

ARCN Weather & Climate Monitoring

Site Visit Worksheet

Version: 8 March 2017

ARCN Program Contact:

Pam Sousanes/Ken Hill

phone: (907) 455-0677/(907)-455-0678

email: pam_sousanes@nps.gov/kenneth_hill@nps.gov

RAWS HelpDesk:

phone: (208) 387-5475

Hours: M-F, 6 AM-2:30 PM AST

Site name
Date of this visit
Operators

Howard Pass

6/11/2018

P+K

DCS - Sat. TX Check

phone: (757) 824-7450

24/7 technical support

Pre-Field Information

(Look up the station: www.nifc.blm.gov-->Login-->'Weather'-->'Select Station')

GOES Information:		Sensors	Swap? (Y/N)	Changes/Recent error events?
Latitude	68 09.3610	Temp	N	
Longitude	156 53.7490	Temp/RH	Y	HMP155 out 9/23/2017
NESDIS ID	39617266	Solar Radiation	N	
Tx Time (mm:ss)	0:39:50	Wind Speed/Dir	Y	Out 9/2/2017. Replace with 5108
Tx Channel	152	Snow Depth	N/A	
Antenna Azimuth (Deg Mag)	139	Soil Temp 1	N	
Antenna Elev. (Deg.)	13	Soil Temp 2	N	
Currently activated?	Y	Soil Temp 3	N	
Currently transmitting?	Y	Precipitation	N	
NWS Site ID	HOWA2	Datalogger	N	
		Transmitter	N	
		Battery	N	

Record Site Conditions

Time visit begins:	7:47 AM	Time visit ends:	
Station accessible? (Y/N)	Y	If no, comment:	
Cables intact? (Y/N)	Y	If no, comment:	
Power source ok? (Y/N)	Y	If no, comment:	
Batteries ok? (Y/N)	Y	If no, comment:	

Record Station Status Table Values

(WMD: PConnectCE-->Connect Button-->Measurements Tab-->'Select 'Status' from Table Drop-Down Box)
(Laptop: Device config utility-->Select DataLogger CR1000 -->Connect Button-->Data Monitor tab-->Status table)

	Before Maintenance:		After Maintenance:
OSVersion	26		26
ProgName	Howard Pass_2017		Howard Pass - 2017
StartTime	6/28/17 9:56 AM		13.7
12 V Battery Voltage	13.9		-0.5
Panel Temperature	-0.6		0
Watchdog Errors	8	Reset if >0	0
Lithium Batt Volt	3.1	Replace if <2.9	3.1
Low 12V Batt Count	0	Reset if >0	0
Skipped Scan	0	Reset if >0	0

Maintenance Checklist

	Completed? (Y/N)	Check transmitted values:	
		Value	OK? (Y/N)
Download Hourly Data	Y	RNIN	
RNIN before program update	2.39	WSM	10.4
SR50 height before	93	WDD	40.9
Upload new program	N	ATF_109	30.5
Re-enter RNIN after	2.39	FTF	/
Measure and re-enter Sr50a	N/A	RHP	76.4
Clean rain gage	OK	BVV	13.9
Clean temp shield	OK	WDDP	25.7
Level solar sensor	OK	WSMPH	10.9
Wipe out enclosure	OK	SDI	no sensor
Replace dessicant	✓	SRW	98.2
Test guy wires, tighten	OK	AT1H	
Tighten bolts and guy wires	✓	AT1L	
Clean battery terminals	OK	STF	32.9
Clear snow depth area	N/A	STF2	32.9
Brush station vicinity	N/A	STF3	34.4
Take site photos	✓	Const SR50_ht=	
Tighten elements on YAGI	✓	ATF ThermX	30.3
Electric Fence Rehab	N/A	ATF HMP155	30.4

Damaged. Replace next year

driver missing 2 times

Record Sensor Configuration Changes

	Model # out	Serial# out	Model # in	Serial# in	?	(ft)	(in)
Temp/RH	HMP155	F3810058	HMP155	42950012			
Solar Radiation							
Wind Speed/Dir	05108	WM146183	5108 Alpine HD	WM160868		15	
Snow depth							
Soil Temp 1							
Soil Temp 2							
Soil Temp 3							
Precipitation							
Barometric pressure							
Datalogger							
Temp 1							

Comments

To do:

Replace Wind Monitor ☒ Swap HMP155 ☒ Assess damage HMP shield blown off. sensor severed.
 Consider options for strengthening Wind Monitor ☐

Pre-visit Notes: Wind sensor damaged 9/1/2017 by high winds (?). HMP155 sensor damaged 9/23 - unknown reason.

05108 destroyed
 HMP155 destroyed

- Replace HMP155 shield Next year.
 - Tipping Bucket was not off of level on arrival.
 - Missing 2 driver lines. Consider Replacing YAGI next year

WFMI Maintenance Narrative

(Fill out prior to submission of NAMS post-trip update. Update may contain several station visits.)

Image identifiers of photos taken

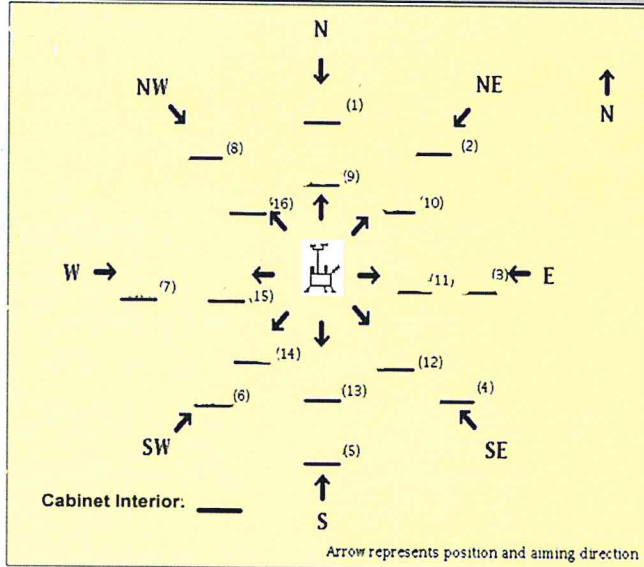


Photo Key	Image on camera #	Direction	On Computer
1		N Towards	
2		NE Towards	
3		E Towards	
4		SE Towards	
5		South Towards	
6		SW Towards	
7		W Towards	
8		NW Towards	
9		North Away	
10		NE Away	
11		E Away	
12		SE Away	
13		S Away	
14		SW Away	
15		W Away	
16		NW Away	
17		Enclosure	

Howard Pass

7/23/2018 Repair Visit

July 2018 Suspect Data

STF1, STF2, STF3, RH, HMP, WS-WD, SRW.

- Is any data recoverable from CR1000?

- Almost all cables severed.
- Solar Panel Charging Box ripped off back of solar panel
- CR1000 data logger damaged (?). Unable to connect
- Soil temp sensors on surface

REPAIR

- REPLACED HMP155 w/ HMP45 + NEW STRAIN
- REPAIRED SOLAR PANEL CONNECTION BY WIRING BLACK BOX CABLES BACK TO SOLAR PANEL.
- REPLACED CR1000 - COULD NOT CONNECT TO ONE ON SITE ON ARRIVAL.
- REPLACED ALL 3 SOIL SENSORS, CABLES OK JUST RE-SET IN GROUND
- REPLACED CABLE AND ONLY OF 05108 WIND (FROM GULL BOX). TOP PART OK
- COAX AND WIRE PULLED OUT, BUT INTACT, SO REPLACED + ADDED MASTIC

sensor

	In	Out
CR1000	79718	
HMP155		20021
HMP45	X1710120	M2950012
AT-RH Shield	10-plate shield double-enclosed	14-plate
109 (AT)	308903-37	308903-31
LI200X	py 43042	py 63434

CONT'D

- SOLAR MTD. REPLACED
- 109 REPLACED
- GULL REPLACED
- TESTED TIPANB BUCKET

FROM ACROSS BACKSL

- LI200X
- HMP45 / + CABLE
- 109
- COAX
- WIND CABLE
-

Status

VALUES

- 05 29	0.00 RNIN	57.5 STF1
- Howard Pass 2018	2.7 mph	54.4 STF2
7/23/2018 13:52	335 deg	49.6 STF3
- 13.1 V	68.9 ° 109	68.3 HMP45
25.4 Ptcmg	48.7%	69.1 ThermX
0 watchdog	13.1 V	
3.5 Li RH	6.6 WSP	
0 Low V	250 WDP	
0 skip	882 W/m ²	

	A	B	C	D	E	F	G
1	Kavet	2018		DATE: 6/12/2018			
2	SENSOR	ASSET# OR SERIAL #	YES	NO	NOTES		
3	WS/WD			✓			
4	RH/AT	489100 Asset#	✓				
5	RAIN GAUGE			✓			
6	SOLAR RAD			✓			
7	GOES ANTENNA			✓			
8	GPS ANTENNA			✓			
9	FTS F6/G5 LOGGER			✓			
10	GOES CABLE			✓			
11	GPS CABLE			✓			
12	SP CABLE			✓			
13	SOLAR PANEL			✓			
14	BATTERY			✓			
15	RVT PORT B			✓			
16	VHF ANTENNA			✓			
17							
18							
19							
20							
21	RESET RG	-----	✓		Tested and Reset from 1.54 to 0.00 inches		
22	SCAN SENSORS	-----					
23	PICTURES ?	-----					
24							
25	POWER RATIO						
26							
27							
28							
29							
30	NOTES: STATION LOOKING GREAT. - KEN Hill & PAM SOLESANES						

ARCN Weather & Climate Monitoring

Site Visit Worksheet

Version: 8 March 2017

ARCN Program Contact:

Pam Sousanes/Ken Hill

phone: (907) 455-0677/(907)-455-0678

email: pam_sousanes@nps.gov/kenneth_hill@nps.gov

Site name	Salmon River	DCS - Sat. TX Check	RAWS HelpDesk:
Date of this visit	6/12/2018	phone: (757) 824-7450	phone: (208) 387-5475
Operators	Sousanes, Hill	24/7 technical support	Hours: M-F, 6 AM-2:30 PM AST

Pre-Field Information

(Look up the station: www.nifc.blm.gov-->Login-->'Weather'-->'Select Station')

GOES Information:	Sensors	Swap? (Y/N)	Changes/Recent error events?
Latitude	Temp	N	
Longitude	Temp/RH	Y	HMP155
NESDIS ID	Solar Radiation	N	
Tx Time (mm:ss)	Wind Speed/Dir	N	
Tx Channel	Snow Depth	N	
Antenna Azimuth (Deg Mag)	Soil Temp 1	N	
Antenna Elev. (Deg.)	Soil Temp 2	N	
Currently activated?	Soil Temp 3	N	
Currently transmitting?	Precipitation	N	
NWS Site ID	Datalogger	N	
	Transmitter	N	
Camera?	Battery	N	

Record Site Conditions

Time visit begins:	2:05	Time visit ends:	16:00
Station accessible? (Y/N)	Y	If no, comment:	
Cables intact? (Y/N)	Y	If no, comment:	
Power source ok? (Y/N)	Y	If no, comment:	
Batteries ok? (Y/N)	Y	If no, comment:	

Record Station Status Table Values

(WMD: PConnectCE-->Connect Button-->Measurements Tab-->'Select 'Status' from Table Drop-Down Box)
(Laptop: Device config utility-->Select DataLogger CR1000 -->Connect Button-->Data Monitor tab-->Status table)

Before Maintenance:	After Maintenance:
OSVersion	26
ProgName	SalmonRiver2017
StartTime	6/28/17 7:08 PM
12 V Battery Voltage	13.3
Panel Temperature	18.5
Watchdog Errors	0
Lithium Batt Volt	3.44
Low 12V Batt Count	0
Skipped Scan	0
Reset if >0	Reset if >0
Replace if <2.9	Replace if <2.9
Reset if >0	Reset if >0
Reset if >0	Reset if >0

Maintenance Checklist

Completed? (Y/N)	Check transmitted values:
Download Hourly Data	Value OK? (Y/N)
RNIN before program update	RNIN 2.86
SR50 height before	WSM 9.2
Upload new program	WDD 250
Re-enter RNIN after	ATF_109 53.9
Measure and re-enter Sr50a	FTF
Clean rain gage	RHP 31
Clean temp shield	BVV 13.3
Level solar sensor	WDDP 223
Wipe out enclosure	WSMPH 15.0
	SDI 0.2

Replace dessicant	Y
Test guy wires, tighten	Y
Tighten bolts and guy wires	Y
Clean battery terminals	N
Clear snow depth area	NA
Brush station vicinity	NA
Take site photos	Y
Tighten elements on YAGI	Y
Electric Fence Rehab	Y

Good

SRW	602	
AT1H	—	
AT1L	—	
STF	58.1	
STF2	48.2	
STF3	42.9	
Const SR50_ht=	84.7	
ATF_ThermX	53.5	
ATF_HMP155	53.7	

Record Sensor Configuration Changes

	Model # out	Serial# out	Model # in	Serial# in	(ft)	(in)
Temp/RH	HMP155	F3810056	HMP155	F3810051		
Solar Radiation						
Wind Speed/Dir						
Snow depth						
Soil Temp 1						
Soil Temp 2						
Soil Temp 3						
Precipitation						
Barometric pressure						
Datalogger						
Temp 1						

Comments

To do:

Swap HMP155 ☒ Swap SD Card in Camera ☒ Repair Fence ☒ Assess Camera Condition Good.

Station looks excellent

Fence Mostly Good.

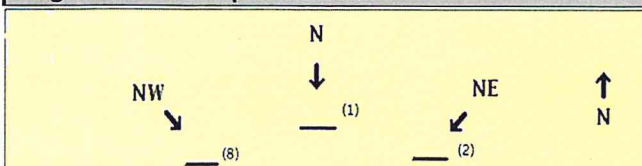
Swapped Card

Restrung wire and replaced one mount

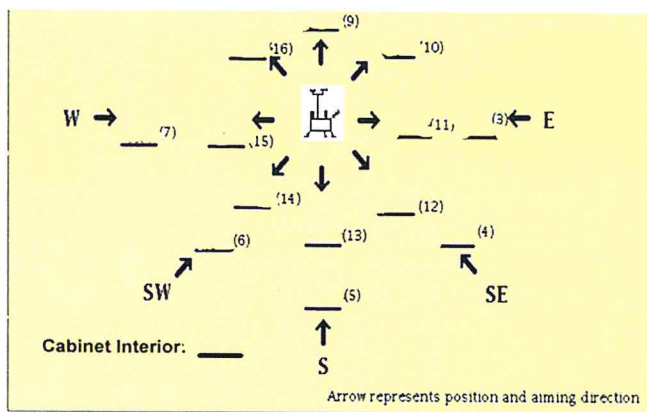
WFMI Maintenance Narrative

(Fill out prior to submission of NAMS post-trip update. Update may contain several station visits.)

