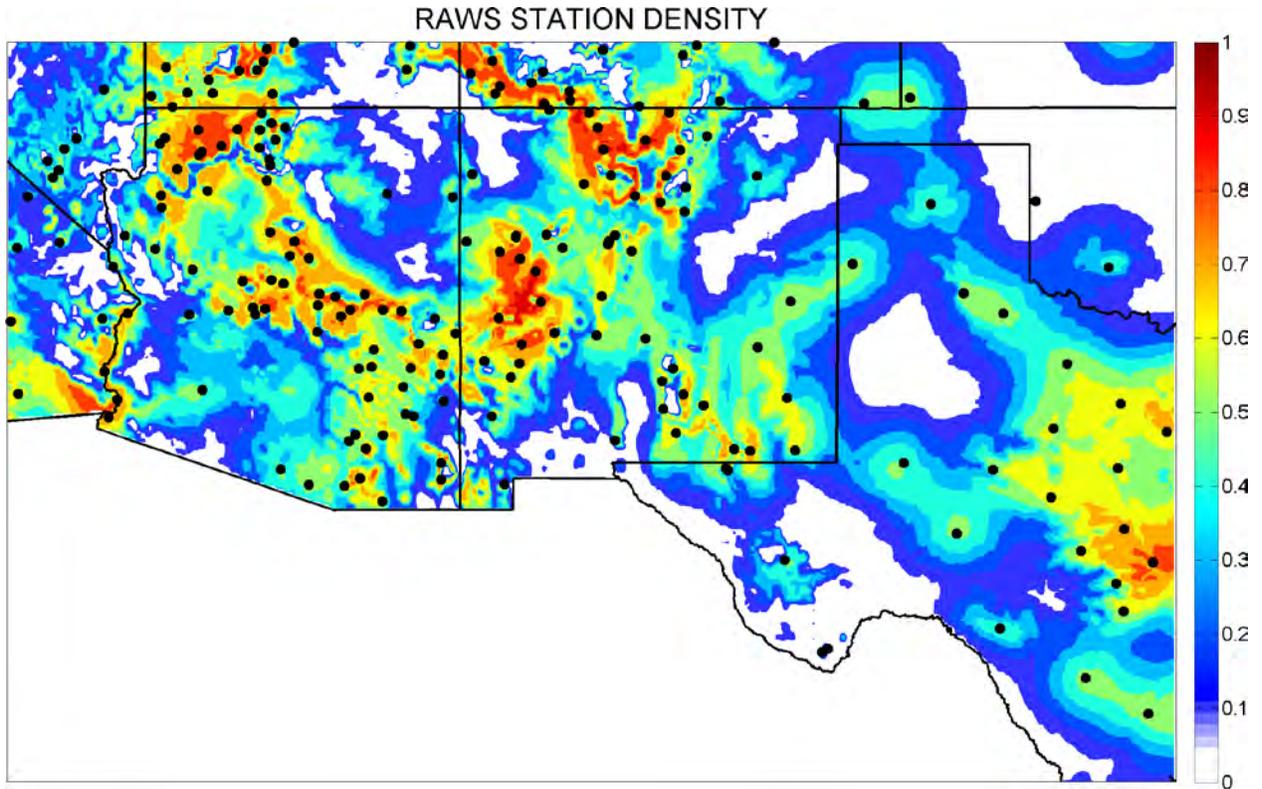
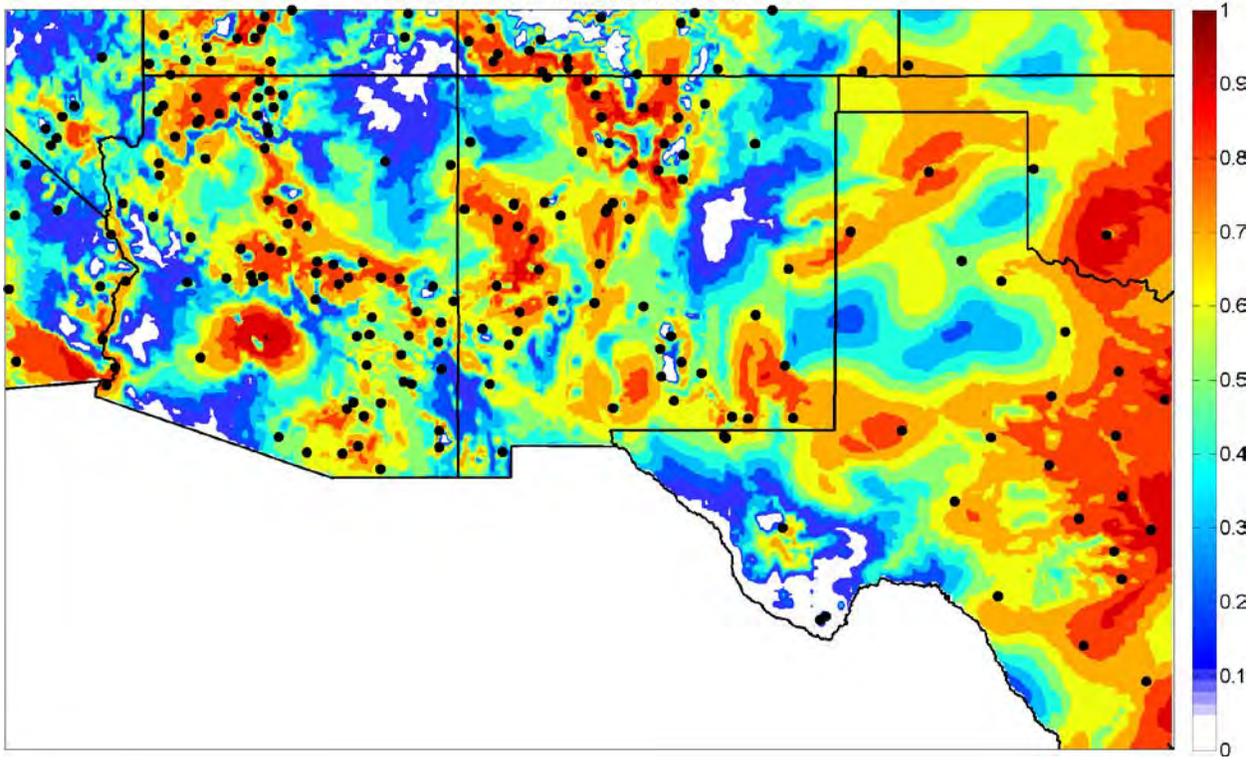


Appendix 9. Data gap maps for the Southwest Area.

The top map shows the IDI values based on RAWS, and the bottom map based on RAWS+ASOS stations. The methods and maps are described in detail in Section 3. Points on the maps are permanent RAWS locations. Stations shown in a white area indicates that they were added to the study after the original IDI analysis.

