsheet
Full station name	-	Text, Numerical	Spreadsheet
Unique station ID	-	Text, Numerical	Spreadsheet
State/County	-	Text	Spreadsheet
Latitude/Longitude	Decimal degrees	Numerical	Spreadsheet
Elevation	m	Numerical	Spreadsheet
Aspect	degrees	Numerical	Spreadsheet
Gradient	Percent slope	Numerical	Spreadsheet
Shape	-	Text	Spreadsheet
Position	-	Text	Spreadsheet
Land use/land cover	-	Text	Spreadsheet
Date: Initial installation	YYYY/MM/DD	Numerical	Spreadsheet
Date: Data connectivity	YYYY/MM/DD	Numerical	Spreadsheet
Date: Data availability	YYYY/MM/DD	Numerical	Spreadsheet

Metadata field	Recommended Units	Data Type	Recommended File Type
Date: Decommission	YYYY/MM/DD	Numerical	Spreadsheet
Date: Relocation	YYYY/MM/DD	Numerical	Spreadsheet
Nearby obstructions and water features	-	Text	Spreadsheet
Type of obstruction	-	Text	Spreadsheet
Height of obstruction	m	Numerical	Spreadsheet
Obstruction distance from site	m	Numerical	Spreadsheet
Date and time of maintenance visit	YYYY/MM/DD HH:MM	Numerical	Spreadsheet or hand-written
Name of person doing maintenance	-	Text	Spreadsheet or hand-written
Type of maintenance done	-	Text	Spreadsheet or hand-written
Record of sediment deposition/erosion	mm	Numerical	Spreadsheet
Bare soil versus vegetated	-	Text	PDF or website/Spreadsheet
Soil temperature	°C	Numerical	Spreadsheet
Matric potential	kPa	Numerical	Spreadsheet
Ancillary weather measurements: list	various	Text	Word, PDF, or website
Ancillary soil measurements: list	various	Text	Word, PDF, or website
Soil moisture sensor depths	cm	Numerical	Spreadsheet

Metadata field	Recommended Units	Data Type	Recommended File Type
Sensor model, manufacturer	-	Text	Word, PDF, or website
Sensor calibration	-	Text	Word, PDF, or website
Date installed	YYYY/MM/DD	Numerical	Spreadsheet
Location relative to tower	Cardinal direction, m	Text, numerical	Word, PDF, or website
Raw soil moisture data types and associated units	various	Numerical	Word, PDF, or website
SSURGO map unit key	-	Text	Word, PDF, or website
Profile/pedon description	-	Text	Word, PDF, or website
Soil texture	Percentage by volume	Numerical	Spreadsheet
Soil bulk density	g cm^{-3} or kg m^{-3}	Numerical	Spreadsheet
Soil mineralogy	-	Text	Word, PDF, or website
Soil volumetric water content at -33 and -1500 kPa	$\text{cm}^3 \text{ cm}^{-3}$ or $\text{m}^3 \text{ m}^{-3}$	Numerical	Spreadsheet
Saturated hydraulic conductivity	cm d^{-1}	Numerical	Spreadsheet
Soil aggregate stability	-	Numerical	Spreadsheet
Organic matter layer thickness	mm	Numerical	Spreadsheet