Image identifiers of photos taken



#	Direction	Camera Image #	Computer Image #
1	N Towards	N Towards	
2	NE Towards	NE Towards	
3	E Towards	E Towards	



4	SE Towards	SE Towards	
5	South Towards	South Towards	
6	SW Towards	SW Towards	
7	W Towards	W Towards	
8	NW Towards	NW Towards	
9	North Away	North Away	
10	NE Away	NE Away	
11	E Away	E Away	
12	SE Away	SE Away	
13	S Away	S Away	
14	SW Away	SW Away	
15	W Away	W Away	
16	NW Away	NW Away	
17	Enclosure	Enclosure	

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ARCN Program Contact:

Pam Sousanes/Ken Hill

phone: (907) 455-0677/(907)-455-0678

email: pam_sousanes@nps.gov/kenneth_hill@nps.gov

Site name	Imelyak	DCS - Sat. TX Check	RAWS HelpDesk:
Date of this visit	6/12/2018	phone: (757) 824-7450	phone: (208) 387-5475
Operators	Sousanes, H. V.	24/7 technical support	Hours: M-F, 6 AM-2:30 PM AST

Pre-Field Information

(Look up the station: www.nifc.blm.gov-->Login-->'Weather'-->'Select Station')

GOES Information:	Sensors	Swap? (Y/N)	Changes/Recent error events?
Latitude	Temp	N	
Longitude	Temp/RH	Y	HMP155
NESDIS ID	Solar Radiation	N	
Tx Time (mm:ss)	Wind Speed/Dir	Y	5108 Alpine HD
Tx Channel	Snow Depth	N	
Antenna Azimuth (Deg Mag)	Soil Temp 1	N	
Antenna Elev. (Deg.)	Soil Temp 2	N	
Currently activated?	Soil Temp 3	N	
Currently transmitting?	Precipitation	N	(Yes)
NWS Site ID	Datalogger	N	
	Transmitter	N	
	Battery	N	

Record Site Conditions

Time visit begins:	9:45	Time visit ends:	12:30
Station accessible? (Y/N)	Y	If no, comment:	Station down 5/11/18. All sensors ok before 5/11.
Cables intact? (Y/N)	N	If no, comment:	See Notes
Power source ok? (Y/N)	N	If no, comment:	
Batteries ok? (Y/N)	Y	If no, comment:	

Record Station Status Table Values

(WMD: PConnectCE-->Connect Button-->Measurements Tab-->'Select 'Status' from Table Drop-Down Box)
(Laptop: Device config utility-->Select DataLogger CR1000 -->Connect Button-->Data Monitor tab-->Status table)

Before Maintenance:	After Maintenance:	Time
OSVersion	26	18:15
ProgName	Imelyak_2017	26
StartTime	6/27/17 6:10 PM	Imelyak - 2018
12 V Battery Voltage	12.7	6/12/2018 18:14
Panel Temperature	-0.5	13.3
Watchdog Errors	0	7.9
Lithium Batt Volt	3.4	6
Low 12V Batt Count	0	3.4
Skipped Scan	12	0
		0

2nd visit 18:08 to 18:20

- changed program for 5108 - HD sensor

Maintenance Checklist

Check transmitted values:

Time

18:15

Completed? (Y/N)

Value

OK? (Y/N)

Download Hourly Data

Y

RNIN

0

Y

0.00

RNIN before program update

398.4

WSM

8.1

Y

11.1

SR50 height before

104.5

104.5 in. ; 2016 note

WDD

334

Y

235

Upload new program

No

ATF_109

33.3

Y

40.7

Re-enter RNIN after

0.00

FTF

—

Y

—

Measure and re-enter Sr50a

RHP

75.6

Y

56.3

Clean rain gage

Replaced

BVV

13.3

Y

13.3

Clean temp shield

OK

WDDP

334

Y

235

Level solar sensor

OK

WSMPH

8.1

Y

11.1

Wipe out enclosure

Y

SDI

0.1

Y

0

Replace dessicant

Y

SRW

448

Y

418

Test guy wires, tighten

OK

AT1H

—

Y

—

Tighten bolts and guy wires

Y

AT1L

—

Y

—

Clean battery terminals

OK

STF

35.1

Y

33.5

Clear snow depth area

NA

STF2

33.5

Y

36.9

Brush station vicinity

NA

STF3

33.6

Y

34.1

Take site photos

Y

Const SR50_ht=

104.5

Y

104.5

Tighten elements on YAGI

Y

ATF_ThermX

33.1

Y

39.8

Electric Fence Rehab

NA

ATF_HMP155

33.3

Y

40.2

Sensor Configuration Changes

	Model # out	Serial# out	Model # in	Serial# in	(ft)	(in)
Temp/RH	HMP155	H2940034	HMP155	F1150020		
Solar Radiation						
Wind Speed/Dir	5103-45	140149	5108 Alpine HD	160367		
Snow depth						
Soil Temp 1						
Soil Temp 2						
Soil Temp 3						
Precipitation	TES25	41471-609	TES25-USWR3	30464-402		
Barometric pressure						
Datalogger						
Temp 1						

Comments

To do:

Swap HMP 155 ☒ Swap Wind Monitor ☒ Consider moving SR50a to lower height (many errors) Not this year

On Arrival: Solar Panel Disconnected. Coax Severed. Power cable & conduit chewed.
HMP155 severed. Precip severed. Antenna Bent

- Reconnected Solar Panel. Replaced Battery Cable and Removed Damaged Conduit
Swapped HMP 155. Replaced 05103-45 w/ 5108 Alpine HD.
Replaced Tipping Bucket. Replaced coax. Realigned YAGI (consider replacing next year)
Antenna missing 1 driver line & a few bent. Tightened Solar Panel bolts.

* To Do 2019: Replace Power Cable w/ terminal ends prepared & In Conduit
Add Conduit (2-3 feet)

2nd visit to send New Program for 5108-HD. see page 1.

BEAR DAMAGE

WFMI Maintenance Narrative

(Fill out prior to submission of NAMS post-trip update. Update may contain several station visits.)

Image identifiers of photos taken

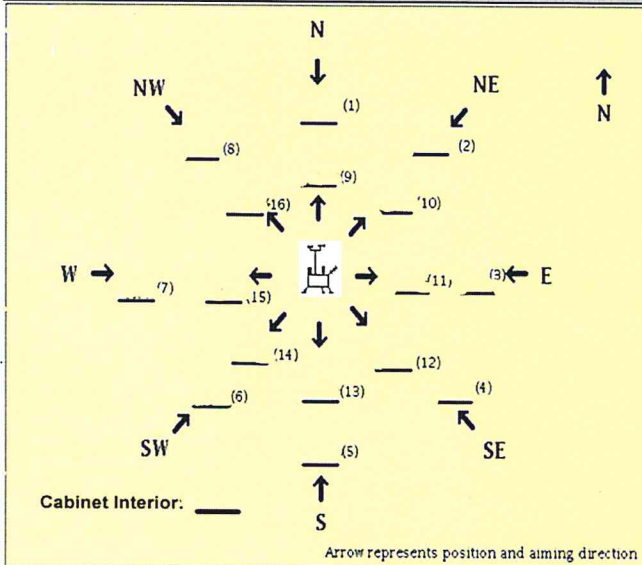


Photo Key	Image on camera #	Direction	On Computer
1		N Towards	
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4		SE Towards	
5		South Towards	
6		SW Towards	
7		W Towards	
8		NW Towards	
9		North Away	
10		NE Away	
11		E Away	
12		SE Away	
13		S Away	
14		SW Away	
15		W Away	
16		NW Away	
17		Enclosure	

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ARCN Program Contact:

Pam Sousanes/Ken Hill

phone: (907) 455-0677/(907)-455-0678

email: pam_sousanes@nps.gov/kenneth_hill@nps.gov

Site name	Kaluich	DCS - Sat. TX Check	RAWS HelpDesk:
Date of this visit	6/12/2018	phone: (757) 824-7450	phone: (208) 387-5475
Operators	P+K	24/7 technical support	Hours: M-F, 6 AM-2:30 PM AST

Pre-Field Information

(Look up the station: www.nifc.blm.gov-->Login-->'Weather' -->'Select Station')

GOES Information:	Sensors	Swap? (Y/N)	Changes/Recent error events?
Latitude	Temp	N	
Longitude	Temp/RH	Y	HMP155
NESDIS ID	Solar Radiation	Y	
Tx Time (mm:ss)	Wind Speed/Dir	Y	damaged; swap with 5018 HD Alpine
Tx Channel	Snow Depth	N	
Antenna Azimuth (Deg Mag)	Soil Temp 1	N	
Antenna Elev. (Deg.)	Soil Temp 2	N	
Currently activated?	Soil Temp 3	N	
Currently transmitting?	Precipitation	N	
NWS Site ID	Datalogger	N	
	Transmitter	N	
	Battery	N	Battery not charging

Record Site Conditions

Time visit begins:	1:15	Time visit ends:	
Station accessible? (Y/N)	Y	If no, comment:	
Cables intact? (Y/N)	N	If no, comment:	Solar panel wires pulled out of box (at panel)
Power source ok? (Y/N)	N	If no, comment:	Not charging
Batteries ok? (Y/N)	Y	If no, comment:	

Record Station Status Table Values

(WMD: PConnectCE-->Connect Button-->Measurements Tab-->'Select Status' from Table Drop-Down Box)
(Laptop: Device config utility-->Select DataLogger CR1000 -->Connect Button-->Data Monitor tab-->Status table)

Before Maintenance:		After Maintenance:	
OSVersion	26	26	
ProgName	Kaluich2017	Kaluich2018	
StartTime	6/28/17 3:08 PM	6/12/18 13:41	
12 V Battery Voltage	11.5	12.2	
Panel Temperature	9.5	10.0	
Watchdog Errors	0	0	Reset if >0
Lithium Batt Volt	3.4	3.4	Replace if <2.9
Low 12V Batt Count	0	0	Reset if >0
Skipped Scan	0	0	Reset if >0

Maintenance Checklist

Check transmitted values:

	Completed? (Y/N)	
Download Hourly Data	Y	
RNIN before program update	1.21	
SR50 height before	80	80 in. ; 2017 notes
Upload new program	Y	
Re-enter RNIN after	Y	
Measure and re-enter Sr50a	Y	
Clean rain gage	N	
Clean temp shield	N	
Level solar sensor	Y	
Wipe out enclosure	N	
Replace dessicant	Y	
Test guy wires, tighten	Y	
Tighten bolts and guy wires	N	
Clean battery terminals	N	
Clear snow depth area	N	
Brush station vicinity	N	
Take site photos		
Tighten elements on YAGI	Y	
Electric Fence Rehab	NA	

	Value	OK? (Y/N)
RNIN	1.21	
WSM	2.2	
WDD	280	
ATF_109	45.4	
FTF	—	
RHP	46.0	
BVV	12.2	
WDDP	285	
WSMPH	9.3	
SDI	1.6	
SRW	771	
AT1H	—	
AT1L	—	
STF	37.7	
STF2	35.1	
STF3	33.2	
Const SR50_ht=	80.6	
ATF_ThermX	46.6	
ATF_HMP155	45.3	

Record Sensor Configuration Changes

	Model # out	Serial# out	Model # in	Serial# in	(ft)	(in)
Temp/RH	HMP155	F3810057	HMP155	F1150022		
Solar Radiation	11200X	PY60189	Li200	PY63670		
Wind Speed/Dir	05013-45	140148	5108 HD	WM160867		
Snow depth						
Soil Temp 1						
Soil Temp 2						
Soil Temp 3						
Precipitation						
Barometric pressure						
Datalogger						
Temp 1						

Comments

To do:

Swap HMP155 ☒ Swap Wind with 5018 Alpine HD ☒ Swap Li200x ☒

Assess Power system (battery not charging) SOLAR PANEL WIRES NOT CONNECTED AT PANEL

Pre-visit Notes: Battery not charging since July 10, 2017; Wind monitor damaged December 2017 (gust/ice?);

- Changed WS to 05108 HD + changed program multiplier (uncommented)
- Update snow cut + add 05108 manuals to computers / sticks
 - BRING NEW COAX CABLE NEXT YEAR. CABLE HAS DAMAGE + WAS TAPED.
 - BEAR VISIT - PULLD CABLES OUT, DAMAGED FEW, MOSTLY COAX + SOLAR PANEL WIRES
 - WIND VANE WAS CRACKED + BROKEN OFF.
 - GOT TRIMBLE GPS
 - UNUSUALLY CALM + PLEASANT!

WFMI Maintenance Narrative

(Fill out prior to submission of NAMS post-trip update. Update may contain several station visits.)