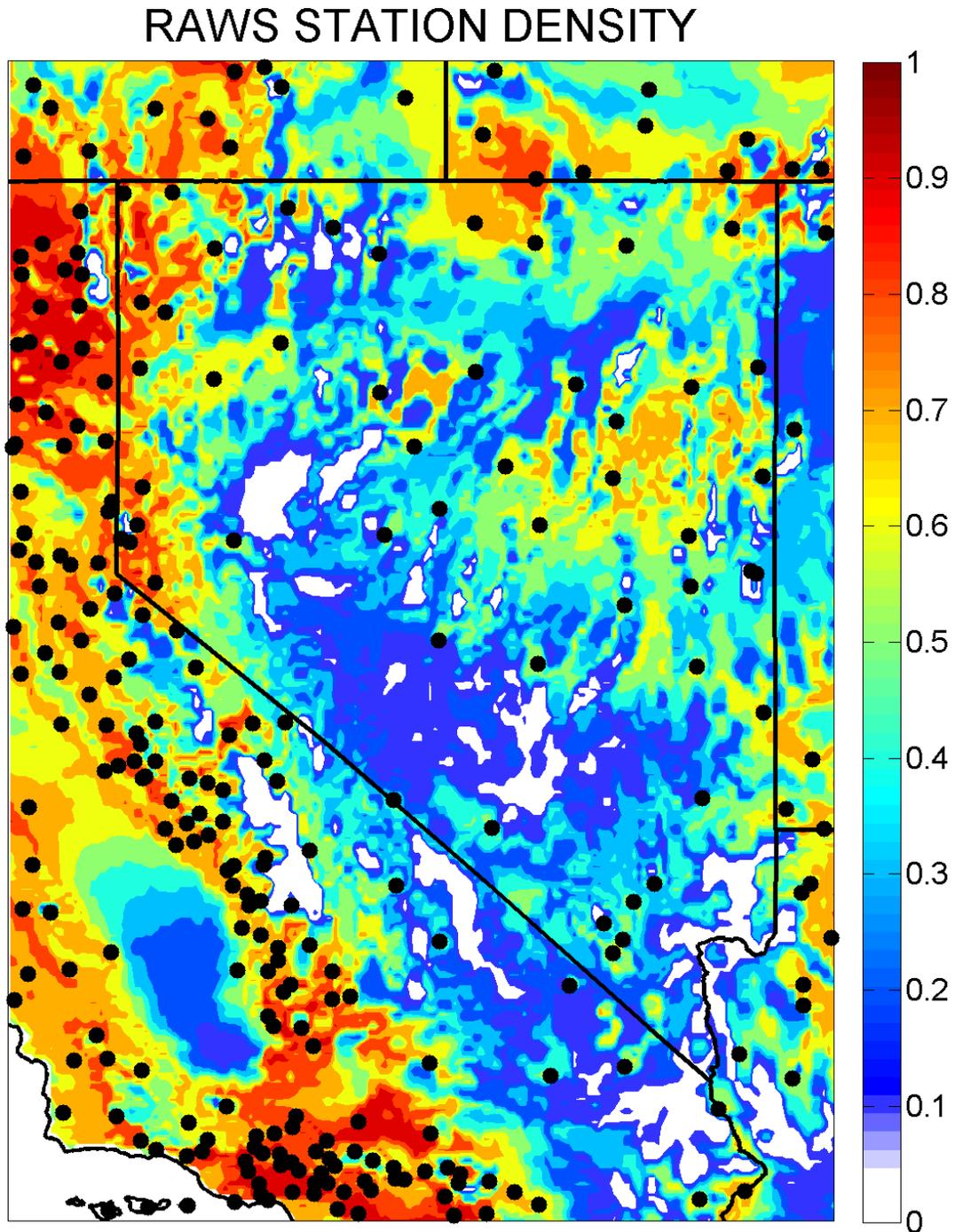


NWS+RAWS STATION DENSITY

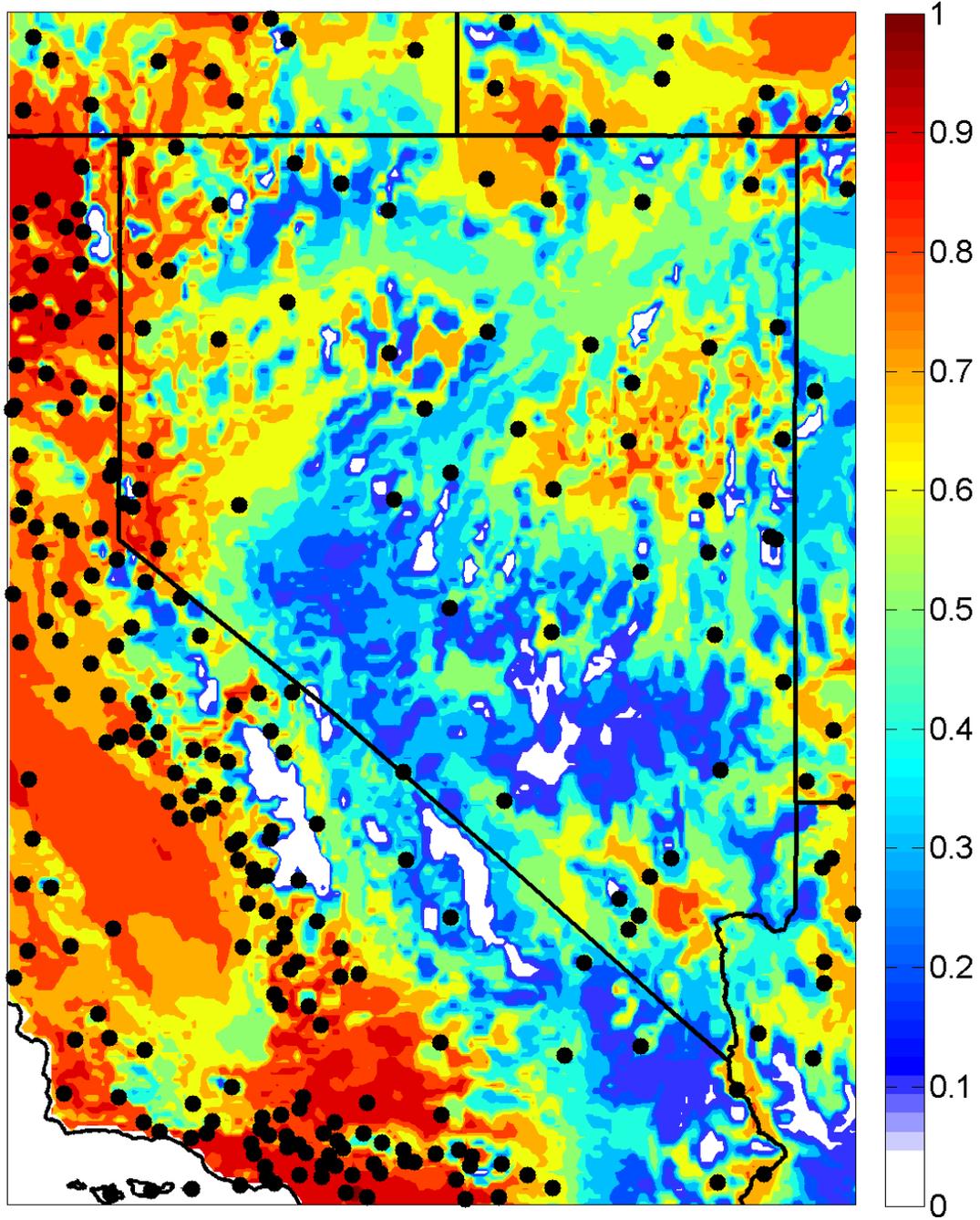


Appendix 10. Data gap maps for the Western Great Basin Area.

The top map shows the IDI values based on RAWS, and the bottom map based on RAWS+ASOS stations. The methods and maps are described in detail in Section 3. Points on the maps are permanent RAWS locations. Stations shown in a white area indicates that they were added to the study after the original IDI analysis.



NWS+RAWS STATION DENSITY



Appendix 11. Table of weather station networks in MESOWEST.

This table include the network short and full names, the number of active stations as of March 2011, the states represented, and the number stations per weather element.

MNET	Name	Active Stations	States	TEMP	RH	WIND	PRECIP
AFGWFO	Fairbanks Weather Forecast Office	12	AK	12	12	12	10
AGRIMET	U.S. Bureau of Reclamation	90	CA;ID;MT;NV; OR;WA;WY	90	90	77	76
AIRNOW	AIRNow	385	AL;AZ;CA;CT;FL; GA;HI;IA;ID;IL; IN;KS;KY;LA;MA; MD;ME;MI;MO; MS;NC;NE;NJ; NV;NY;OK;PA;RI; TX;UT;VA;VT; WA;WI;WV;WY	385	195	514	44
AKDOT	Alaska Department of Transportation	39	AK	39	39	39	24
APRSWXNET/ CWOP	Automatic Position Reporting System WX NET/Citizen Weather Observer Program	6497	ALL	6497	6465	6490	5690
AQ	Utah Department of Air Quality	19	UT	17	9	19	1
ARL FRD	NOAA Air Resources Laboratory Field Research Division	35	ID	35	35	35	31
ARL SORD	NOAA Air Resources Laboratory Special Operations and Resource Division	30	NV	30	30	30	16
AVALANCHE	Forest Service Avalanche Center	26	ID;UT	26	17	17	9
AZ ALERT	The Flood Control District of Maricopa County	35	AZ	35	35	28	34
AZDOT	Arizona Department of Transportation	17	AZ	17	17	17	

MNET	Name	Active Stations	States	TEMP	RH	WIND	PRECIP
AZMET	The Arizona Meteorological Network	23	AZ	23	23	23	23
BTAVAL	Bridger Teton National Forest Avalanche Center	16	WY	16	9	9	9
BWFO NWS	Boulder WFO National Weather Service	12	CO	12	12	12	3
CA HYDRO	CA HYDRO	77	CA;NV	77	17	14	
CAIC	Colorado Avalanche Information Center	13	CO	13	12	13	1
CALTRANS	California Department of Transportation	17	CA	17	17	17	11
CAMPBELL	Campbell Scientific	4	UT	4	4	4	3
CARB	California Air Resources Board	140	CA	128	84	140	
CBRFC	Colorado Basin River Forecast Center	5	AZ;CO	1			5
CDEC	California Department of Water Resources	5	CA	5	4	2	2
CDOT	Colorado Department of Transportation	78	CO	78	78	78	37
CDPHE	Colorado Department of Public Health and Environment	9	CO	9		9	
CEMP	Community Environmental Monitoring Program	22	CA;NV;UT	22	22	22	22
CIMIS	California Irrigation Management Information System	129	CA	129	129	129	126
CNRFC	California Nevada River Forecast Center	29	CA;NV	29	15	15	28
CPCRC	Columbia Plateau Conservation Research Center	3	OR	3	3	3	3

MNET	Name	Active Stations	States	TEMP	RH	WIND	PRECIP
CRN	Climate Reference Network	95	AL;AR;AZ;CA;CO;FL; GA;IA;ID;IL;IN;KY;LA;ME;MN;MT;NC;NE;NH;NM;NV;NY;OK;OR;PA;RI;SC;SD;TN;TX;UT;VA;WA;WI;WV;WY	95	8	76	85
DCEW	Dry Creek Experimental Watershed	3	ID	3	3	3	3
DEERVLY	Deer Valley Resort	6	UT	6	6	5	2
DEOS	Delaware Environmental Observing System	30	DE	30	30	29	29
DRI	Desert Research Institute	59	CA;CO;NV; OR	59	59	59	38
DUDFCD	Denver Urban Drainage and Flood Control District	24	CO	24	24	24	20
DUGWAY	U.S. Army Dugway Proving Grounds	27	UT	27	27	27	27
EDW	Edwards Air Force Base	14	CA	14	14	14	
FAWN	Florida Automated Weather Network	36	FL	36	36	36	5
FGNet	Utah Fruit Growers Weather Monitoring Network	15	UT	15	15	15	
FGZWFO	Flagstaff Weather Forecast Office	5	AZ	5	5	5	5
GGWWFO	Glasgow Weather Forecast Office	13	MT	13	11	13	7
GNP	Glacier National Park	1	MT	1	1	1	

MNET	Name	Active Stations	States	TEMP	RH	WIND	PRECIP
GPSMET	FSL Ground-Based GPS	88	AK;AL;AR;AZ;CA;CO;FL;GA;IA;KS;KY;LA;MA;MD;ME;MI;MN;MO;MT;MX;ND;NE;NH;NJ;NM;NV;NY;OK;OR;PA;SC;TN;TX;UT;WA;WI;WV;WY	88	88	2	11
GSE	Grand Staircase-Escalante National Monument	8	UT	8	8	8	8
HADS	Hydrometeorological Automated Data System	2433	ALL	731	86	149	2433
HILL	CH2M HILL Hill Air Force Base	1	UT	1	1	1	1
HMMN	Hanford Meteorological Monitoring Network	30	WA	30	4	30	
HNLWFO	Honolulu Weather Forecast Office	21	AS;HI	21		21	20
HNXWFO	Hanford Weather Forecast Office	11	CA	11	10	9	1
HPWREN	High Performance Wireless Research and Education Network	2	CA	2	2	2	2
IADOT	Iowa Department of Transportation	58	IA	58	58	58	28
INDOT	Indiana Department of Transportation	26	IN	26	26	26	5
ITD	Idaho Transportation Department	78	ID	78	78	78	65
KENNECOTT	Kennecott Utah Copper	7	UT	7	1	7	7
KSL	KSL	2	UT	2	2	2	2
KYDOT	Kentucky Transportation Cabinet RWIS	17	KY	17	17	17	17

MNET	Name	Active Stations	States	TEMP	RH	WIND	PRECIP
LANL	Los Alamos National Laboratory	5	NM	5	4	5	4
LAS VEGAS	Clark County Nevada Flood Control District	54	AZ;NV	46	48	50	54
LKNWFO	Elko Weather Forecast Office	2	NV	2	2	2	2
LOXWFO	Los Angeles/Oxnard Weather Forecast Office	26	CA	19	19	18	26
MAMMOTH	Mammoth Mountain Ski Area	5	CA	5	5	4	1
MARITIME	Moored Buoys and CMAN	289	AK;AL;CA;CT;FL; HI;IL;IN;LA;MA; MD;ME;MI;NC; NH; NJ;NY;OH; OR;SC;TX;VA; WA;WI	289	142	288	
MAWN	Michigan Automated Weather Network	60	MI	60	60	59	60
MCSCN	Montana Counties Soil Climate Network	20	MT	20	20	20	20
MDDOT	Maryland Department of Transportation	52	MD	52	52	52	4
ME-CAR-Meso	Caribou Weather Forecast Office	5	ME	5	5	5	5
MEDOT	Maine Department of Transportation	4	ME	4	4	4	
MFRWFO	Medford Weather Forecast Office	1	OR	1			
MISC	Miscellaneous	5	CA;UT;WA	5	5	5	3
MNDOT	Minnesota Department of Transportation	85	MN	84	85	74	85
MSI	Meteorological Solutions Inc.	2	UT	2	2	2	2
MSOWFO	Missoula Weather Forecast Office	10	ID;MT	10	3	6	8

MNET	Name	Active Stations	States	TEMP	RH	WIND	PRECIP
MT DOT	Montana Department of Transportation	61	MT	60	60	61	60
MTRWFO	Monterey Weather Forecast Office	26	CA	2			26
NCAWOS	MADIS Non-Commissioned AWOS	116	AK;AZ;CA;CO;CT;FL;HI;ID;IN;KS;MD;ME;MI;MO;MT;NC;NJ;NV;NY;OH;OK;OR;PA;SD;TX;VT;WA	116	116	116	14
NDDOT	North Dakota Department of Transportation	24	ND	24	24	24	2
NEDOR	Nebraska Department of Roads	48	NE	48	48	48	2
NEMPPA	Northeast Metro Pollution Prevention Alliance	4	CO	4	1	4	
NHDOT	New Hampshire Department of Transportation	15	NH	15	15	15	3
NJNET	New Jersey Weather and Climate Network	40	NJ	40	38	40	39
NOS-NWLON	National Ocean Service Water Level Observation Network	144	AK;AL;CA;CT;FL;GA;HI;IL;LA;MA;MD;ME;MI;MN;MS;NC;NJ;NY;OH;OR;PA;PR;SC;TX;VI;WA;WI	144	12	129	29
NOS-PORTS	National Ocean Service Physical Oceanographic Real-Time System	59	AK;AL;CA;CT;DE;FL;MA;MD;MI;NJ;NY;OR;PA;RI;TX;VA;WA	57	5	59	8
NV DOT	Nevada Department of Transportation	73	NV	73	73	73	73
NWAVAL	Northwest Avalanche Center	31	OR;WA	31	28	20	18

MNET	Name	Active Stations	States	TEMP	RH	WIND	PRECIP
NWS COOP	NWS Modernized Cooperative Observer Program - New England	51	CT;MA;ME;NH;NY;VT	51	51	15	51
NWS/FAA	National Weather Service/Federal Aviation Administration	2038	ALL	2038	2037	2037	1801
ODEQ	Oregon Department of Environmental Quality	14	OR	12	4	14	
ODOT	Oregon Department of Transportation	63	OR	62	63	63	27
OHDOT	Ohio Department of Transportation	164	OH	164	164	164	48
PCMR	Park City Mountain Resort	9	UT	9	8	7	
PDTWFO	Pendleton Weather Forecast Office	30	OR;WA	30	30	30	6
PIHWFO	Pocatello/Idaho Falls Weather Forecast Office	1	ID	1	1	1	1
PQRWFO	Portland Weather Forecast Office	13	OR;WA	2	2	5	13
RAWS	Bureau of Land Management	2073	ALL	2073	2071	2073	2068
SARC	Southern Agricultural Research Center	1	MT	1	1	1	1
SBCAPCD	Santa Barbara County Air Pollution Control District	15	CA	15	6	14	

MNET	Name	Active Stations	States	TEMP	RH	WIND	PRECIP
SCAN	Soil Climate Analysis Network	151	AK;AL;AR;AZ; CA;CO;FL;GA; HI; IA;ID;IL;KS; KY;MD;MN;MO; MS;MT;NC;ND;N E;NH;NM;NV;NY; OH;OK;OR; PA;PR;SC;SD;TN; TX;UT;VA;VT; WA;WI;WY	151	145	151	150
SCHWEITZER	Schweitzer Mountain Resort	2	ID	2		2	
SDGE	San Diego Gas and Electric	88	CA	88	88	88	
SEWWFO	Seattle Weather Forecast Office	6	WA	1	1	6	1
SFWMD	South Florida Water Management District	26	FL	26	26	26	3
SGXWFO	San Diego Weather Forecast Office	69	CA	69	68	69	69
SHASAVAL	Mt. Shasta Avalanche Center	4	CA	4	2	2	2
SNOTEL	Natural Resources Conservation Service	757	AK;AZ;CA;CO; ID;MT;NM;NV; OR;SD;UT;WA; WY	757	71	89	754
SNOWBIRD	Snowbird Ski and Summer Resort	2	UT	2		1	
SNOWNET	Snownet/Local Mesonet	31	ID;UT	30	26	31	22
TOOELE	U.S. Army Deseret Chemical Depot	26	UT	26	26	26	
UPR	Union Pacific Railroad	406	AR;AZ;CA;CO;IA; ID;IL;KS;LA;MN; MO;NE;NM;NV; OK;OR;TX;UT; WA;WI;WY	406		48	
UTAH CLIMATE CENTER	Utah Climate Center	3	UT	3	2	3	
UTAH DOT	Utah Department of Transportation	68	UT	68	68	68	6