Image identifiers of photos taken

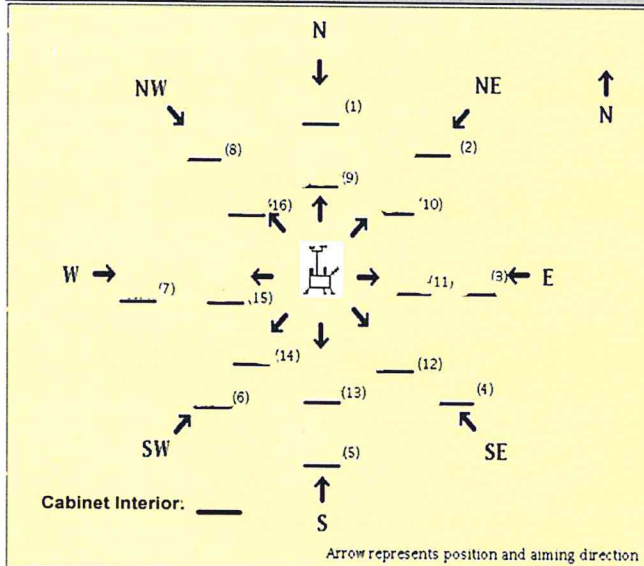


Photo Key	Image on camera #	Direction	On Computer
1		N Towards	
2		NE Towards	
3		E Towards	
4		SE Towards	
5		South Towards	
6		SW Towards	
7		W Towards	
8		NW Towards	
9		North Away	
10		NE Away	
11		E Away	
12		SE Away	
13		S Away	
14		SW Away	
15		W Away	
16		NW Away	
17		Enclosure	

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ARCN Program Contact:

Pam Sousanes/Ken Hill

phone: (907) 455-0677/(907)-455-0678

email: pam_sousanes@nps.gov/kenneth_hill@nps.gov

RAWS HelpDesk:

phone: (208) 387-5475

Hours: M-F, 6 AM-2:30 PM AST

Site name	Pamichtuk	DCS - Sat. TX Check	
Date of this visit	6/26/2017	phone: (757) 824-7450	
Operators	SAUSANES, HILL	24/7 technical support	

Pre-Field Information

(Look up the station: www.nifc.blm.gov-->Login-->'Weather'-->'Select Station')

GOES Information:		Sensors	Swap? (Y/N)	Changes/Recent error events?
Latitude	67 45.977	Temp	N	
Longitude	152 09.854	Temp/RH	Y	HMP45
NESDIS ID	3961E704	Solar Radiation	N	
Tx Time (mm:ss)	0:23:00	Wind Speed/Dir	N	
Tx Channel	108	Snow Depth	N	
Antenna Azimuth (Deg Mag)	143	Soil Temp 1	N	
Antenna Elev. (Deg.)	13	Soil Temp 2	N	
Currently activated?	Y	Soil Temp 3	N	
Currently transmitting?	Y	Precipitation	N	
NWS Site ID	PAMA2	Datalogger	N	
		Transmitter	N	
		Camera SD Card	Y	
		Battery	N	

Record Site Conditions

Time visit begins:	17:50	Time visit ends:	12:30
Station accessible? (Y/N)	Y	If no, comment:	
Cables intact? (Y/N)	Y	If no, comment:	
Power source ok? (Y/N)	Y	If no, comment:	
Batteries ok? (Y/N)	Y	If no, comment:	

Record Station Status Table Values

(WMD: PConnectCE-->Connect Button-->Measurements Tab-->'Select Status' from Table Drop-Down Box)
(Laptop: Device config utility-->Select DataLogger CR1000 -->Connect Button-->Data Monitor tab-->Status table)

	Before Maintenance:		After Maintenance:
OSVersion	25		25
ProgName	Pamichtuk_2017	✓	PAMICHTUK 2017
StartTime	6/27/17 11:19 AM	✓	6/27/17 11:19
12 V Battery Voltage	13.6		13.6
Panel Temperature	11.9		17.6
Watchdog Errors	0	Reset if >0	0
Lithium Batt Volt	3.4	Replace if <2.9	3.4
Low 12V Batt Count	0	Reset if >0	0
Skipped Scan	0	Reset if >0	0

Maintenance Checklist

	Completed? (Y/N)		Value	OK? (Y/N)
Download Hourly Data	Y		RNIN 3.88	
RNIN before program update	3.88		WSM 2.7	
SR50 height before	80.5	80.5 in 2017	WDD 20.4	
Upload new program	N		ATF_109 50.4	
Re-enter RNIN after	No change		FTF	
Measure and re-enter Sr50a	No change		RHP 8.8	
Clean rain gage	N		BVV 13.6	
Clean temp shield	OK		WDDP 315	
Level solar sensor	OK		WSMPH 6.7	
Wipe out enclosure	N		SDI	
Replace dessicant	Y		SRW 450	
Test guy wires, tighten	OK		AT1H	
Tighten bolts and guy wires	OK		AT1L	
Clean battery terminals	N		STF 40.5	
Clear snow depth area	N		STF2 41.8	
Brush station vicinity	N		STF3 32.5	
Take site photos	Y		Const SR50_ht= 80.5	
Swap SD Card in Camera	Y		ATF_ThermX 54.0	

Electric Fence Rehab Replaced Poly wireATF_HMP45 51.3

Record Sensor Configuration Changes

	Model # out	Serial# out	Model # in	Serial# in	(ft)	(in)
Temp/RH	HMP45	C2410024	HMP45	D3520076		
Solar Radiation						
Wind Speed/Dir						
Snow depth						
Soil Temp 1						
Soil Temp 2						
Soil Temp 3						
Precipitation						
Barometric pressure						
Datalogger						
Temp 1						

Comments

To do:

Assess camera condition Good cleaned lens. Swap SD card on camera ✓ Repair Fence Replaced Poly wire and put 5 or 6 connectors back on posts (1 replaced)Swap HMP45 ✓

10 cm. soil temp sensor heaved out 2-3 cm and pushed back in to place.

- Arrived in fog at top of hour + snow depth read 805. next hour, sky cleared and it read 0.0.

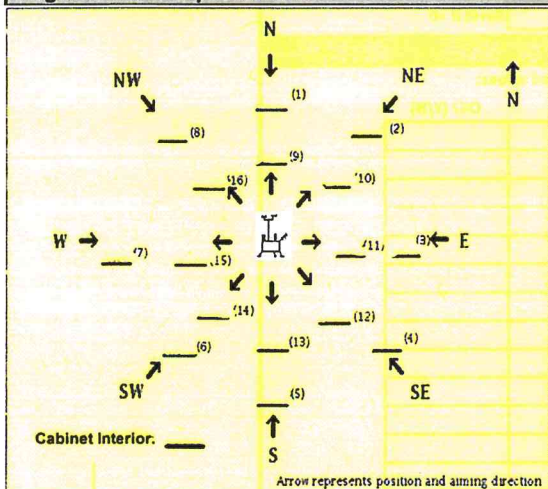
Soil Characterization by D. Swanson
Took Trimble Coordinates
Station looked good!

WFMI Maintenance Narrative

(Fill out prior to submission of NAMS post-trip update. Update may contain several station visits.)

Completed 8/14/2018

Image identifiers of photos taken



Key	Camera Image #	Direction	Comp. Image #
1		N Towards	
2		NE Towards	
3		E Towards	
4		SE Towards	
5		South Towards	
6		SW Towards	
7		W Towards	
8		NW Towards	
9		North Away	
10		NE Away	
11		E Away	
12		SE Away	
13		S Away	
14		SW Away	
15		W Away	
16		NW Away	
17		Enclosure	

ARCNC Weather & Climate Monitoring

Site Visit Worksheet

Version: 8 March 2017

ARCNC Program Contact:

Pam Sousanes/Ken Hill

phone: (907) 455-0677/(907)-455-0678

email: pam_sousanes@nps.gov/kenneth_hill@nps.gov

RAWS HelpDesk:

phone: (208) 387-5475

Hours: M-F, 6 AM-2:30 PM AST

Site name	Chimney Lake	DCS - Sat. TX Check
Date of this visit	6/26/2017	phone: (757) 824-7450
Operators	SOUSANES, KILL, Swanson	24/7 technical support

Pre-Field Information

(Look up the station: www.nifc.blm.gov-->Login-->'Weather' -->'Select Station')

GOES Information:	Sensors	Swap? (Y/N)	Changes/Recent error events?
Latitude	Temp	N	
Longitude	Temp/RH	Y	HMP45
NESDIS ID	Solar Radiation	Y	
Tx Time (mm:ss)	Wind Speed/Dir	Y	5103
Tx Channel	Snow Depth	Y	Reading -99.9 since October 2017
Antenna Azimuth (Deg Mag)	Soil Temp 1	N	
Antenna Elev. (Deg.)	Soil Temp 2	N	
Currently activated?	Soil Temp 3	N	
Currently transmitting?	Precipitation	N	
NWS Site ID	Datalogger	N	
	Transmitter	N	
	Battery	N	

Record Site Conditions

Time visit begins:	15:00	Time visit ends:	
Station accessible? (Y/N)	Y	If no, comment:	
Cables intact? (Y/N)	Y	If no, comment:	
Power source ok? (Y/N)	Y	If no, comment:	
Batteries ok? (Y/N)	Y	If no, comment:	

Record Station Status Table Values

(WMD: PConnectCE-->Connect Button-->Measurements Tab-->'Select 'Status' from Table Drop-Down Box)

(Laptop: Device config utility-->Select DataLogger CR1000 -->Connect Button-->Data Monitor tab-->Status table)

Before Maintenance:		After Maintenance:	
OSVersion	25	25	
ProgName	Chimney_2017	Chimney_2017	
StartTime	6/27/17 9:38 AM	6/26/2017 15:19	
12 V Battery Voltage	13.7	13.7	
Panel Temperature	9.6	12.7	
Watchdog Errors	0	0	Reset if >0
Lithium Batt Volt	3.4	2.4	Replace if <2.9
Low 12V Batt Count	0	0	Reset if >0
Skipped Scan	0	0	Reset if >0

Maintenance Checklist

Completed? (Y/N)	Value	OK? (Y/N)
Download Hourly Data	Y	
RNIN before program update	3.83	
SR50 height before	79.0	
Upload new program	N, But ran SR50 test + reloaded Chimney 2017	
Re-enter RNIN after	Y	
Measure and re-enter Sr50a	78	
Clean rain gage	N	
Clean temp shield	N	
Level solar sensor	Y	
Wipe out enclosure	N	
Replace dessicant	Y	
Test guy wires, tighten	Y	
Tighten bolts and guy wires	Y	
Clean battery terminals	N	
Clear snow depth area	N	
Brush station vicinity	N	
Take site photos	Y	
Tighten elements on YAGI	Y	
	RNIN	2.83
	WSM	2.2
	WDD	9.4
	ATF_109	51.9
	FTF	-
	RHP	77
	BBV	13.6
	WDDP	297
	WSMPH	6.5
	SDI	0
	SRW	576
	AT1H	-
	AT1L	-
	STF	50.0
	STF2	51.2
	STF3	30.1
	STF4	34.8
	Const SR50_ht=	78

Electric Fence Rehab

Not needed

ATF ThermX

51.8

ATF HMP

51.9

Record Sensor Configuration Changes

	Model # out	Serial# out	Model # in	Serial# in	Cable length (ft)	Height/depth (in)
Temp/RH	HMP45	E2630054	HMP45	F4010026		
Solar Radiation	Li200	PY52878	Li200x	89115		
Wind Speed/Dir	5103	WM105730	05103	90948		
Snow depth	SR50a	2544	SR50a	1703		
Soil Temp 1						
Soil Temp 2						
Soil Temp 3						
Precipitation						
Barometric pressure						
Datalogger						
Temp 1						

Comments

To do:

Swap HMP45 ✓

Swap Li200x ✓

Swap 5103 ✓

Replace / Troubleshoot SR50a

Swapped sensor head only; sensor looks OK but should be tested at office.

Station looked great. Fence was in perfect shape, & working on arrival.

Dave S. did soil characterization at the site.

Changed SASD height from 79 to 78 inches.

WFMI Maintenance Narrative

(Fill out prior to submission of NAMS post-trip update. Update may contain several station visits.)

Image identifiers of photos taken

Diagram showing 17 numbered camera positions around a central station. Arrows indicate the direction of each camera's field of view. The diagram includes cardinal and ordinal directions: N, NE, E, SE, S, SW, W, NW. A label 'Cabinet Interior.' points to a specific location. A note at the bottom states 'Arrow represents position and aiming direction'.

Key	Camera Image #	Direction	Comp. Image #
1		N Towards	
2		NE Towards	
3		E Towards	
4		SE Towards	
5		South Towards	
6		SW Towards	
7		W Towards	
8		NW Towards	
9		North Away	
10		NE Away	
11		E Away	
12		SE Away	
13		S Away	
14		SW Away	
15		W Away	
16		NW Away	
17		Enclosure	

ARCN Weather & Climate Monitoring

Site Visit Worksheet

Version: 8 March 2017

ARCN Program Contact:

Pam Sousanes/Ken Hill

phone: (907) 455-0677/(907)-455-0678

email: pam_sousanes@nps.gov/kenneth_hill@nps.gov

Site name	Ram Creek	DCS - Sat. TX Check	RAWS HelpDesk:
Date of this visit	6/27/2018	phone: (757) 824-7450	phone: (208) 387-5475
Operators	SOUSANES / HILL	24/7 technical support	Hours: M-F, 6 AM-2:30 PM AST

Pre-Field Information

(Look up the station: www.nifc.blm.gov-->Login-->'Weather' -->'Select Station')

GOES Information:	Sensors	Swap? (Y/N)	Changes/Recent error events?
Latitude	Temp	Y	station damaged Oct. 11, 2017
Longitude	Temp/RH	Y	HMP45; scheduled maintenance
NESDIS ID	Solar Radiation	Y	Li200x; scheduled maintenance
Tx Time (mm:ss)	Wind Speed/Dir	N	
Tx Channel	Snow Depth	Y?	station damaged Oct. 11, 2017
Antenna Azimuth (Deg Mag)	Soil Temp 1	Y	station damaged Oct. 11, 2017
Antenna Elev. (Deg.)	Soil Temp 2	Y	station damaged Oct. 11, 2017
Currently activated?	Soil Temp 3	Y	station damaged Oct. 11, 2017
Currently transmitting?	Precipitation	Y?	station damaged Oct. 11, 2017
NWS Site ID	Datalogger	N	
	Transmitter	N	
	Battery	N?	Not charging since Oct. 11, 2017

Record Site Conditions

Time visit begins:	1000	Time visit ends:	15:40 - 1200
Station accessible? (Y/N)	Y	If no, comment:	
Cables intact? (Y/N)	N	If no, comment:	All soils, precip, 109 all bad.
Power source ok? (Y/N)	N	If no, comment:	Red wire disconnected from solar panel.
Batteries ok? (Y/N)	Y	If no, comment:	11.7

Record Station Status Table Values

(WMD: PConnectCE-->Connect Button-->Measurements Tab-->'Select 'Status' from Table Drop-Down Box)
 (Laptop: Device config utility-->Select DataLogger CR1000 -->Connect Button-->Data Monitor tab-->Status table)

Before Maintenance:		After Maintenance:	
OSVersion	25	25	
ProgName	Ram2017	RAM 2017	
StartTime	6/27/17 3:08 PM	6/27/2018	12:42
12 V Battery Voltage	11.7	12.2	
Panel Temperature	Did not read	11.2	
Watchdog Errors		0	Reset if >0
Lithium Batt Volt		3.0	Replace if <2.9
Low 12V Batt Count		0	Reset if >0
Skipped Scan		0	Reset if >0

Maintenance Checklist

Completed? (Y/N)	Value	OK? (Y/N)
Download Hourly Data	Y (Twice !!)	
RNIN before program update	0418	
SR50 height before	76	79.4 in.; 2017 notes
Upload new program	N	
Re-enter RNIN after	Set at 0.0	
Measure and re-enter Sr50a	Y	
Clean rain gage	Y	
Clean temp shield	Y	
Level solar sensor	Y	
Wipe out enclosure	Y	
Replace dessicant	Y	
Test guy wires, tighten	Y	
Tighten bolts and guy wires	Y	
Clean battery terminals	Y	
Clear snow depth area	Y	
Brush station vicinity	Y	
Take site photos	Y	
Tighten elements on YAGI	Y	
	RNIN	0.00
	WSM	4.9
	WDD	51
	ATF_109	48.4
	FTF	-
	RHP	88
	BVV	12.2
	WDDP	67
	WSMPH	6.2
	SDI	0
	SRW	26.2
	AT1H	-
	AT1L	-
	STF	44.4
	STF2	43.1
	STF3	26.2
	Const SR50_ht=	76
	ATF_ThermX	49.8

Electric Fence Rehab

ATF_HMP45

47.9

d Sensor Configuration Changes

	Model # out	Serial# out	Model # in	Serial# in	(ft)	(in)
Temp/RH	HMP45	A2220055	HMP45	F4010006		
Solar Radiation	LI200x	63673	LI200x	64299		
Wind Speed/Dir						
Snow depth						
Soil Temp 1		107	107	No S/W		
Soil Temp 2		107	107			
Soil Temp 3		107	107			
Precipitation	TE525		TE525	30959-702		
Barometric pressure						
Datalogger						
Temp 1		109	308903-11	109	308903-16	

Comments

To do:

Replace 109 AT Sensor Damaged ✓ Swap HMP45 ✓ Swap LI200x Damaged ✓Replace/Troubleshoot ST1, ST2, ST3 Replaced all Assess Damage from 10/11/2017 BeaTroubleshoot power/battery Red wire out Reset WFMI configuration with RAWs depot after return to officeRepair Fence Tide Troubleshoot Missed Transmissions (Signal Strength okay as of May 2018...)

Replaced 1 antenna line.
Downloaded as Killik the first time. Downloaded again.

Replaced 109, 3 soils, solar rad (scheduled but cable damaged), tipping bucket.

Revised all sensors.

Revised precip/snow crossbar.

Revised red wire to solar panel, charging light not on, but

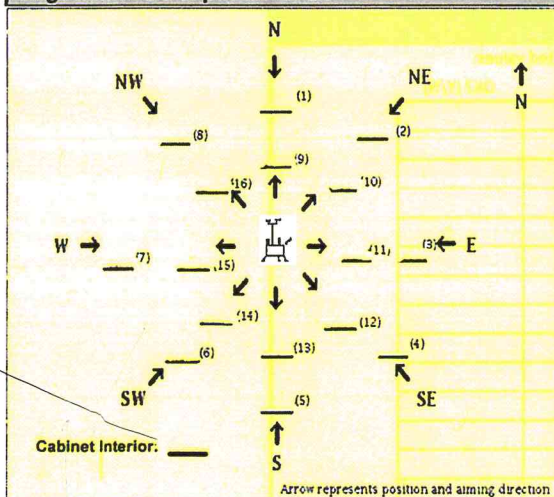
Revised battery reading 12.2, solar 13.5 - was 11.7 on arrival.

Replaced 1 line, 615 cable some chew marks, but not bad.
lots of damage, most connectors off posts.
Replaced small rad. shield for 109 sens. v. Bent + damaged.

WFMI Maintenance Narrative

(Fill out prior to submission of NAMS post-trip update. Update may contain several station visits.)

Image identifiers of photos taken



Key	Camera Image #	Direction	Comp. Image #
1		N Towards	
2		NE Towards	
3		E Towards	
4		SE Towards	
5		South Towards	
6		SW Towards	
7		W Towards	
8		NW Towards	
9		North Away	
10		NE Away	
11		E Away	
12		SE Away	
13		S Away	
14		SW Away	
15		W Away	
16		NW Away	
17		Enclosure	

ARC N Weather & Climate Monitoring

Site Visit Worksheet

Version: 8 March 2017

ARC N Program Contact:

Pam Sousanes/Ken Hill

phone: (907) 455-0677/(907)-455-0678

email: pam_sousanes@nps.gov/kenneth_hill@nps.gov

RAWS HelpDesk:

phone: (208) 387-5475

Hours: M-F, 6 AM-2:30 PM AST

Site name	Killik Pass	DCS - Sat. TX Check
Date of this visit	6/27/2018	phone: (757) 824-7450
Operators	Hill, Sousanes	24/7 technical support

Pre-Field Information

(Look up the station: www.nifc.blm.gov-->Login-->'Weather' -->'Select Station')

GOES Information:		Sensors	Swap? (Y/N)	Changes/Recent error events?
Latitude	67 59.007	Temp	N	
Longitude	155 0.782	Temp/RH	Y	HMP45
NESDIS ID	3961C1E8	Solar Radiation	XN	
Tx Time (mm:ss)	0:22:50	Wind Speed/Dir	Y	
Tx Channel	108	Snow Depth	?	
Antenna Azimuth (Deg Mag)	141	Soil Temp 1	N	
Antenna Elev. (Deg.)	13	Soil Temp 2	N	
Currently activated?	Y	Soil Temp 3	N	
Currently transmitting?	Y	Precipitation	N	
NWS Site ID	KLIA2	Datalogger	N	
		Transmitter	N	
		Battery	N	

Record Site Conditions

Time visit begins:	14:02	Time visit ends:	15:30
Station accessible? (Y/N)	Y	If no, comment:	
Cables intact? (Y/N)	Y	If no, comment:	
Power source ok? (Y/N)	Y	If no, comment:	
Batteries ok? (Y/N)	Y	If no, comment:	

Record Station Status Table Values

(WMD: PConnectCE-->Connect Button-->Measurements Tab-->'Select 'Status' from Table Drop-Down Box)

(Laptop: Device config utility-->Select DataLogger CR1000 -->Connect Button-->Data Monitor tab-->Status table)

Before Maintenance:		After Maintenance:	
OSVersion	25		25
ProgName	Killik2017		Killik2017
StartTime	6/27/17 4:22 PM		6/27/2018 15:22
12 V Battery Voltage	13.6		12.5
Panel Temperature	8.4		13.2
Watchdog Errors	0	Reset if >0	0
Lithium Batt Volt	3.5	Replace if <2.9	3.5
Low 12V Batt Count	0	Reset if >0	0
Skipped Scan	0	Reset if >0	0

Maintenance Checklist

Completed? (Y/N)		Check transmitted values:	
		Value	OK? (Y/N)
Download Hourly Data	Y	RNIN	2.34
RNIN before program update	2.34	WSM	12.2
SR50 height before	77	WDD	355
Upload new program	N	ATF_109	52.5
Re-enter RNIN after	N	FTF	
Measure and re-enter Sr50a	75.5 Replaced sensor read.	RHP	66
Clean rain gage	N	BVV	13.5
Clean temp shield	N	WDDP	355
Level solar sensor	N	WSMPH	12.2
Wipe out enclosure	N	SDI	0
Replace dessicant	Y	SRW	410
Test guy wires, tighten	N	AT1H	
Tighten bolts and guy wires	N	AT1L	
Clean battery terminals	N	STF	44.3
Clear snow depth area	N	STF2	40.1
Brush station vicinity	N	STF3	34.1
Take site photos	Y	Const SR50_ht=	75.5
Tighten elements on YAGI	Y	ATF_ThermX	50.8

Electric Fence Rehab

NA

ATF_HMP45

516

Record Sensor Configuration Changes

	Model # out	Serial# out	Model # in	Serial# in	(ft)	(in)
Temp/RH	HMP45	B1240025	HMP45	F41010025		
Solar Radiation						
Wind Speed/Dir	05103	95225	05103	95226		
Snow depth	SR50a	2546	SR50a-316SS	7330		
Soil Temp 1						
Soil Temp 2						
Soil Temp 3						
Precipitation						
Barometric pressure						
Datalogger						
Temp 1						

Comments

To do:

Swap HMP45 Yes Swap Li200x No Swap 5103 WS-WD YesTroubleshoot Snow Depth Sensor (many errors.... replace desiccant?) No obvious issues. Did not replace. Replaced desiccant.

* Did not replace SR sensor. No Extra sensor in Action Packer

- station looked Great.

- Replaced desiccant in SR50a.

- Ended up replacing SR30 sensor head with newer SR50a-316SS.

WFMI Maintenance Narrative

(Fill out prior to submission of NAMS post-trip update. Update may contain several station visits.)

ge identifiers of photos taken

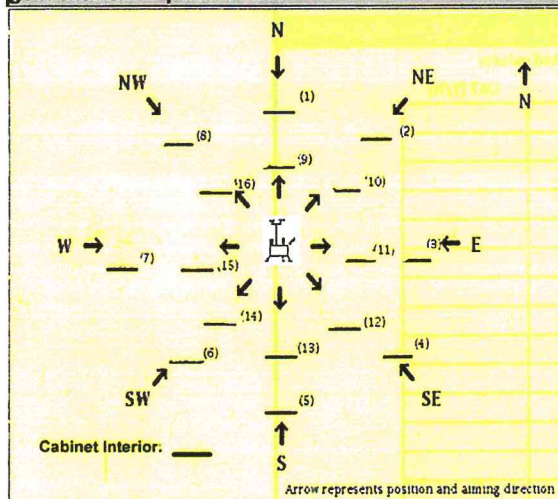


Photo Key	Image on camera #	Direction	On Computer
1		N Towards	
2		NE Towards	
3		E Towards	
4		SE Towards	
5		South Towards	
6		SW Towards	
7		W Towards	
8		NW Towards	
9		North Away	
10		NE Away	
11		E Away	
12		SE Away	
13		S Away	
14		SW Away	
15		W Away	
16		NW Away	
17		Enclosure	

ARCN Weather & Climate Monitoring

Site Visit Worksheet

Version: 8 March 2017

ARCN Program Contact:

Pam Sousanes/Ken Hill

phone: (907) 455-0677/(907)-455-0678

email: pam_sousanes@nps.gov/kenneth_hill@nps.gov

Site name	Killik Pass	DCS - Sat. TX Check	RAWS HelpDesk:
Date of this visit	9/18/2018	phone: (757) 824-7450	phone: (208) 387-5475
Operators	Ken Hill	24/7 technical support	Hours: M-F, 6 AM-2:30 PM AST

Pre-Field Information

(Look up the station: www.nifc.blm.gov-->Login-->'Weather'-->'Select Station')

GOES Information:	Sensors	Swap? (Y/N)	Changes/Recent error events?
Latitude	Temp	N	
Longitude	Temp/RH	Y	HMP45
NESDIS ID	Solar Radiation	N	
Tx Time (mm:ss)	Wind Speed/Dir	?? X??	NO - re-wired
Tx Channel	Snow Depth	?	
Antenna Azimuth (Deg Mag)	Soil Temp 1	N	
Antenna Elev. (Deg.)	Soil Temp 2	N	
Currently activated?	Soil Temp 3	N	
Currently transmitting?	Precipitation	N	
NWS Site ID	Datalogger	N	
	Transmitter	N	
	Battery	N	

Record Site Conditions

Time visit begins:	1430	Time visit ends:	
Station accessible? (Y/N)	Y	If no, comment:	
Cables intact? (Y/N)	N	If no, comment:	HMP sensor pulled out of sensor head
Power source ok? (Y/N)	Y	If no, comment:	
Batteries ok? (Y/N)	Y	If no, comment:	

Record Station Status Table Values

(WMD: PConnectCE-->Connect Button-->Measurements Tab-->'Select Status' from Table Drop-Down Box)
(Laptop: Device config utility-->Select DataLogger CR1000 -->Connect Button-->Data Monitor tab-->Status table)

Before Maintenance:	After Maintenance:
OSVersion	25
ProgName	Killik2017
StartTime	6/27/17 4:22 PM
12 V Battery Voltage	13.8
Panel Temperature	31.7
Watchdog Errors	0
Lithium Batt Volt	3.4
Low 12V Batt Count	0
Skipped Scan	0
Reset if >0	0
Replace if <2.9	3.5
Reset if >0	0
Reset if >0	0

Maintenance Checklist

Completed? (Y/N)	Value	OK? (Y/N)
Download Hourly Data	Y	
RNIN before program update	11.13	
SR50 height before	76.5	
Upload new program	Y	
Re-enter RNIN after	11.13	
Measure and re-enter Sr50a	N	
Clean rain gage	N	
Clean temp shield	OK	
Level solar sensor	N	
Wipe out enclosure	N	
Replace dessicant	N	
Test guy wires, tighten	OK	
Tighten bolts and guy wires	OK	
Clean battery terminals	N	
Clear snow depth area	NA	
Brush station vicinity	NA	
Take site photos		
Tighten elements on YAGI	Y	
	RNIN	11.13
	WSM	5.67
	WDD	16.2
	ATF_109	35.6
	FTF	0
	RHP	83.4
	BVV	13.8
	WDDP	16.8
	WSMPH	7.6
	SDI	0.02
	SRW	82.5
	AT1H	35.9
	AT1L	35.4
	STF	33.5
	STF2	35.9
	STF3	33.6
	Const SR50_ht=	
	ATF_ThermX	35.4
	ATF_HMP45	37.1

Electric Fence Rehab

MA

ATF_HMP45

Record Sensor Configuration Changes

	Model # out	Serial# out	Model # in	Serial# in	(ft)	(in)
Temp/RH	HMP45	F4010025	HMP45	F4010024		
Solar Radiation						
Wind Speed/Dir						
Snow depth						
Soil Temp 1						
Soil Temp 2						
Soil Temp 3						
Precipitation						
Barometric pressure						
Datalogger						
Temp 1						

cal 2017

Comments

To do:

Replace/Troubleshoot HMP45

✓

Re-wire/Replace 5103 WS-WD

Re-wire only

Troubleshoot other station issues

None

- HMP busted at sensor head connection unknown reason. May have been pulled out.

- Replaced HMP Sensor Head + Cable. New cable is 7-wire.
 Ret-sent program for 2018_V2 w/ 7-wire configuration

- WDD 5103 ground wire not connected for WDD. Re-wired only.