MNET	Name	Active Stations	States	TEMP	RH	WIND	PRECIP
VADOT	Virginia Department of Transportation	44	VA	44	44	42	34
VTRANS	Vermont Agency of Transportation	14	VT	14	14	14	
WA DOT	Washington Department of Transportation	97	WA	97	90	96	
WAAQ	Washington State Department of Ecology Air Quality Network	19	WA	18	10	19	1
WIDOT	Wisconsin Department of Transportation	53	WI	53	53	53	
WSMR	U.S. Army White Sands Missile Range	22	NM	22	22	22	22
WTEXAS	West Texas Mesonet	60	NM;TX	60	60	60	5
WY DOT	Wyoming Department of Transportation	64	WY	64	64	64	12
YAKIMA	Bureau of Reclamation Yakima Project	7	WA	7		5	

Appendix 12. Summary of other weather networks.

This list is based on sites checked by WRCC in January 2011. Access refers to a qualitative statement regarding the availability of historical data directly from the provider.

ALABAMA

Alabama Mesonet

<http://wx.aamu.edu/ALMNet.php>

The Alabama A&M University operates this network of 11 combination meteorological and soil stations (8 in Alabama). The combination stations are included within the USDA/NRCS Soil Climate Analysis Network.

Total stations: 11. Hourly: Yes Height: 10 feet Access: Good

Auburn University Mesonet

<http://www.awis.com/mesonet/>

Auburn University operates this network of 19 stations at locations throughout the state of Alabama. The network provides hourly observations of air temperature, dew point, wet bulb temperature, relative humidity, precipitation, soil temperature at 4 inches depth, vegetative wetting, solar radiation, wind speed, wind direction, and wind gust.

Total Stations: 19. Hourly: Yes Height: 33 feet Access: Password (fee)

ALASKA

Road Weather Information System (RWIS)

<http://www.dot.state.ak.us/iways/roadweather/forms/AreaSelectForm.html>

The Alaska Department of Transportation (DOT) operates this network of 40 stations with locations throughout Alaska. The network provides variable temporal resolution observations of air temperature, dew point, relative humidity, wind speed, wind direction, wind gust, and precipitation (only yes/no and sometimes precipitation type).

Total Stations: 40 Hourly: Yes Height: 33 feet Access: Difficult

Seward Peninsula Hydrometeorology Network

<http://data.ine.uaf.edu/seward/index.html>

The University of Alaska Fairbanks Water and Environmental Research Center operates this network of 8 meteorological stations located on the Seward Peninsula in western Alaska. The parameters measured vary by site but can include hourly observations of wind speed, wind direction, air temperature, relative humidity, net radiation, up/downward long/shortwave radiation, barometric pressure, precipitation, and snow depth.

Total Stations: 8 Hourly: Yes Height 30 feet Access: Real-time only?

ARIZONA

Road Weather Information System (RWIS)

The Arizona Department of Transportation (DOT) operates this network of 7 stations located along I40 in central Arizona. The network provides variable temporal resolution observations of air temperature, relative humidity, dew point, wind speed, wind direction, visibility, and precipitation (yes/no).

Arizona Meteorological Network (AZMET)

<http://ag.arizona.edu/azmet/>

The Arizona Meteorological Network (AZMET) is part of the Extension Biometeorology Program, which is a service of the University of Arizona Cooperative Extension within the College of Agriculture. The network provides hourly observations of air temperature, relative humidity, vapor pressure deficit, solar radiation, precipitation, soil temperature (2 and 4 inch depths), wind speed, wind direction, wind gust, and reference evapotranspiration. The network consists of 23 stations located throughout the southern half of Arizona.

Total Stations: 23 Hourly: Yes Height: ? Access: Easy

ARKANSAS

None

CALIFORNIA

Road Weather Information System (RWIS)

<http://www.dot.ca.gov/dist2/travelmap.htm>

The California Department of Transportation (CalTrans) operates this network of 14 stations located in Northern California. The network provides variable temporal resolution observations of air temperature, relative humidity, dew point, wind speed, wind direction, visibility, and precipitation (yes/no). This network is included as part of the University of Utah MesoWest and NOAA/Earth System Research Laboratory (ESRL) Global Systems Division (GSD) MADIS data sets.

Total Stations: 14 Hourly: Yes Height 30 feet Access: Real-time only?

China Lake Weather Station Network

The China Lake Naval Air Weapons Stations (NAWS) operates this network 13 weather stations located around the China Lake NAWS located at the south end of the Owens Valley in central California. Eight of the stations provide 5 minute observations of wind direction, wind speed, wind gust, temperature, relative humidity and station pressure. The other 5 stations provide hourly observations of the same set of parameters as well as precipitation and solar radiation.

Total Stations: 13 Hourly: Yes Height: ? Access: Difficult

COLORADO

Colorado Department of Transportation (DOT) Road Weather Information System (RWIS) Networks

The Colorado DOT operates this network of 109 stations located along roadways throughout the state of Colorado. The network provides 15-min observations of air temperature, dew point, relative humidity, barometric pressure, wind speed, wind direction, wind gust, precipitation type and intensity. Some stations also provided precipitation accumulation and visibility measurements.

Total Stations: 109 Hourly: Yes Height: 33 feet Access: Unavailable

CONNECTICUT

None

DELAWARE

None

FLORIDA

Florida Automated Weather Network (FAWN)

<http://fawn.ifas.ufl.edu/>

The University of Florida Institute of Food and Agricultural Sciences operates this network of 28 stations located throughout the state of Florida. The network provides 15-minute observations of air temperature (at 2, 6, and 10 ft), relative humidity, wind speed, wind direction, solar radiation, soil temperature (at 10 cm depth), and precipitation. For further

Total Stations: 28 Hourly: Yes Height: 33 feet Access: Easy

GEORGIA

Georgia Forestry Commission Weather Station Network

<http://weather.gfc.state.ga.us/climate/climate.aspx>

The Georgia Forestry Commission operates this network of 18 stations located throughout the state of Georgia. The network provides hourly observations of air temperature, relative humidity, wind direction, wind speed, and precipitation. (These appear to be RAWS).

Total Stations: 18 Hourly: Yes Height 33 feet? Access: Good

Georgia Ambient Air Monitoring Program

<http://www.eol.ucar.edu/projects/hydrometnet/georgia/>

The Georgia Department of Natural Resources Environmental Protection Division Air Protection Branch operates this network of ambient air monitoring stations with locations throughout the state of Georgia. At present it is not known how many of these provide any meteorological measurements.

Total Stations: 24? Hourly: Yes Height: ? Access: Good

HAWAII

None

IDAHO

Idaho National Engineering and Environmental Laboratory (INEEL) Network <http://niwc.noaa.inel.gov/Climate.htm>

The NOAA/Air Resources Laboratory/Field Research Division operates this network of 31 stations at locations around the Idaho National Engineering and Environmental Laboratory site in southeastern Idaho. The network provides 5-minute observations of air temperature, relative humidity, wind speed, wind direction, solar radiation, precipitation, and barometric pressure.

Total Stations: 31 Hourly: Yes Height 33 feet Access: Good

Idaho Transportation Department (ITD) Road Weather Information System (RWIS) Network <http://511.idaho.gov/staticMap.asp?display=nws>

The ITD operates this network of 41 stations located along highways throughout the state of Idaho. The network provides 5-minute observations of air temperature, relative humidity, wind speed and wind direction. This network is included as part of the University of Utah MesoWest and NOAA/Earth System Research Laboratory (ESRL) Global Systems Division (GSD) MADIS data sets.

Total Stations: 41 Hourly: Yes Height: 30 feet Access: None thru website

ILLINOIS

Great Lakes Environmental Research Laboratory (GLERL) Real-Time Meteorological Observation Network <http://www.glerl.noaa.gov/metdata/info.html>

The GLERL operates this network of 7 stations with locations primarily around southern Lake Michigan (1 in Illinois). The network provides up to 5-minute observations of air temperature, wind speed, and wind direction.