WFMJ Maintenance Narrative

(Fill out prior to submission of NAMS post-trip update. Update may contain several station visits.)

ge identifiers of photos taken

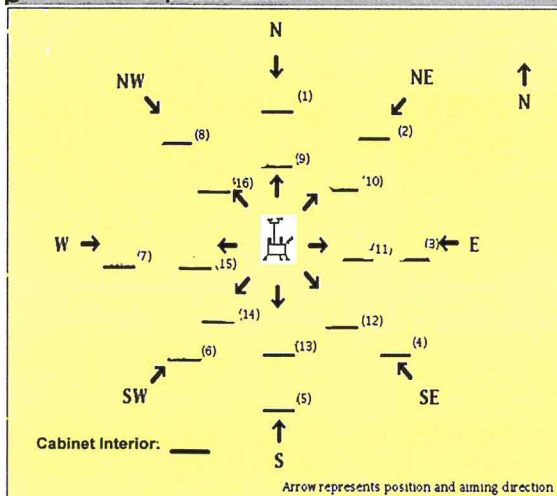


Photo Key	Image on camera #	Direction	On Computer
1		N Towards	
2		NE Towards	
3		E Towards	
4		SE Towards	
5		South Towards	
6		SW Towards	
7		W Towards	
8		NW Towards	
9		North Away	
10		NE Away	
11		E Away	
12		SE Away	
13		S Away	
14		SW Away	
15		W Away	
16		NW Away	
17		Enclosure	

ARCNS Weather & Climate Monitoring

Site Visit Worksheet

Version: 8 March 2017

ARCNS Program Contact:

Pam Sousanes/Ken Hill

phone: (907) 455-0677/(907) 455-0678

email: pam_sousanes@nps.gov/kenneth_hill@nps.gov

Suspect Data

RNIN: Missing Funnel out of level

SDI: out of level

Site name	Sisiak	DCS - Sat. TX Check	RAWS HelpDesk:
Date of this visit	7/21/2018	phone: (757) 824-7450	phone: (208) 387-5475
Operators	Ken, Pam	24/7 technical support	Hours: M-F, 6 AM-2:30 PM AST

Pre-Field Information

(Look up the station: www.nifc.blm.gov-->Login-->'Weather' -->'Select Station')

GOES Information:	Sensors	Swap? (Y/N)	Changes/Recent error events?
Latitude	Temp	N	
Longitude	Temp/RH	Y	HMP45
NESDIS ID	Solar Radiation	Y	LI200X
Tx Time (mm:ss)	Wind Speed/Dir	N	
Tx Channel	Snow Depth	?	Remove? out of level
Antenna Azimuth (Deg Mag)	Soil Temp 1	N	
Antenna Elev. (Deg.)	Soil Temp 2	N	
Currently activated?	Soil Temp 3	?	Seems warm
Currently transmitting?	Precipitation	?	Only a few tips - out of level
NWS Site ID	Datalogger	N	
Fence	Transmitter	N	
	Battery	N	

Record Site Conditions

Time visit begins:	12:45	Time visit ends:	14:15
Station accessible? (Y/N)	Y	If no, comment:	
Cables intact? (Y/N)	Y	If no, comment:	
Power source ok? (Y/N)	Y	If no, comment:	
Batteries ok? (Y/N)	Y	If no, comment:	

Record Station Status Table Values

(WMD: PConnectCE-->Connect Button-->Measurements Tab-->'Select 'Status' from Table Drop-Down Box)
(Laptop: Device config utility-->Select DataLogger CR1000 -->Connect Button-->Data Monitor tab-->Status table)

Before Maintenance:	After Maintenance:
OSVersion	26
ProgName	sisiak_2017
StartTime	7/26/17 2:05 PM
12 V Battery Voltage	13.3
Panel Temperature	19.1
Watchdog Errors	0
Lithium Batt Volt	3.5
Low 12V Batt Count	0
Skipped Scan	0
Reset if >0	0
Replace if <2.9	3.5
Reset if >0	0
Reset if >0	0

Maintenance Checklist

Completed? (Y/N)	Value	OK? (Y/N)
Download Hourly Data	Y	
RNIN before program update	0.47 (out of level)	
SR50 height before	82.2	82.2 in 2017
Upload new program	N	
Re-enter RNIN after	0.00	Reset
Measure and re-enter Sr50a		
Clean rain gage	Y	
Clean temp shield	N	
Level solar sensor	Y	
Wipe out enclosure	NA	
Replace dessicant	Y	
Tighten bolts and guy wires	Y	
Clean battery terminals	N	
Clear snow depth area	NA	
Brush station vicinity	NA	
Take site photos		
Tighten elements on YAGI	Y	
Electric Fence Rehab	New Fence Installed	
Const SR50_ht=	82.2	
RNIN	0.00	
WSM	8.5	
WDD	185	
ATF_109	62.8	
RHP	65.3	
BVV	13.3	
WSMPH	11.1	
WDDP	191.8	
SDI	0.5	
SRW	299	
STF	52.8	
STF2	45.2	
STF3	42.9	
ATF Secondary	62.8	ThermX
	62.9	HMP45
	81.7	TCDT

d Sensor Configuration Changes

	Model # out	Serial# out	Model # in	Serial# in	(ft)	(in)
Temp/RH	HMP45	X3410053	HMP45	B1240010		
Solar Radiation	LI200X	Py 90552	LI200X	Py 52879		
Wind Speed/Dir						
Snow depth						
Soil Temp 1						
Soil Temp 2						
Soil Temp 3						
Precipitation						
Barometric pressure						
Datalogger						
Temp 1						

Comments

Swap HMP45 ☒ Swap LI200X ☒ Assess precip issue ☒ Remove snow NO

Check STF3 OK

Add fence ☒

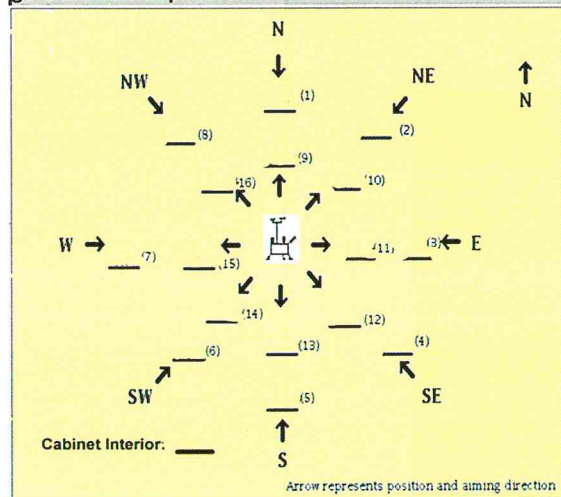
- long crossarm out of level on arrival. Tipping Bucket lid on ground & damaged.
Snow depth sensor out of level

- Did not replace mast. OK for now
- Did not replace SRS0a - Re-leveled.
- Tipping bucket damaged, but field repaired and re-leveled.
- Soil cables had been pulled on and were loose. No damage.
- white nut on AT-RH shield tightened.

FMI Maintenance Narrative

AMS post-trip update. Update may contain several station visits.)

ge identifiers of photos taken



#	To/From	Direction	Photo Numbers
1	Towards station	N	
2		NE	
3		E	
4		SE	
5		S	
6		SW	
7		W	
8		NW	
9	From station	N	
10		NE	
11		E	
12		SE	
13		S	
14		SW	
15		W	
16		NW	
17	Enclosure	Inside	

ARCN Weather & Climate Monitoring

Site Visit Worksheet

Version: 8 March 2017

ARCN Program Contact:

Pam Sousanes/Ken Hill

phone: (907) 455-0677/(907)-455-0678

email: pam_sousanes@nps.gov/kenneth_hill@nps.gov

RAWS HelpDesk:

phone: (208) 387-5475

Hours: M-F, 6 AM-2:30 PM AST

Suspect Data

- All sensors for a few days prior to 7/21/2017
- ST's may have been checked out. Before or after station tapped.

Site name	Kuguruk	DCS - Sat. TX Check	
Date of this visit	7/21/2017	phone: (757) 824-7450	
Operators	SOUSANES/HILL	24/7 technical support	

Pre-Field Information

(Look up the station: www.nifc.blm.gov-->Login-->'Weather'-->'Select Station')

GOES Information:	Sensors	Swap? (Y/N)	Changes/Recent error events?
Latitude	Temp	N	
Longitude	Temp/RH	Y	HMP45
NESDIS ID	Solar Radiation	Y	LI200X
Tx Time (mm:ss)	Wind Speed/Dir	N	
Tx Channel	Snow Depth	N	
Antenna Azimuth (Deg Mag)	Soil Temp 1	N	
Antenna Elev. (Deg.)	Soil Temp 2	N	
Currently activated?	Soil Temp 3	N	
Currently transmitting?	Precipitation	N	
NWS Site ID	Datalogger	N	
Fence	Transmitter	N	
Camera	Battery	N	

Record Site Conditions

Time visit begins:	3:00 PM	Time visit ends:	6:30
Station accessible? (Y/N)	Y	If no, comment:	
Cables intact? (Y/N)	Y	If no, comment:	STATION TAPPED OVER
Power source ok? (Y/N)	Y	If no, comment:	
Batteries ok? (Y/N)	Y	If no, comment:	

Record Station Status Table Values

(WMD: PConnectCE-->Connect Button-->Measurements Tab-->'Select 'Status' from Table Drop-Down Box)
(Laptop: Device config utility-->Select DataLogger CR1000 -->Connect Button-->Data Monitor tab-->Status table)

Before Maintenance:	After Maintenance:
OSVersion	26
ProgName	Kuguruk_2017
StartTime	7/26/17 4:40 PM
12 V Battery Voltage	13.7
Panel Temperature	72.6
Watchdog Errors	0
Lithium Batt Volt	3.5
Low 12V Batt Count	0
Skipped Scan	0

Maintenance Checklist

Completed? (Y/N)	Value	OK? (Y/N)
Download Hourly Data	Y	
RNIN before program update	5.55	
SR50 height before	81	81 in.; 2017 notes
Upload new program	N	
Re-enter RNIN after	5.55	
Measure and re-enter Sr50a	81	
Clean rain gage	Y	
Clean temp shield	OK	
Level solar sensor	Y	
Wipe out enclosure	Y	
Replace dessicant	Y	
Tighten bolts and guy wires	Y	
Clean battery terminals	N	
Clear snow depth area	NA	
Brush station vicinity	NA	
Take site photos	Y	
Tighten elements on YAGI	Y	
Electric Fence Re-lab	Installed	

Check transmitted values:	Value	OK? (Y/N)
Const SR50_ht=	81	
RNIN	5.55	
WSM	10.0	
WDD	183	
ATF_109	62.3	
RHP	69.8	
BVV	13.6	
WSMPH	15.5	
WDDP	16.7	
SRW	10.7	
SDI	0.5	
STF	55.1	
STF2	52.4	
STF3	45.7	
ATF_HMP45	62.6	
ATF_ThermX	62.3	

Record Sensor Configuration Changes

	Model # out	Serial# out	Model # in	Serial# in	(ft)	(in)
Temp/RH	HMP45	E3010020	HMP45	A2120054		
Solar Radiation	L1200X	90559	L1200X	52877		
Wind Speed/Dir	05103	53108	05103	87997		
Snow depth						
Soil Temp 1	Pushed	back into	10 cm			
Soil Temp 2						
Soil Temp 3						
Precipitation						
Barometric pressure						
Datalogger						
Temp 1						

Comments

Swap HMP 45 ✓ Swap LI200X ✓ Swap SD camera card ✓

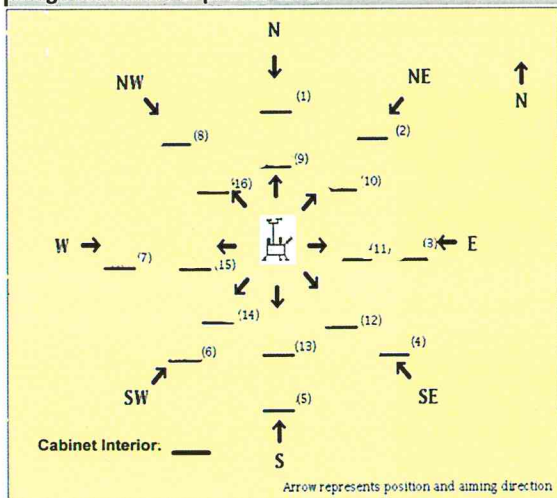
Install fence ✓

- STATION TOPPLED OVER TO THE NORTH. SOUTH LEG PULLED OUT, OTHER LEGS IN. RIGHTED STATION + ONLY DAMAGED SENSOR WAS WS/WD. COAX CABLE WAS PULLED OUT AT ANTENNA + REPLACED. Hair on back of solar panel. Bear (→) DIRT ON FRONT OF
- SWAPPED WS/WD, SR, HMP45, SD Card
- INSTALLED FENCE
- ST1 was heaved out. Not sure if before or after station toppled. check data.
- COW + CALF MOOSE IN DRAINAGE TO THE EAST

WFMI Maintenance Narrative

(Fill out prior to submission of NAMS post-trip update. Update may contain several station visits.)