Total Stations: 7-Most in MI Hourly: Yes Height: 12-25 meters Access: Good

Illinois Climate Network (ICN) <http://www.isws.illinois.edu/warm/datatype.asp>

The Illinois State Water Survey operates this network of 19 stations at locations throughout the state of Illinois. The network provides hourly observations of air temperature, relative humidity, wind speed, wind direction, solar radiation, evaporation, precipitation, and soil temperature.

Total Stations: 19 Hourly: Yes Height: ? Access: Good

Illinois Roadway Weather Information System (RWIS) Network
<http://www.gettingaroundillinois.com/default.aspx?ql=rwis>

The Illinois Department of Transportation operates this network of 49 stations located throughout the state of Illinois. The network provides observations of air temperature, relative humidity, wind speed, wind direction, wind gust, and precipitation at an unknown temporal resolution.

Total Stations: 49 Hourly: Yes Height: 33 feet Access: Difficult

INDIANA

Purdue Automated Agricultural Weather Station Network (PAAWS)
<http://data.eol.ucar.edu/codiac/dss/id=85.033>

Purdue University operates this network of 9 stations at each of its Agricultural Research Centers throughout the state of Indiana. The network provides 30-minute observations of air temperature, wind speed, wind direction, solar radiation, precipitation, and soil temperature at a depth of 4 cm.

Total Stations: 9 Hourly: Yes Height: 10 feet Access: ?

Road Weather Information System (RWIS)
<http://netservices.indot.in.gov/rwis/>

The Indiana Department of Transportation (DOT) operates this network of 31 stations located throughout Indiana. The network provides variable temporal resolution observations of air temperature, relative humidity, dew point, wind speed, wind direction, visibility, and precipitation (yes/no). For further information visit the Indiana DOT RWIS web page. This data set is included in the NOAA/FSL MADIS data set.

Total Stations: 31 Hourly: Yes Height: 33 feet Access: Current only

IOWA

Iowa Department of Transportation (DOT) Road Weather Information System (RWIS) <http://www.dotweatherview.com/>

The Iowa DOT operates this network of 50 stations with locations along highways throughout the state of Iowa. The network provides 15-minute observations of air temperature, dew point, wind speed, wind direction, and precipitation. These data are included in the Iowa Environmental Mesonet (IEM) data set developed by Iowa State University. For further information visit the IEM home page or the Iowa DOT Weatherview web page. This data set is included in the NOAA/FSL MADIS data set.

Total Stations: 50 Hourly: Yes Height: 33 feet Access: Real-Time only

KANSAS

Kansas Department of Transportation (DOT) Road Weather Information System (RWIS) Network
<http://www.ksdot.org/burcompser/generatedreports/weather.asp#station1>

The Kansas DOT operates this network of 44 stations at locations along highways throughout the state of Kansas. The network provides hourly observations of air temperature, relative humidity, wind speed, and wind direction. For further information visit the Kansas DOT RWIS home page or the Surface Systems, Inc Road Weather page. This data set is included in the NOAA/FSL MADIS data set.

Total Stations: 44 Hourly: Yes Height: 33 feet Access: Real-Time only

Kansas Mesonet
<http://wdl.agron.ksu.edu/>

The Kansas State Climate Office operates this network of 14 stations in southwestern Kansas (formerly operated by the Kansas GWMD #3). The network provides hourly observations of air temperature, relative humidity, wind speed, wind direction, precipitation, solar radiation, and soil temperature.

Total Stations: 14 Hourly: Yes Height: 33 feet Access: Good

KENTUCKY

Kentucky Mesonet

<http://www.kymesonet.org/index.html>

The Kentucky Climate Center at Western Kentucky University is overseeing the development of this network of environmental monitoring stations throughout Kentucky. For further information visit the Kentucky Mesonet web page.

Total Stations: 40 Hourly: Yes Height: ~30 ft Access: Easy (per day only)

Kentucky Roadway Weather Information System (RWIS)

<http://www.kytc.state.ky.us/RWIS/>

The Kentucky Transportation Cabinet operates this network of 39 stations with locations throughout the state of Kentucky. The network provides variable (hourly or higher) resolution observations of air temperature, dew point, relative humidity, and wind speed. For further information visit the Kentucky RWIS home page. This network is included in the NOAA/FSL MADIS data set.

Total Stations: 39 Hourly: Yes Height: 33 feet Access: Difficult

LOUISIANA

Louisiana Agriclimatic Information System (LAIS)

<http://weather.lsuagcenter.com/Default.aspx>

The Louisiana State University AgCenter operates this network of 20 stations with locations throughout the state. The network provides 5-minute observations of air temperature, precipitation, wind speed, wind direction, relative humidity, solar radiation, and soil temperature. For further information visit the LAIS home page. This network is included in the NOAA/FSL MADIS data set.

Total Station: 20 Hourly: Yes Height: ? Access: Good

MAINE

None

MARYLAND

Maryland Department of Transportation (DOT) Road Weather Information System (RWIS) Network

<http://www.chart.state.md.us/travInfo/weatherStationData.asp>

The Maryland DOT operates this network of 45 stations with locations along highways throughout the state of Maryland. The network provides variable (hourly or higher) resolution observations of air temperature, dew point, relative humidity, and wind speed.

Total Stations: 45 Hourly: Yes Height: 33 feet Access: Excellent

MASSACHUSETTS

Massachusetts Air Monitoring Network

The Massachusetts Department of Environmental Protection Air Program Planning Unit operates this network of 18 stations with locations throughout the state of Massachusetts. The parameters vary by station with 8 providing hourly observations of winds and the other 10 providing air temperature, wind speed, wind direction, solar radiation, relative humidity, and barometric pressure. For further information visit the Air Program Planning Unit page.

Unable to locate met data.

MICHIGAN

Michigan Automated Weather Network (MAWN)

<http://www.agweather.geo.msu.edu/mawn/>

The Michigan State University and Michigan Agricultural Experiment Station operate this network of 25 stations located throughout the state of Michigan. The network provides hourly observations of air temperature, relative humidity, soil temperature (at 4 inch depth), soil moisture, leaf wetness, wind speed, wind direction, solar radiation, and precipitation. A subset of these parameters is also available every 5 minutes.

Total Stations: 25 Hourly: Yes Height: 6-10 feet Access: Excellent

MINNESOTA

Minnesota Road Weather Information System (RWIS)

<http://rwis.dot.state.mn.us/>

The Minnesota Department of Transportation (DOT) operates this network of 92 RWIS stations across the state of Minnesota. The network provides variable (hourly or higher) resolution observations of air temperature, dew point, relative humidity, and wind speed. For further information visit the Minnesota DOT RWIS web page. This network is included in the NOAA/FSL MADIS data set.

Total Stations: 92 Hourly: Yes Height: 33 feet Access: Very Good

MISSISSIPPI

Mississippi Mesonet

<http://jsumesonet.jsums.edu/index.htm>

Jackson State University operates this network. For further information please visit the Mississippi Mesonet web page. This network is included in the NOAA/FSL MADIS data set.

Total Stations: 6 Hourly: Yes Height: 33 feet Access: Difficult

MISSOURI

Commercial Agriculture Weather Station (CAWS) Network

<http://agebb.missouri.edu/weather/stations/index.htm>

The Commercial Agriculture Program of the University of Missouri Extension operates this network of 21 stations with locations throughout Missouri. The network provides hourly observations of air temperature, relative humidity, wind speed, wind direction, soil temperature (2 cm depth), and solar radiation. For further information visit the network page.

Total Stations: 21 Hourly: Yes Height: 10 feet Access: Excellent

Road Weather Information System (RWIS)

The Missouri Department of Transportation (DOT) and City of St. Peters operate this network of 26 stations located throughout the state of Missouri. The network provides variable temporal resolution observations of air temperature, relative humidity, dew point, wind speed, wind direction, visibility, and precipitation (yes/no). For further information visit the Surface Systems, Inc Road Weather page.

Total Stations: 26 Hourly: Yes Height: 33 feet Access: Unable to locate.

Missouri Air Monitoring Network

<http://www.dnr.mo.gov/env/esp/aqm/northmo.htm>

The Missouri Department of Natural Resources Environmental Services Program operates this network of 19 stations located throughout the state of Missouri. All stations provide hourly observations of wind speed and wind direction, additionally 16 of the stations provide air temperature, 3 provide solar radiation, and 2 provide relative humidity.

Total Stations: 19 Hourly: Yes Height: 20 feet? Access: Difficult

MONTANA

Montana Department of Transportation (DOT) Road Weather Information System (RWIS) Network

<http://rwis.mdt.mt.gov/>

The Montana DOT operates this network of 59 stations located along highways throughout the state of Montana. The network provides 5-minute observations of air temperature, relative humidity, wind speed, and wind direction. This network is included within the University of Utah MesoWest and NOAA/FSL MADIS data sets.

Total Stations: 59 Hourly: Yes Height: 33 feet Access: Difficult

Montana Air Monitoring Network

<http://www.deq.state.mt.us/energy/renewable/windweb/winddata/index.asp>

The Montana Department of Environmental Quality Planning, Prevention, and Assistance Division operates this network of 4 stations located throughout the state of Montana. The network provides hourly observations of air temperature, wind speed, and wind direction.

Total Stations: 5 Hourly: Yes Height: 20 meters Access: Good

NEBRASKA

Road Weather Information System (RWIS)

The Nebraska Department of Roads (DOR) and City of Omaha operate this network of 54 stations located throughout the state of Nebraska. The network provides variable temporal resolution observations of air temperature, relative humidity, dew point, wind speed, wind direction, visibility, and precipitation (yes/no). For further information visit the Surface Systems, Inc Road Weather page. This network is included as part of the University of Utah MesoWest and NOAA/Earth System Research Laboratory (ESRL) Global Systems Division (GSD) MADIS data sets.

Total Stations: 54 Hourly Yes Height: 33 feet Access: None thru NE DOT

NEVADA

Nevada Department of Transportation (DOT) Road Weather Information System (RWIS) Network

The Nevada DOT operates this network of 38 stations with locations along highways in the vicinity of Reno. The network provides 15-minute observations of air temperature, relative humidity, wind speed, and wind direction. This network is included as part of the University of Utah MesoWest and NOAA/Earth System Research Laboratory (ESRL) Global Systems Division (GSD) MADIS data sets. For further information visit the Nevada DOT RWIS home page.

Total Stations: 38 Hourly Yes Height: 33 feet Access: Real-Time only

Clark County ALERT Weather Station Network

<http://www.ccrfcd.com/ftrs.htm>

The Clark County (Las Vegas area) Regional Flood Control District operates this network of 25 weather stations with locations throughout the county. The network provides observations of air temperature, relative humidity, wind speed, wind direction, and precipitation at varying temporal resolutions.

Total Stations w/wind: 24 Hourly: Yes Height: 10-12 feet Access: Good

NEW HAMPSHIRE

New Hampshire Road Weather Information System (RWIS)

The New Hampshire Department of Transportation operates this network of 12 weather stations located along roadways throughout the state.

Unable to locate data.

NEW JERSEY

New Jersey Weather and Climate Network

<http://climate.rutgers.edu/njwxnet/stationmap.php>

The Office of the New Jersey State Climatologist collects data from a number of different agencies that operates weather stations throughout the state of New Jersey. These include the National Weather Service, the New Jersey Department of Transportation, the New Jersey Turnpike Authority, and the Davidson Lab at Stevens Institute of Technology, among others. Most of the data are of hourly temporal resolution and the parameters vary by network but can include air temperature, dew point, relative humidity, atmospheric pressure, precipitation, wind speed, wind gust, and wind direction.

Includes all stations including RWIS and New Jersey Mesonet. Access OK.

NEW MEXICO

New Mexico State University (NMSU) Climate Network

<http://weather.nmsu.edu/cgi-shl/cns/uberpage.pl?selected=3>

NMSU operates this network of 16 stations with locations throughout the state of New Mexico. The network provides hourly observations of air temperature, relative humidity, precipitation, wind speed, wind direction, solar radiation, soil temperature, and soil moisture. Further information at: <http://weather.nmsu.edu/data/data.htm/>.

Stations from numerous NM networks posted. Hourly: Yes Height: Varies
Access: excellent

Los Alamos National Laboratory (LANL) Network

<http://www.weather.lanl.gov/>

LANL operates this network of 11 stations that operate around LANL in north-central New Mexico. The network includes a 92 m tower with wind and temperature at four levels (also near-surface measurements of temperature, moisture, pressure, precipitation, and surface energy balance terms), a 23 m tower with wind and temperature at two levels (also shortwave radiation), three 46 m towers with wind and temperature at three levels (also near-surface measurements of temperature, moisture, precipitation, and shortwave radiation), and a 36 m tower with wind and temperature at one level (also near-surface measurements of temperature, moisture, pressure, and precipitation). The additional sites provide primarily precipitation. For further information visit the LANL network page and information on the individual sites can be found here.

Total Stations: 11 Hourly: Yes Height: Varies Access: Real-time; Historical data via email

NEW YORK

Northeast Weather Association (NEWA) Network

<http://newa.cornell.edu/>

The NEWA is affiliated with the New York State Integrated Pest Management Program and operates this network of 46 weather stations primarily in western New York state (43 in New York). The network provides hourly observations of air temperature, relative humidity, soil temperature, leaf wetness, and precipitation. Access to data from this network usually requires a subscription although such fees have been waived in the past (e.g. 2002).

Total Stations: 46 Hourly: Yes Height: Unknown Access: Excellent

NORTH CAROLINA

North Carolina Agricultural Research Service (NCARS) Weather and Climate Network

<http://www.nc-climate.ncsu.edu/econet/>

The NCARS and North Carolina State Climate Office operate this network of 24 stations located throughout the state of North Carolina. The network provides hourly observations of air temperature, relative humidity, wind speed, wind direction, barometric pressure, solar radiation, photosynthetically active radiation (PAR), precipitation, soil temperature, and soil moisture.

North Carolina Environment and Climate Observing Network (ECONet)

<http://www.nc-climate.ncsu.edu/econet/>

The North Carolina State Climate Office in cooperation with state and federal agencies oversees this combination of networks with locations throughout the state of North Carolina. Among the networks included in ECONet are the NCARS, ASOS, AWOS, buoy, C-MAN, and SCAN networks described elsewhere. Also included are the North Carolina Department of Air Quality network and the Emergency Management network. For further information visit the ECONet home page.

Total Stations: 35 Hourly: Yes Height: 33 feet? Access: Difficult

NORTH DAKOTA

High Plains Regional Climate Center (HPRCC) Automated Weather Data Network (AWDN)

<http://ndawn.ndsu.nodak.edu/index.html>

The HPRCC oversees and ingests data from various state agricultural networks and makes it available as the AWDN. The AWDN is comprised of 167 stations located primarily in High Plains region (55 in North Dakota). The network provides hourly observations of air temperature, relative humidity, solar radiation, soil temperature, wind speed, wind direction, and precipitation. For further information visit the HPRCC AWDN home page or the North Dakota AWDN home page or the NDAWN page at UND.

Total Stations: 55 Hourly: Yes Height: 10 feet Access: Excellent

North Dakota Department of Transportation (DOT) Road Weather Information System (RWIS) Network

The North Dakota DOT operates this network of 14 RWIS locations throughout the state of North Dakota. The network provides hourly observations of air temperature, relative humidity, wind speed, and wind direction. For further information visit the North Dakota DOT RWIS home page or the Surface Systems, Inc Road Weather page.

Total Stations: 14 Hourly: Yes Height: 33 feet Access: None

OHIO

Ohio Department of Transportation (DOT) Road and Weather Information System (RWIS)

<http://www.buckeyetraffic.org/reporting/RWIS/results.aspx>

The Ohio DOT operates this network of 69 weather stations along highways throughout the state of Ohio. The network provides variable (hourly or higher) resolution observations of air temperature, dew point, relative humidity, and wind speed. For further information visit the Ohio DOT RWIS page or the Surface Systems, Inc Road Weather page.

Total Stations: 69 Hourly: Yes Height: 33 feet Access: Difficult

Ohio Agricultural Research and Development Center (OARDC) Network

<http://www.oardc.ohio-state.edu/newweather/>

The OARDC and Miami University operate this network of 12 stations located throughout the state of Ohio. The network provides hourly observations of air temperature, relative humidity, solar radiation, precipitation, wind speed, wind direction, and soil temperature at 5 and 10 cm depths. For further information visit the OARDC Network home page.

Total Stations: 12 Hourly: Yes Height: 15 meters Access: Excellent

OKLAHOMA

Oklahoma Mesonet

<http://www.mesonet.org/>

The Oklahoma Climatological Survey operates this network of 116 stations located throughout the state of Oklahoma. The network provides up to 5-minute observations of air temperature, relative humidity, wind speed, wind direction, barometric pressure, precipitation, soil temperature (5, 10, and 30 cm depths), solar radiation, and soil moisture. Some free real-time products are available here. For further information visit the Oklahoma Mesonet home page.

Total Stations: 116 Hourly: Yes Height: 10 meters Access: Excellent (but fee based)

Road Weather Information System (RWIS)

The Oklahoma Department of Transportation (DOT) operates this network of 11 stations located throughout the state of Oklahoma. The network provides variable temporal resolution observations of air temperature, relative humidity, dew point, wind speed, wind direction, visibility, and precipitation (yes/no). For further information visit the Surface Systems, Inc Road Weather page.