Image identifiers of photos taken



#	To/From	Direction	Photo Numbers
1	Towards station	N	
2		NE	
3		E	
4		SE	
5		S	
6		SW	
7		W	
8		NW	
9	From station	N	
10		NE	
11		E	
12		SE	
13		S	
14		SW	
15		W	
16		NW	
17	Enclosure	Inside	

K2LLY

	A	B	C	D	E	F	G
1		2018	DATE: 7/21/2018				
2	SENSOR	ASSET# OR SERIAL #	YES	NO	NOTES		
3	WS/WD			X			
4	RH/AT		X	X	48369 IN		
5	RAIN GAUGE			X	36370 OUT		
6	SOLAR RAD			X			
7	GOES ANTENNA			X			
8	GPS ANTENNA			X			
9	FTS F6/G5 LOGGER			X			
10	GOES CABLE			X			
11	GPS CABLE			X			
12	SP CABLE			X			
13	SOLAR PANEL			X			
14	BATTERY			X			
15	RVT PORT B			X			
16	VHF ANTENNA			X			
17							
18							
19							
20							
21	RESET RG	-----		Y			
22	SCAN SENSORS	-----		Y			
23	PICTURES ?	-----		Y			
24							
25	POWER RATIO						
26							
27							
28							
29							
30	NOTES: Downloaded data fire crew brushed hot spot						

ARCN Weather & Climate Monitoring

Site Visit Worksheet

Version: 8 March 2017

ARCN Program Contact:

Pam Sousanes/Ken Hill

phone: (907) 455-0677/(907)-455-0678

email: pam_sousanes@nps.gov/kenneth_hill@nps.gov

RAWS HelpDesk:

phone: (208) 387-5475

Hours: M-F, 6 AM-2:30 PM AST

Suspect Data

SDI
STF 1
STF 2
STF 3
RNIN
5/18/2018 - 7/22/2018

Site name
Date of this visit
Operators

Asik
7/22/2018
Ken & Pam

DCS - Sat. TX Check
phone: (757) 824-7450
24/7 technical support

Pre-Field Information

(Look up the station: www.nifc.blm.gov-->'Weather' -->'Select Station')

GOES Information:	Sensors	Swap? (Y/N)	Changes/Recent error events?
Latitude	Temp	N	
Longitude	Temp/RH	Y	swap HMP45
NESDIS ID	Solar Radiation	Y	swap LI200X
Tx Time (mm:ss)	Wind Speed/Dir	Y	5103
Tx Channel	Snow Depth	?	May 18th - readings went to 18"
Antenna Azimuth (Deg Mag)	Soil Temp 1	?	May 18th damage
Antenna Elev. (Deg.)	Soil Temp 2	?	May 18th damage
Currently activated?	Soil Temp 3	?	May 18th damage
Currently transmitting?	Precipitation	?	Flat line since May 18
NWS Site ID	Datalogger	N	
Camera	Transmitter	N	
Fence	Battery	N	

Record Site Conditions

Time visit begins:	11:20	Time visit ends:	13:15
Station accessible? (Y/N)	Y	If no, comment:	
Cables intact? (Y/N)	N	If no, comment:	Solar Panel cable cut
Power source ok? (Y/N)	N	If no, comment:	Not charging
Batteries ok? (Y/N)	Y	If no, comment:	

Record Station Status Table Values

(WMD: PConnectCE-->Connect Button-->Measurements Tab-->'Select 'Status' from Table Drop-Down Box)
(Laptop: Device config utility-->Select DataLogger CR1000 -->Connect Button-->Data Monitor tab-->Status table)

Before Maintenance:	After Maintenance:
OSVersion	26
ProgName	Asik_2017
StartTime	7/12/16 3:39 PM
12 V Battery Voltage	13.3 12.4
Panel Temperature	17.8 16.3
Watchdog Errors	0 0
Lithium Batt Volt	3.5 3.5
Low 12V Batt Count	0 0
Skipped Scan	0 0

Maintenance Checklist

Completed? (Y/N)	Value	OK? (Y/N)
Download Hourly Data	Y	
RNIN before program update	7.29	
SR50 height before	72.8	
Upload new program	N	
Re-enter RNIN after	1.29	
Measure and re-enter Sr50a	73.5	
Clean rain gage	Y	
Clean temp shield	NA	
Level solar sensor	Y	
Wipe out enclosure	Y	
Replace dessicant	Y	
Tighten bolts and guy wires	Y	
Clean battery terminals	N	
Clear snow depth area	Y	
Brush station vicinity	NA	
Take site photos	Y	
Tighten elements on YAGI	Y	
Electric Fence Rehab	Add fence	

Check transmitted values:

Value	OK? (Y/N)
Const SR50_ht=	73.5
RNIN	1.29
WSM	19.6
WDD	175
ATF_109	61.4
RHP	78.1
BVV	13.3
WSMPH	19.6
WDDP	174
SDI	0.7
SRW	376
STF	55.0
STF2	51.5
STF3	46.1
ATF Secondary	60.2
	61.1
	ThermX
	HMP45

One missing on official

d Sensor Configuration Changes

	Model # out	Serial# out	Model # in	Serial# in	(ft)	(in)
Temp/RH	HMP45	X3410059	HMP45	E71630027		
Solar Radiation	L1200X	90553	L1200X	63692		
Wind Speed/Dir	DIA NOT SWAP					
Snow depth						
Soil Temp 1	SPICED					
Soil Temp 2	SPICED					
Soil Temp 3						
Precipitation						
Barometric pressure						
Datalogger						
Temp 1						

Comments

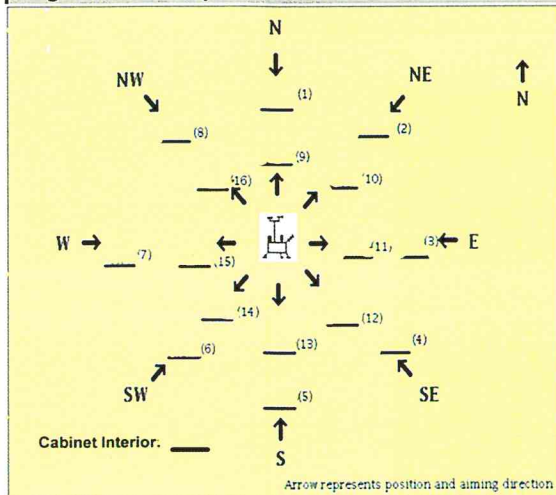
Swap HMP45 ☒ Swap LI200X ☒ Swap Wind 05103 ☒ No Add fence ☒ SD/Precip Crossbar check ☒ leveled
 Replace/Assess Soil 10, 20, and 50cm ☒ See Notes Assess Precip ☒ leveled

- DAMAGE TO ALL SOIL SENSORS. STIF 1+2 WERE CUT, STIF 3 IN MCT BUT CLOSE TO SURFACE, SPICED STIF 1+2 AND RE-SET AW 3 AT CORRECT DEPTHS.
- SNOW DEPTH + TIPING BULGE CROSSBAR OUT OF LEVEL, SD WAS LOW TB HIGH.
- TEETH MARKS ON BATTERY BOX
- 1 GUY WIRE (NE) WAS DETACHED,
- Changed SR50c height to 73.5 inches
- Saved WS-WD sensor for repair. did not swap
- One white screw missing from HMP45 shield. Bring next visit

WFMi Maintenance Narrative

(Fill out prior to submission of NAMS post-trip update. Update may contain several station visits.)

Image identifiers of photos taken



#	To/From	Direction	Photo Numbers
1	Towards station	N	
2		NE	
3		E	
4		SE	
5		S	
6		SW	
7		W	
8		NW	
9	From station	N	
10		NE	
11		E	
12		SE	
13		S	
14		SW	
15		W	
16		NW	
17	Enclosure	Inside	

ARCNC Weather & Climate Monitoring

Site Visit Worksheet

Version: 8 March 2017

ARCNC Program Contact:

Pam Sousanes/Ken Hill

phone: (907) 455-0677/(907)-455-0678

email: pam_sousanes@nps.gov/kenneth_hill@nps.gov

Site name: Tahinichok

Date of this visit: 7/22/2018

Operators: SOUSANES THILL

DCS - Sat. TX Check

phone: (757) 824-7450

24/7 technical support

RAWS HelpDesk:

phone: (208) 387-5475

Hours: M-F, 6 AM-2:30 PM AST

Pre-Field Information

(Look up the station: www.nifc.blm.gov-->Login-->'Weather' -->'Select Station')

GOES Information:

Latitude: 67 33.0090

Longitude: 163 34.0310

NESDIS ID: 396147FC

Tx Time (mm:ss): 0:39:20

Tx Channel: 152

Antenna Azimuth (Deg Mag): 137

Antenna Elev. (Deg.): 12

Currently activated? Y

Currently transmitting? Y

NWS Site ID: TAHA2

Fence: Improve

Camera: N

Sensors

Temp: N

Temp/RH: Y

Solar Radiation: N

Wind Speed/Dir: N

Snow Depth: ?

Soil Temp 1: N

Soil Temp 2: N

Soil Temp 3: N

Precipitation: N

Datalogger: N

Transmitter: ?

Battery: N

Swap?

(Y/N)

Changes/Recent error events?

HMP45; replace with last cable

Reading 25"; crossarm level?

TX spotty, check antenna

Record Site Conditions

Time visit begins: 12:15

Station accessible? (Y/N): Y

Cables intact? (Y/N): Y

Power source ok? (Y/N): Y

Batteries ok? (Y/N): Y

Time visit ends:

If no, comment:

If no, comment: HMP45 BROKE OFF

If no, comment:

If no, comment:

Record Station Status Table Values

(WMD: PConnectCE-->Connect Button-->Measurements Tab-->'Select Status' from Table Drop-Down Box)

(Laptop: Device config utility-->Select DataLogger CR1000 -->Connect Button-->Data Monitor tab-->Status table)

Before Maintenance:

OSVersion: 26

ProgName: Tahinichok_2017

StartTime: 7/27/2017 12:00AM

12 V Battery Voltage:

Panel Temperature:

Watchdog Errors:

Lithium Batt Volt:

Low 12V Batt Count:

Skipped Scan:

12 am?

Reset if >0

Replace if <2.9

Reset if >0

Reset if >0

After Maintenance:

26

Tahinichok

7/22/2018

13.21

16.16

0

2.5

0

0

2017

10:40

Reset if >0

Replace if <2.9

Reset if >0

Reset if >0

Maintenance Checklist

Check transmitted values:

Completed? (Y/N)

Download Hourly Data: Y

RNIN before program update: 1.59

SR50 height before: 80.5

Upload new program: N

Re-enter RNIN after: 1.59

Measure and re-enter SR50a: 49.5

Clean rain gage: OK

Clean temp shield: OK

Level solar sensor: Y

Wipe out enclosure: OK

Replace dessicant: Y

Tighten bolts and guy wires: Y

Clean battery terminals: N

Clear snow depth area: Y

Brush station vicinity: NA

Take site photos:

Tighten elements on YAGI: Y

Electric Fence Rehab: Y. Post ok. Strong new wire

80.5 from 2017 note

(only for SR50 test...)

Value OK? (Y/N)

RNIN: 1.59

WSM: 9.1

WDD: 209

ATF_109: 58.7

RHP: 95.1

BVV: 13.5

WSMPH: 9.1

WDDP: 209

SRW: 132

SDI: 0

STF: 16.3

STF2: 53.5

STF3: 49.3

STF4: 42.4

ATF_HMP45: 58.7

ATF_ThermX: 58.7

Suspect Data

RNIN } out of level
SDI }
SRW } out of level
WS-WDD } out of level
- see photos
WS-WDD } pegged against
tipping bucket

d Sensor Configuration Changes

	Model # out	Serial# out	Model # in	Serial# in	(ft)	(in)
Temp/RH	HMP45	X3410050	HMP45	X3410052		
Solar Radiation						
Wind Speed/Dir						
Snow depth						
Soil Temp 1						
Soil Temp 2						
Soil Temp 3						
Precipitation						
Barometric pressure						
Datalogger						
Temp 1						

Comments

Swap HMP45; replace cable ☒ Check SD/Precip crossbar again ☒ Check YAGI antenna OK

Improve fence; more connectors or double posts. fence looked decent, but was not grounded. Replacing wire & replaced 2 post connectors

WIND SENSOR PEGGED AGAINST TB

- BOTH CROSSBARS OUT OF LEVEL. moved lower to rest on solar panel.

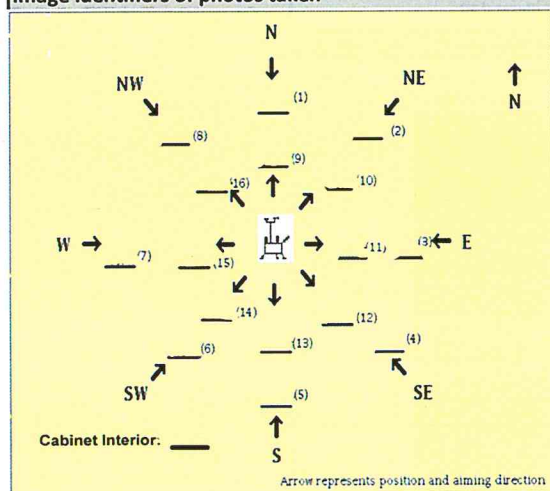
- HMP45 busted. replaced cable & sensor.

- WS-WD / SR crossarm out of level due to crooked mast. Moved south leg of tripod down a few notches

WFMI Maintenance Narrative

(Fill out prior to submission of NAMS post-trip update. Update may contain several station visits.)