Total Stations: 11 Hourly: Yes Height: 33 feet Access: Unable to locate

OREGON

Mountain Weather Data Network

<http://www.nwac.us/weatherdata/map/>

The Northwest Weather and Avalanche Center operates this network of 17 stations located in mountainous areas of Washington and Oregon (4 in Oregon). The network provides hourly observations of air temperature, relative humidity, wind speed, wind direction, precipitation, and snowfall. This network is included within the University of Utah MesoWest and the NOAA/FSL MADIS. For further information visit the Mountain Weather Data Network home page.

Total Stations: 4 Hourly: Yes Height: Unknown Access: Past 10 days

Oregon Department of Transportation (DOT) Road Weather Information System (RWIS) Network

<http://www.tripcheck.com/Pages/RCMap.asp?curRegion=0&mainNav=RoadConditions>

The Oregon DOT operates this network of 58 stations located along highways throughout Oregon. The network provides 15-minute observations of air temperature, relative humidity, wind speed, and wind direction. For further information visit the Oregon DOT RWIS page. This network is included as part of the University of Utah MesoWest and NOAA/Earth System Research Laboratory (ESRL) Global Systems Division (GSD) MADIS data sets.

Total Stations: 58 Hourly: Yes Height: 33 feet Access; Real-time only

PENNSYLVANIA

Pennsylvania Department of Transportation (DOT) Road Weather Information System (RWIS) Network

The Pennsylvania DOT operates this network of 75 stations with locations along highways throughout the state of Pennsylvania. The network provides variable (hourly or higher) resolution observations of air temperature, dew point, relative humidity, and wind speed. Hourly data from this network is included in the Pennsylvania Hourly Mesonet operated by the Pennsylvania State Climatologist. For further information visit the Pennsylvania DOT RIWS page.

Total Stations: 75 Hourly: Yes Height: 33 feet Access: Poor. Access through PA Hourly Mesonet page does not work nor does the PA DOT RWIS page.

Pennsylvania Air Monitoring Network

The Pennsylvania Department of Environmental Protection Bureau of Air Quality operates this network of 55 stations with locations throughout the state of Pennsylvania. The network provides hourly observations of air temperature, solar radiation, wind speed, and wind direction. Hourly data from this network is included in the Pennsylvania Hourly Mesonet operated by the Pennsylvania State Climatologist. For further information visit the Bureau of Air Quality page.

Total Stations: 55 Hourly: Yes Height: Unknown: Access: Poor. (See above).

RHODE ISLAND

None

SOUTH CAROLINA

Road Weather Information System (RWIS)

The South Carolina Department of Transportation (DOT) operates this network of 40 stations located throughout South Carolina. The network provides variable temporal resolution observations of air temperature, relative humidity, dew point, wind speed, wind direction, visibility, and precipitation (yes/no).

Total Stations: 40 Hourly: Yes Height: 33 feet Access: Unable to locate

SOUTH DAKOTA

South Dakota Department of Transportation (DOT) Road Weather Information System (RWIS) Network

The South Dakota DOT operates this network of 35 RWIS locations throughout the state of South Dakota. The network provides hourly observations of air temperature, relative humidity, wind speed, and wind direction. For further information visit the South Dakota DOT RWIS home page or the Surface Systems, Inc Road Weather page.

Total Stations: 35 Hourly: Yes Height: 33 feet Access: Unable to locate

TENNESSEE

Road Weather Information System (RWIS)

The Tennessee Department of Transportation (DOT) operates this network of 20 stations located along throughout Tennessee. The network provides variable temporal resolution observations of air temperature, relative humidity, dew point, wind speed, wind direction, visibility, and precipitation (yes/no). For further information visit the Surface Systems, Inc Road Weather page.

Total Stations: 20 Hourly: Yes Height: 33 feet Access: Unable to locate

East Tennessee Ozone Study (ETOS) Network

The National Oceanic and Atmospheric Administration (NOAA) Atmospheric Turbulence and Diffusion Division (ATDD) operates this network of 21 meteorological towers throughout eastern Tennessee. The network provides at least hourly observations of air temperature, wind speed, wind direction, relative humidity, and precipitation. For further information visit the ETOS Tower home page.

Total Stations: 21 Hourly: Yes Height: Unknown Access: Unable to locate

TEXAS

West Texas Mesonet

<http://www.mesonet.ttu.edu/>

Texas Tech University operates this network of 34 stations in the area around Lubbock, Texas. The network provides 5-minute observations of air temperature, wind speed, wind direction, relative humidity, barometric pressure, precipitation, solar radiation, soil temperature (at 5, 10 and 20 cm depths), soil moisture (at 5, 20, 60 and 75 cm depths) and leaf wetness. For further information visit the West Texas Mesonet home page. Meteogram imagery for the West Texas Mesonet is available from the University of Oklahoma.

Total Stations: 34 Hourly: Yes Height: 10 meters Access: Good

Road Weather Information System (RWIS)

The Texas Department of Transportation (DOT) operates this network of 12 stations located throughout the state of Texas. The network provides variable temporal resolution observations of air temperature, relative humidity, dew point, wind speed, wind direction, visibility, and precipitation (yes/no). For further information visit the Surface Systems, Inc Road Weather page.

Total Stations: 12 Hourly: Yes Height: 33 feet Access: Unable to locate

Texas Natural Resources Conservation Commission (TNRCC) Air Monitoring Network

http://www.tceq.state.tx.us/compliance/monitoring/air/monops/historical_data.html

The TNRCC monitors air quality across the state of Texas with this network of 131 stations operated by various local agencies. The network provides hourly observations of a varying set of parameters typically including air temperature, wind speed, and wind direction. For further information visit the TNRCC Air Monitoring page.

Total Stations: 131 Hourly: Yes Height: 10 meters Access: Difficult

UTAH

Utah Department of Transportation (DOT) Road Weather Information System (RWIS) Network

The Utah DOT operates this network of 38 stations located alongside highways throughout the state of Utah. The network provides 15-minute observations of air temperature, relative humidity, wind speed, and wind direction. This network is included as part of the University of Utah MesoWest and the NOAA/FSL MADIS. For further information visit the MesoWest home page or the Surface Systems, Inc Road Weather page.

Total Stations: 38 Hourly: Yes Height: 30 feet Access: Difficult

Emery Water Conservancy District Network

<http://orange.ewcd.org/weather/>

The Emery Water Conservancy District operates this network of 9 stations with locations around Emery County in east-central Utah. The network provides hourly observations of air temperature, relative humidity, wind speed, wind direction, solar radiation, soil temperature, and precipitation.

Total Stations: 9 Hourly: Yes Height ~30 feet Access: Good

Sevier River Water Users Association Network

<http://www.sevierriver.org/weather/>

The Sevier River Water Users Association operates this network of 6 stations with locations around Sevier County in central Utah. The network provides hourly observations of air temperature, relative humidity, wind speed, wind direction, solar radiation, soil temperature, and precipitation.

Total Stations: 6 (3 current) Hourly: Yes Height: ~30 ft Access: Good

U.S. Army Deseret Chemical Depot Network

<http://www.tcem.org/weather.htm>

The US Army operates this network of 26 stations on its site near Tooele, Utah. The network provides 15-minute observations of air temperature, relative humidity, wind speed, wind direction, and barometric pressure.

Total Stations: 26 Hourly: Yes Height: Unknown Access: Unknown (Page not working when checking data)

U.S. Army Dugway Proving Ground Network

<http://www.dugway.army.mil/index.php/index/content/id/21>

The US Army operates this network of 25 stations on its site in northwestern Utah. The network provides 15-minute observations of air temperature, relative humidity, wind speed, wind direction, solar radiation, and barometric pressure. Data from this network is included in the University of Utah Mesowest and NOAA/GSD MADIS data sets.

Total Stations: 25 Hourly: Yes Height: Unknown Access: Unable to locate

Utah Division of Air Quality Network

<http://www.airquality.utah.gov/slc-currentconditions.html>

The Utah Division of Air Quality operates this network of 17 stations located throughout the state of Utah (although most are in the north-central portion of the state). The parameters and temporal resolution vary, however all provide at least hourly wind speed and wind direction. Some stations also provide air temperature, relative humidity, and/or other parameters.

Total Stations: 17 Hourly: Yes Height: Unknown Access: Real-Time only

VERMONT

None

VIRGINIA

Road Weather Information System (RWIS)

The Virginia Department of Transportation (DOT), Richmond County, and Suffolk County operate this network of 40 stations located throughout Virginia. The network provides variable temporal resolution observations of air temperature, relative humidity, dew point, wind speed, wind direction, visibility, and precipitation (yes/no).