Image identifiers of photos taken



# To/From	Direction	Photo Numbers
1 Towards station	N	
2	NE	
3	E	
4	SE	
5	S	
6	SW	
7	W	
8	NW	
9 From station	N	
10	NE	
11	E	
12	SE	
13	S	
14	SW	
15	W	
16	NW	
17 Enclosure	Inside	

ARC N Weather & Climate Monitoring

Site Visit Worksheet

Version: 8 March 2017

ARC N Program Contact:

Pam Sousanes/Ken Hill

phone: (907) 455-0677/(907)-455-0678

email: pam_sousanes@nps.gov/kenneth_hill@nps.gov

RAWS HelpDesk:

phone: (208) 387-5475

Hours: M-F, 6 AM-2:30 PM AST

Site name	Mt. Noak	DCS - Sat. TX Check	
Date of this visit	7/22/2018	phone: (757) 824-7450	
Operators	Sousanes Hill	24/7 technical support	

Pre-Field Information

(Look up the station: www.nifc.blm.gov-->Login-->'Weather' -->'Select Station')

GOES Information:	Sensors	Swap? (Y/N)	Changes/Recent error events?
Latitude	Temp	N	
Longitude	Temp/RH	Y	HMP45
NESDIS ID	Solar Radiation	N	
Tx Time (mm:ss)	Wind Speed/Dir	N	
Tx Channel	Snow Depth	N	
Antenna Azimuth (Deg Mag)	Soil Temp 1	N	
Antenna Elev. (Deg.)	Soil Temp 2	N	
Currently activated?	Soil Temp 3	N	
Currently transmitting?	Precipitation	N	
NWS Site ID	Datalogger	N	
Fence	Transmitter	N	
Camera	Battery	N	

Record Site Conditions

Time visit begins:	1410	Time visit ends:	1630
Station accessible? (Y/N)	Y	If no, comment:	
Cables intact? (Y/N)	Y	If no, comment:	
Power source ok? (Y/N)	Y	If no, comment:	
Batteries ok? (Y/N)	Y	If no, comment:	

Record Station Status Table Values

(WMD: PConnectCE-->Connect Button-->Measurements Tab-->'Select 'Status' from Table Drop-Down Box)

(Laptop: Device config utility-->Select DataLogger CR1000 -->Connect Button-->Data Monitor tab-->Status table)

Before Maintenance:	After Maintenance:
OSVersion	26
ProgName	noak_2017
StartTime	7/27/17 6:02 PM
12 V Battery Voltage	13.4
Panel Temperature	20.5
Watchdog Errors	0
Lithium Batt Volt	3.5
Low 12V Batt Count	0
Skipped Scan	0

Maintenance Checklist

Completed? (Y/N)	Check transmitted values:
Download Hourly Data	Const SR50_ht= 44.9 Value OK? (Y/N)
RNIN before program update	RNIN 4.45
SR50 height before	WSM 11.4
Upload new program	WDD 153.9
Re-enter RNIN after	ATF_109 64.9
Measure and re-enter Sr50a	RHP 71.4
Clean rain gage	BBV 13.4
Clean temp shield	WSMPH 13.1
Level solar sensor	WDDP 163.6
Wipe out enclosure	SDI 0
Replace dessicant	SRW 420.4
Tighten bolts and guy wires	STF 51.3
Clean battery terminals	STF2 49.8
Clear snow depth area	STF3 47.8
Brush station vicinity	STF4 45.0
Take site photos	ATF_HMP45 65.2
Tighten elements on YAGI	ATF_ThermX 65.2

Suspect Data

RNIN Out of Level
SDI

15:59 (tested snow)

77.4 in.; 2017 notes

Reloaded / tested snow

installed new yagi

Electric Fence Rehab

new fence

Record Sensor Configuration Changes

	Model # out	Serial# out	Model # in	Serial# in	(ft)	(in)
Temp/RH	HMP45C	Y2410067	HMP45C	AZ120053		
Solar Radiation						
Wind Speed/Dir						
Snow depth						
Soil Temp 1						
Soil Temp 2						
Soil Temp 3						
Precipitation						
Camera	CG5MPX	9700041696				
Datalogger						
Temp 1						

Comments

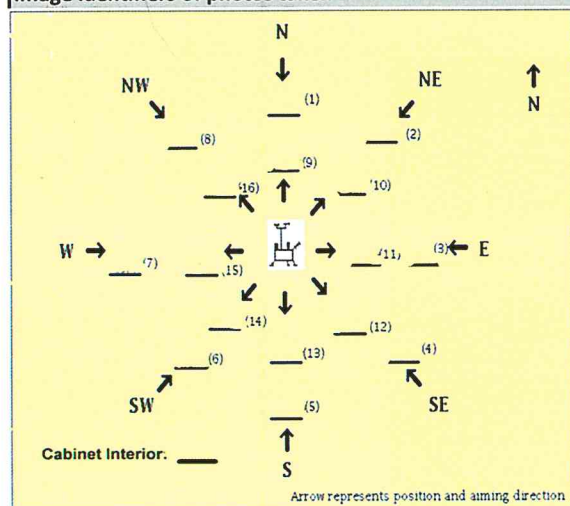
 Swap HMP45 ☒ Install fence ☒ Install new camera battery ☒

- Tipping Bucket / SR50c cross arm out of level on arrival.
- YAGI fines x4 broken off on arrival.
- Scratch / teeth marks on battery box & enclosure.
- moved crossbar down to rest on top of enclosure, to help w/ level issue. Tipping bucket next to snow depth sensor.
- new snow depth height 44.9 in.
- replaced yagi
- installed fence
- SD card was in camera. Checked and left. Camera in good condition.

WFMI Maintenance Narrative

(Fill out prior to submission of NAMS post-trip update. Update may contain several station visits.)

Image identifiers of photos taken



#	To/From	Direction	Photo Numbers
1	Towards station	N	
2		NE	
3		E	
4		SE	
5		S	
6		SW	
7		W	
8		NW	
9	From station	N	
10		NE	
11		E	
12		SE	
13		S	
14		SW	
15		W	
16		NW	
17	Enclosure	Inside	

HDD DDD #111

	A	B	C	D	E	F	G
1		2018		DATE: 7/24/2018			
2	SENSOR	ASSET# OR SERIAL #	YES	NO	NOTES		
3	WS/WD			X			
4	RH/AT		X		41641 IN		
5	RAIN GAUGE			X	42344 OUT		
6	SOLAR RAD			X			
7	GOES ANTENNA			X			
8	GPS ANTENNA			X			
9	FTS F6/G5 LOGGER			X			
10	GOES CABLE			X			
11	GPS CABLE			X			
12	SP CABLE			X			
13	SOLAR PANEL			X			
14	BATTERY			X			
15	RVT PORT B			X			
16	VHF ANTENNA			X			
17							
18							
19							
20							
21	RESET RG	-----	y		Reading 8.17		
22	SCAN SENSORS	-----	y				
23	PICTURES ?	-----	y				
24							
25	POWER RATIO						
26							
27							
28							
29							

NOTES:

Repaired bear fence
 Replaced STF 1 + STF 2 / not working.
 Added additional 3 to 1 SDI cable

30

~~SDI Mapping~~

SDI Mapping

~~SDI A~~
~~Solar STF 2 Wind~~
~~SDI B~~
~~STF 1 STF 2~~
~~SDI 3~~
 7 (2)

SDI A
 WIND STF2 STF3
 2 7 6

SDI B
 Solar STF1
 1 0
 (middle not at all)

ARCN Weather & Climate Monitoring
Site Visit Worksheet
Version: 8 March 2017

ARCN Program Contact:

Pam Sousanes/Ken Hill

phone: (907) 455-0677/(907)-455-0678

email: pam_sousanes@nps.gov/kenneth_hill@nps.gov

RAWS HelpDesk:

phone: (208) 387-5475

Hours: M-F, 6 AM-2:30 PM AST

Site name	Ella Creek	DCS - Sat. TX Check	
Date of this visit	7/24/2018	phone: (757) 824-7450	
Operators	SOUSANES, HILL	24/7 technical support	

Pre-Field Information

(Look up the station: www.nifc.blm.gov-->Login-->'Weather' -->'Select Station')

GOES Information:	Sensors	Swap? (Y/N)	Changes/Recent error events?
Latitude 65 16.511	Temp	?	Looked okay before TX stopped
Longitude 163 49.2080	Temp/RH	Y	Replace Shield (No shield)
NESDIS ID 396182E2	Solar Radiation	Y	Looked okay before TX stopped
Tx Time (mm:ss) 0:40:00	Wind Speed/Dir	YN	Replace with 5108 Alpine HD
Tx Channel 152	Snow Depth	? Y	SR50a Replaced
Antenna Azimuth (Deg Mag) 136	Soil Temp 1	?	Looked okay before TX stopped
Antenna Elev. (Deg.) 14	Soil Temp 2	?	Looked okay before TX stopped
Currently activated? Y	Soil Temp 3	?	Looked okay before TX stopped
Currently transmitting? N	Precipitation	Funnel only	spiked in March, suspect damage
NWS Site ID ELLA2	Datalogger	?	
Camera N	Transmitter	?	Tx stopped April 2018
Fence N	Battery	?	Looked okay before TX stopped

Record Site Conditions

Time visit begins: 3:50 PM	Time visit ends:	
Station accessible? (Y/N) Y	If no, comment:	
Cables intact? (Y/N) Y	If no, comment:	
Power source ok? (Y/N) Y	If no, comment:	
Batteries ok? (Y/N) Y	If no, comment:	

Record Station Status Table Values

(WMD: PConnectCE-->Connect Button-->Measurements Tab-->'Select 'Status' from Table Drop-Down Box)

(Laptop: Device config utility-->Select DataLogger CR1000 -->Connect Button-->Data Monitor tab-->Status table)

Before Maintenance:	After Maintenance:
OSVersion 26	26
ProgName Ella_2017	9/12/2017
StartTime 8/9/17 1:52 PM	7/24/2018 17:16
12 V Battery Voltage 13.5	13.3
Panel Temperature 19.5	18.6
Watchdog Errors 0	0
Lithium Batt Volt 3.9	2.4
Low 12V Batt Count 0	0
Skipped Scan 0	0
Reset if >0	Reset if >0
Replace if <2.9	Replace if <2.9
Reset if >0	Reset if >0
Reset if >0	Reset if >0

Maintenance Checklist

Completed? (Y/N)	Value	OK? (Y/N)
Download Hourly Data Y	Const SR50_ht= 76.5	Y
RNIN before program update 8.68	RNIN 8.68	
SR50 height before 74	WSM 5.3	
Upload new program yes after SR50 test program	WDD 345	
Re-enter RNIN after 8.68	ATF_109 60.9	
Measure and re-enter Sr50a 76.5	RHP 76	
Clean rain gage Y	BBV 12.4	
Clean temp shield N	WSMPH 5.3	
Level solar sensor Y	WDDP 345	
Wipe out enclosure Y	SRW 233	
Replace dessicant	SDI 0	
Tighten bolts and guy wires Y	STF 59.0	
Clean battery terminals N	STF2 57.5	
Clear snow depth area N	STF3 51.2	
Brush station vicinity NA	STF4	
Take site photos	ATF HMP45 61.1	
Tighten elements on YAGI need to replace	ATF ThermX 60.4	

Suspect Data

RNIN: Missing funnel [March(?)]

SDI: sensor replaced 7/24/2018

Electric Fence Rehab

NA

Record Sensor Configuration Changes

	Model # out	Serial# out	Model # in	Serial# in	(ft)	(in)
Temp/RH	HMP45	X2120034	HMP45	F4010027		
Solar Radiation	Li200x	60144	Li200X	60147		
Wind Speed/Dir	5108	Not changing. Swapped last year.				
Snow depth						
Soil Temp 1						
Soil Temp 2						
Soil Temp 3						
Precipitation	TE525	Replaced funnel (missing)				
Barometric pressure						
Datalogger						
Temp 1						

Comments

To do: (station stopped transmitting April 7)

Troubleshoot Transmissions (suspect Antenna damage) yes damaged Replace YAGI (7/25) Replace HMP Shield No - did this last year
 Swap Li200x ✓ Swap 5018 Alpine HD Swapped last year consider replacing program with correct order for WDDP and WSMP
 Consider replacing HMP Sensor ✓ Probably need to replace tipping Bucket Replaced funnel
 Consider eventually getting new antenna model/Iridium?

- YAGI WAS BROKEN OFF AT MAST CONNECTION + TWISTED AROUND AND FACING NW TOWARDS GROUND. NEED TO RETURN ON 7/25 TO REPLACE.
- TIPPING BUCKET FUNNEL MISSING, REPLACED FUNNEL. TUBE LOOKED FOR IT AND FOUND PART OF AN OLD WIND SENSOR + A SPRUCE.
- REPLACED HAD US + CABLE. CABLE STILL WORKS IF NEEDED - JUST SOME CORROSION.
- REPLACED SASOa sensor head; distance 2" more than previous sensor.

WFMJ Maintenance Narrative

(Fill out prior to submission of NAMS post-trip update. Update may contain several station visits.)

Image identifiers of photos taken

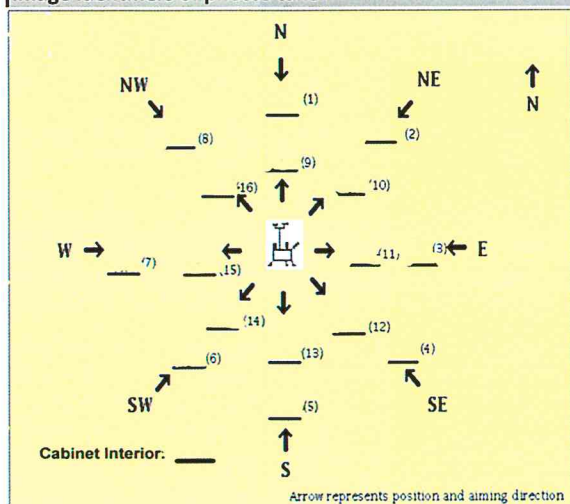


Photo Key	Image on camera #	Direction	On Computer
1		N Towards	
2		NE Towards	
3		E Towards	
4		SE Towards	
5		South Towards	
6		SW Towards	
7		W Towards	
8		NW Towards	
9		North Away	
10		NE Away	
11		E Away	
12		SE Away	
13		S Away	
14		SW Away	
15		W Away	
16		NW Away	
17		Enclosure	

ARCN Weather & Climate Monitoring
Site Visit Worksheet
Version: 8 March 2017

ARCN Program Contact:

Pam Sousanes/Ken Hill

phone: (907) 455-0677/(907)-455-0678

email: pam_sousanes@nps.gov/kenneth_hill@nps.gov

Suspect Data

Site name	Midnight Mountain	DCS - Sat. TX Check	RAWS HelpDesk:
Date of this visit	7/25/2018	phone: (757) 824-7450	phone: (208) 387-5475
Operators	Ken + Pam	24/7 technical support	Hours: M-F, 6 AM-2:30 PM AST

Pre-Field Information

(Look up the station: www.nifc.blm.gov-->'Weather'-->'Select Station')

GOES Information:	Sensors	Swap? (Y/N)	Changes/Recent error events?
Latitude 65 49.2200	Temp	? N	
Longitude 164 32.5645	Temp/RH	N/A	
NESDIS ID 395104F6	Solar Radiation	N/A	
Tx Time (mm:ss) 00:38:40	Wind Speed/Dir	N/A	
Tx Channel 152	Snow Depth	N/A	
Antenna Azimuth (Deg Mag) 135	Soil Temp 1	N/A	
Antenna Elev. (Deg.) 12	Soil Temp 2	N/A	
Currently activated? N	Soil Temp 3	N/A	
Currently transmitting? N	Precipitation	N/A	
NWS Site ID MITA2	Datalogger	N/A	
	Transmitter	N/A	
	Battery	N	Small solar panel

Record Site Conditions

Time visit begins:	11:45 9:50	Time visit ends:	12:15
Station accessible? (Y/N) Y		If no, comment:	
Cables intact? (Y/N) N 4		If no, comment:	Power and all soils severed
Power source ok? (Y/N) N 4		If no, comment:	Battery not connected, running off solar panel
Batteries ok? (Y/N) Y 4		If no, comment:	Removed