Total Stations: 40 Hourly: Yes Height: 30 feet Access: None

WASHINGTON

Mountain Weather Data Network

<http://www.nwac.us/weatherdata/map/>

The Northwest Weather and Avalanche Center operates this network of 18 stations located in mountainous areas of Washington and Oregon. The network provides hourly observations of air temperature, relative humidity, wind speed, wind direction, precipitation, and snowfall. This network is included within the University of Utah MesoWest and the NOAA/FSL MADIS. For further information visit the Mountain Weather Data Network home page.

Total Stations: 18 Hourly: Yes Height: Unknown Access: Past 10 days

Washington Roadway Weather Information System (RWIS)

<http://www.wsdot.wa.gov/traffic/weather/default.aspx?station=2108&id=dt>

The Washington Department of Transportation (DOT) operates this network of 65 RWIS stations across the state of Washington. The network provides variable (hourly or higher) resolution observations of air temperature, dew point, relative humidity, and wind speed. For further information visit the Washington DOT RWIS page or the Surface Systems, Inc Road Weather page. This network is included in the University of Utah MesoWest and the NOAA/FSL MADIS data sets.

Total Stations: 65 Hourly: Yes Height: 33 feet Access: Real-time only

Hanford Meteorological Station (HMS) Network

<http://hms.pnl.gov/>

The Pacific Northwest National Laboratory operates the Hanford Meteorological Station for the Department of Energy at the Hanford Site in south-central Washington. The network of 30 stations provides 15-minute observations of air temperature, dew point, barometric pressure, wind speed, wind direction, solar radiation, and precipitation. Three of the stations have 60 m towers and one has a 400 m tower with measurements at multiple levels. This network is included within the University of Utah MesoWest and the NOAA/FSL MADIS data sets. For further information visit the HMS home page. This network is included in the University of Utah MesoWest and the NOAA/FSL MADIS data sets.

Total Stations: 30 Hourly: Yes Height: 10 meters Access: Good

Pacific Northwest Agricultural Weather Network

<http://www.usbr.gov/pn/agrimet/agrimetmap/agrimap.html>

The present AgriMet network consists of over 70 agricultural weather stations located throughout the Pacific Northwest (see map). Three stations operated by the NOAA Air Resources Laboratory in Idaho Falls, Idaho provide the weather data required to model evapotranspiration at Aberdeen, Kettle Butte, and Monteview, Idaho. Over 20 stations east of the Continental Divide in Montana are managed by the Bureau of Reclamation Great Plains Region.

Total Stations: 70 Hourly: Yes Height: 6 feet Access: Excellent

Washington Agricultural Weather Network

<http://weather.wsu.edu/>

AgWeatherNet (AWN) provides access to raw weather data from the Washington State University weather network, along with decision aids. AWN includes 134 weather stations located mostly in the irrigated regions of eastern Washington State but the network has undergone significant expansion in Western Washington and in dry land regions of the state. The AWN network is administered and managed by the AgWeatherNet team located at the WSU Irrigated Agriculture Research and Extension Center in Prosser, WA but is programmatically linked to efforts at other WSU research and extension centers.

Total Stations: 134 Hourly: Yes

WEST VIRGINIA

Road Weather Information System (RWIS)

The West Virginia Department of Transportation (DOT) operates this network of 6 stations located throughout West Virginia. The network provides variable temporal resolution observations of air temperature, relative humidity, dew point, wind speed, wind direction, visibility, and precipitation (yes/no).

Total Stations: 6 Hourly: Yes Height: 33 feet: Access: None

WISCONSIN

Wisconsin Department of Transportation (DOT) Road Weather Information System (RWIS)

<http://www.dot.wisconsin.gov/travel/gis/rwis.htm>

The Wisconsin DOT operates this network of 62 stations with locations along roadways throughout Wisconsin. The network provides variable (hourly or higher) resolution observations of air temperature, dew point, relative humidity, and wind speed. For further information visit the WIDOT RWIS page. This network is included as part of the University of Utah MesoWest and NOAA/Earth System Research Laboratory (ESRL) Global Systems Division (GSD) MADIS data sets.

Total Stations: 62 Hourly: Yes Height: 33 feet Access: Real-time only

Wisconsin Automated Weather Observation Network (AWON)

<http://www.soils.wisc.edu/wimnext/awon/SelectReport.html>

The University of Wisconsin Cooperative Extension operates this network of 2 stations with locations in central Wisconsin. The network provides hourly observations of precipitation, solar radiation, air temperature, relative humidity, soil temperature (2, 4, and 20 in depths), wind speed, wind direction, wind gust, and PAR. For further information visit the AWON home page.

Total Stations: 4 Hourly: Yes Height: 10 meters Access: Good

WYOMING

Wyoming Department of Transportation (DOT) Road Weather Information System (RWIS)

<http://www.wyoroad.info/highway/roadbuddies.html>

The Wyoming DOT operates this network of 27 stations across the state of Wyoming. The network provides hourly observations of up to 15-minute observations of air temperature, dew point, relative humidity, wind speed, wind direction and wind gust. Some stations also provide yes/no precipitation and/or precipitation accumulation. This network is included as part of the University of Utah MesoWest and NOAA/Earth System Research Laboratory (ESRL) Global Systems Division (GSD) MADIS data sets. For further information visit the WYDOT RWIS home page or the State of Wyoming Water Resources Data System WYDOT RWIS archive web page.

Total Stations: 27 Hourly: Yes Height: 33 feet Access: Real-time only

Wyoming Visibility Monitoring Network

<http://www.wyvisnet.com/>

The Wyoming Department of Environmental Quality operates this network of 3 visibility and air quality monitoring stations throughout the state of Wyoming. Instrumentation varies by site but can include a digital camera, transmissometer, ambient nephelometer, meteorology equipment and air quality monitoring equipment.

Total Stations: 9 Hourly: Yes Height: 10 meter Access: Good

Bridger-Teton National Forest Network

<http://www.jhavalanche.org/stations.html>

The Bridger-Teton National Forest operates this network of 13 stations on its lands in west-central Wyoming. The network provides 15-minute observations of wind speed, wind direction, precipitation, and snow depth. This network is included within the University of Utah MesoWest and the NOAA/FSL MADIS data sets. For further information visit the Bridger-Teton National Forest Network page at: <http://www.jhavalanche.org/>.

Total Stations: 13 Hourly: Yes Height: Unknown Access: Fair

Glacier Lakes Ecosystem Experiments Site (GLEES)

The USDA Forest Service Rocky Mountain Research Station operates this research project in the Snowy Range of the Medicine Bow Mountains in southern Wyoming. There are 3 meteorological towers at various locations on the site (6, 18, and 30 heights). Each tower provides 15 min measurements of air temperature, relative humidity, wind speed, wind direction, solar radiation, precipitation, soil temperature (at 0.5 and 20 cm depths) and surface wetness. The 30 m tower is also part of the Ameriflux network. Additionally there are a SNOTEL station, wet and dry deposition stations, and air quality stations on the site. For further information visit the GLEES home page.

Unable to locate data.

NATIONAL NETWORKS

Soil Climate Analysis Network (SCAN)

<http://www.wcc.nrcs.usda.gov/scan/>

The SCAN is operated by the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS). The network provides hourly observations of air temperature, relative humidity, wind speed, wind direction, solar radiation, precipitation, barometric pressure, snow water content, snow depth, soil temperature (at 2, 4, 8, 20, and 40 cm depths), and soil moisture (at 2, 4, 8, 20 and 40 cm depths). The 80 SCAN stations are located across the US in primarily agricultural regions.

Total Stations: 80 Hourly: Yes Height: 6-10 feet? Access: Good

Coastal-Marine Automated Network (C-MAN)

<http://www.ndbc.noaa.gov/>

The National Data Buoy Center (NDBC) operates this network of 55 C-MAN stations with locations along coastlines throughout the US. The network typically provides hourly observations of air temperature, barometric pressure, wind speed, wind direction, and wind gust. Some stations also provide observations of sea water temperature, water level, waves, relative humidity, precipitation, and visibility. For further information visit the NDBC home page.

Total stations: 55 Hourly: Yes Height 10.1 meters Access: Excellent

Union Pacific Railroad Weather Station Network

The Union Pacific Railroad operates this network of 264 weather stations located in the central and western United States. Further information on Union Pacific is available on their home page. This network is included as part of the University of Utah MesoWest and NOAA/Earth System Research Laboratory (ESRL) Global Systems Division (GSD) MADIS data sets.

Total Stations: 264 Hourly: Yes Height: ? Access: Unable to locate