Record Station Status Table Values

(WMD: PConnectCE-->Connect Button-->Measurements Tab-->'Select 'Status' from Table Drop-Down Box)
(Laptop: Device config utility-->Select DataLogger CR1000 -->Connect Button-->Data Monitor tab-->Status table)

Before Maintenance:		After Maintenance:	
OSVersion	25		
ProgName	Midnight_2017_ThermX_Air		
StartTime	8/10/2017 10:22 AM 10:46		
12 V Battery Voltage	13.9	13.9	
Panel Temperature	18.1	18.3	
Watchdog Errors	0	0	Reset if >0
Lithium Batt Volt	3.5	3.5	Replace if <2.9
Low 12V Batt Count	0	0	Reset if >0
Skipped Scan	0	0	Reset if >0

Maintenance Checklist

Completed? (Y/N)	Check values:
	Value OK? (Y/N)
Download Hourly Data	AirT1 61.4
RNIN before program update	AirT2 58.1
SR50 height before	AirT3 61.9
Upload new program	
Re-enter RNIN after	
Measure and re-enter Sr50a	
Clean rain gage	
Clean temp shield	
Level solar sensor	
Wipe out enclosure	
Replace dessicant	
Tighten bolts and guy wires	
Clean battery terminals	
Clear snow depth area	
Brush station vicinity	
Take site photos	
Tighten elements on YAGI	

Electric Fence Rehab

N/A

Record Sensor Configuration Changes

	Model # out	Serial# out	Model # in	Serial# in	(ft)	(in)
Temp/RH						
Solar Radiation						
Wind Speed/Dir						
Snow depth						
Soil Temp 1						
Soil Temp 2						
Soil Temp 3						
Precipitation						
Barometric pressure						
Datalogger						
Temp 1						

Comments

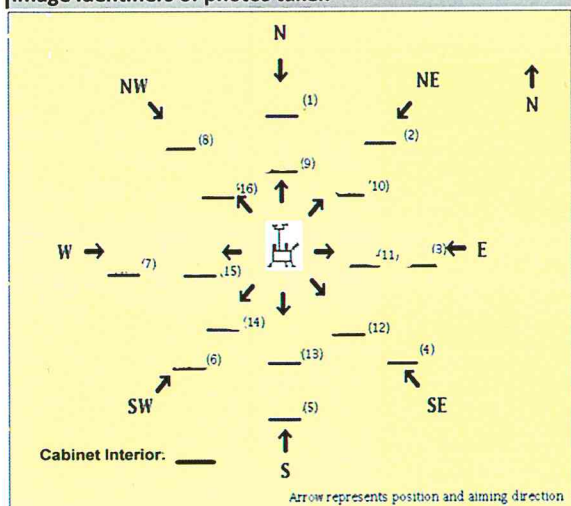
Install 10 W panel with two u-bolts, remove large panel NO

- 75 W solar panel damaged - frame pulling away from panel. Repaired w/ bailing wire.
- Moved AT-RH shield so both are now on S side of mast
- Next year consider replacing solar panel

WFMI Maintenance Narrative

(Fill out prior to submission of NAMS post-trip update. Update may contain several station visits.)

Image identifiers of photos taken



# To/From	Direction	Photo Numbers
1 Towards station	N	
2	NE	
3	E	
4	SE	
5	S	
6	SW	
7	W	
8	NW	
9 From station	N	
10	NE	
11	E	
12	SE	
13	S	
14	SW	
15	W	
16	NW	
17 Enclosure	Inside	

ARCN Weather & Climate Monitoring
Site Visit Worksheet
Version: 8 March 2017

ARCN Program Contact:

Pam Sousanes/Ken Hill

phone: (907) 455-0677/(907)-455-0678

email: pam_sousanes@nps.gov/kenneth_hill@nps.gov

RAWS HelpDesk:

phone: (208) 387-5475

Hours: M-F, 6 AM-2:30 PM AST

Suspect Data
- RNIN (out of level / upside down / mis tied)
- WS-WD (damaged)
- SR (Way out of level, see photo)
- SD (out of level)
Date of damage: May?

Site name	Devil Mountain	DCS - Sat. TX Check	
Date of this visit	7/25/2018	phone: (757) 824-7450	
Operators	Sousanes/Hill	24/7 technical support	

Pre-Field Information

(Look up the station: www.nifc.blm.gov-->'Weather'-->'Select Station')

GOES Information:	Sensors	Swap? (Y/N)	Changes/Recent error events?
Latitude	Temp	N	
Longitude	Temp/RH	Y	HMP45
NESDIS ID	Solar Radiation	?	Looks out of level
Tx Time (mm:ss)	Wind Speed/Dir	Y	5103; wind out since May
Tx Channel	Snow Depth	N	
Antenna Azimuth (Deg Mag)	Soil Temp 1	N	
Antenna Elev. (Deg.)	Soil Temp 2	N	
Currently activated?	Soil Temp 3	N	
Currently transmitting?	Precipitation	N	
NWS Site ID	Datalogger	N	
Fence	Transmitter	?	Some missed TX, corrosion
Camera	Battery	N	

Record Site Conditions

Time visit begins:	16:11 11:30	Time visit ends:	
Station accessible? (Y/N)	Y	If no, comment:	
Cables intact? (Y/N)	Y	If no, comment:	
Power source ok? (Y/N)	Y	If no, comment:	
Batteries ok? (Y/N)	Y	If no, comment:	

Record Station Status Table Values

(WMD: PConnectCE-->Connect Button-->Measurements Tab-->'Select 'Status' from Table Drop-Down Box)
(Laptop: Device config utility-->Select DataLogger CR1000 -->Connect Button-->Data Monitor tab-->Status table)

Before Maintenance:	After Maintenance:
OSVersion	26
ProgName	Devil_2017
StartTime	8/10/17 11:44
12 V Battery Voltage	13.3
Panel Temperature	13.4
Watchdog Errors	0
Lithium Batt Volt	3.5
Low 12V Batt Count	0
Skipped Scan	0
Reset if >0	0
Replace if <2.9	3.5
Reset if >0	0
Reset if >0	0

Maintenance Checklist

Completed? (Y/N)	Value	OK? (Y/N)
Download Hourly Data	Y	
RNIN before program update	1.70	
SR50 height before	83	
Upload new program	Y	
Re-enter RNIN after	Y	
Measure and re-enter Sr50a	Y	
Clean rain gage	Y	
Clean temp shield	Y	
Level solar sensor	Y	
Wipe out enclosure	Y	
Replace dessicant	Y	
Tighten bolts and guy wires	Y	
Clean battery terminals	Y	
Clear snow depth area	Y	
Brush station vicinity	Y	
Take site photos	Y	
Tighten elements on YAGI	Y	
Electric Fence Rehab	Y	
Const SR50_ht=	50.5	
RNIN	1.70	
WSM	10.1	
WDD	34.8	
ATF_109	61.9	
RHP	73	
BVV	13.4	
WSMPH	12.7	
WDDP	34.2	
SRW	520	
SDI	0.16	
STF	53.5	
STF2	47.0	
STF3	37.8	
STF4		
ATF HMP45	62.7	
ATF ThermX	62.6	

Record Sensor Configuration Changes

	Model # out	Serial# out	Model # in	Serial# in	(ft)	(in)
Temp/RH	HMP45	E2630055	HMP45	X23110049		
Solar Radiation						
Wind Speed/Dir	05103	95880	05103	85177		
Snow depth						
Soil Temp 1						
Soil Temp 2						
Soil Temp 3						
Precipitation						
Barometric pressure						
Datalogger						
Temp 1						

Comments

Swap HMP45 ☒ Swap wind 05103 ☒ Repair fence/replace solar charger ☒ Replace coax cable NO - GOOD

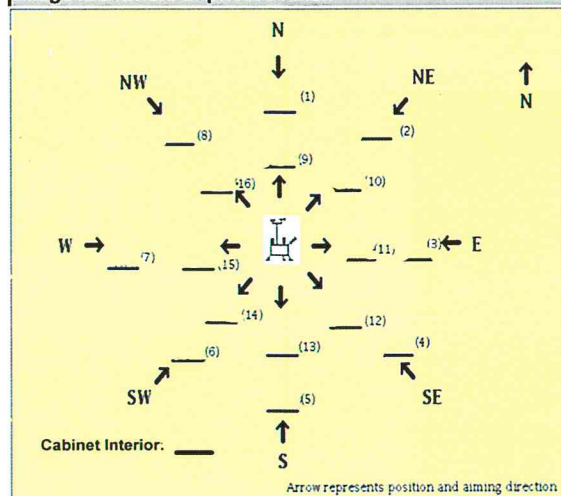
Check wind/SR crossbar out of level.

- BOTH CROSSBARS OUT OF LEVEL; WIND SENSOR BUSTED OFF + NU-RAIL FACING DOWN. TIPPING BUILT NU-RAIL ALSO TWISTED DOWN, FUNKY ON GROUND.
- REPLACED WIND; OTHER ONE DAMAGED BEYOND REPAIR.
- RESET LONG CROSSBAR LOW ON SOLAR PANEL, WITH TB+GPS.
- REPAIRING FENCE STRAIGHTENING T-POSTS (TIDE); CHANGED SOLAR CHARGER.
- REPOSITIONED THERM-X SENSORS TO FACE SOUTH TO AVOID DIRECT HEATING.
- NEW SNOW DEPTH HEIGHT IS 50.5 IN.

WFMI Maintenance Narrative

(Fill out prior to submission of NAMS post-trip update. Update may contain several station visits.)

Image identifiers of photos taken



#	To/From	Direction	Photo Numbers
1	Towards station	N	
2		NE	
3		E	
4		SE	
5		S	
6		SW	
7		W	
8		NW	
9	From station	N	
10		NE	
11		E	
12		SE	
13		S	
14		SW	
15		W	
16		NW	
17	Enclosure	Inside	

QUANTIL & LKZSK

	A	B	C	D	E	F	G
1		2018		DATE: 7/25/2018			
2	SENSOR	ASSET# OR SERIAL #	YES	NO	NOTES		
3	WS/WD			X			
4	RH/AT		X		IN: 43972		
5	RAIN GAUGE				OUT: 39422		
6	SOLAR RAD			X			
7	GOES ANTENNA			X			
8	GPS ANTENNA			X			
9	FTS F6/G5 LOGGER		X		OUT: 077131		
10	GOES CABLE				IN: 093680		
11	GPS CABLE			X			
12	SP CABLE			X			
13	SOLAR PANEL			X			
14	BATTERY			X			
15	RVT PORT B			X			
16	VHF ANTENNA			X			
17							
18							
19							
20							
21	RESET RG	-----	X				
22	SCAN SENSORS	-----	X				
23	PICTURES ?	-----	X				
24							
25	POWER RATIO						
26							
27							
28							
29							
30	NOTES: SWAPPED DATA LOGGER + AT/RH DOWNLOADED DATA TOOK PHOTOS						

ARCN Weather & Climate Monitoring

Site Visit Worksheet

Version: 8 March 2017

ARCN Program Contact:

Pam Sousanes/Ken Hill

phone: (907) 455-0677/(907)-455-0678

email: pam_sousanes@nps.gov/kenneth_hill@nps.gov

Site name	Serpentine	DCS - Sat. TX Check	RAWS HelpDesk:
Date of this visit	7/25/2018	phone: (757) 824-7450	phone: (208) 387-5475
Operators	Hill & Sousanes	24/7 technical support	Hours: M-F, 6 AM-2:30 PM AST

Pre-Field Information

(Look up the station: www.nifc.blm.gov-->Login-->'Weather' -->'Select Station')

GOES Information:	Sensors	Swap? (Y/N)	Changes/Recent error events?
Latitude	65 51.1380	Temp	N
Longitude	164 51.1380	Temp/RH	Y HMP155
NESDIS ID	39611780	Solar Radiation	N
Tx Time (mm:ss)	00:38:50	Wind Speed/Dir	N
Tx Channel	152	Snow Depth	N
Antenna Azimuth (Deg Mag)	135	Soil Temp 1	N
Antenna Elev. (Deg.)	12	Soil Temp 2	N
Currently activated?	Y	Soil Temp 3	N
Currently transmitting?	Y	Precipitation	N
NWS Site ID	SRTA2	Datalogger	N
Camera	Y	Transmitter	X Replace YAGI
Fence	N	Battery	N

Record Site Conditions

Time visit begins:	13:15	Time visit ends:	
Station accessible? (Y/N)	Y	If no, comment:	
Cables intact? (Y/N)	Y	If no, comment:	
Power source ok? (Y/N)	Y	If no, comment:	
Batteries ok? (Y/N)	Y	If no, comment:	

Record Station Status Table Values

(WMD: PConnectCE-->Connect Button-->Measurements Tab-->'Select Status' from Table Drop-Down Box)
 (Laptop: Device config utility-->Select DataLogger CR1000 -->Connect Button-->Data Monitor tab-->Status table)

Before Maintenance:	After Maintenance:
OSVersion	15
ProgName	Serpentine_2017
StartTime	8/10/17 4:06 PM
12 V Battery Voltage	13.4
Panel Temperature	27.1
Watchdog Errors	0
Lithium Batt Volt	3.5
Low 12V Batt Count	0
Skipped Scan	0
Reset if >0	0
Replace if <2.9	3.5
Reset if >0	0
Reset if >0	0

Maintenance Checklist

Completed? (Y/N)	Check transmitted values:
Download Hourly Data	Value OK? (Y/N)
RNIN before program update	Const SR50_ht= 88
SR50 height before	RNIN 4.63
Upload new program	WSM 2.7
Re-enter RNIN after	WDD 274
Measure and re-enter Sr50a	ATF_109 68.2
Clean rain gage	RHP 35.1
Clean temp shield	BVV 12.7
Level solar sensor	WSMPH 11.3
Wipe out enclosure	WDDP 18.7
Replace dessicant	SRW 372
Tighten bolts and guy wires	SDI
Clean battery terminals	STF 59.3
Clear snow depth area	STF2 55.1
Brush station vicinity	STF3 53.1
Take site photos	STF4
Tighten elements on YAGI	ATF_HMP155 67.4
Electric Fence Rehab	ATF_ThermX 67.7

Suspect Date

- STF2 at same depth as STF1 on arrival. Heaving? [Unknown Date]
- CCSMPX Photos. Images ended early June. Suspect power supply issue
- SDI - sensor reading SR50a height on arrival. Sensor removed but no spare for repl.
- Tipping Bucket was a little bit out of level

on Sun Extender + Blue River

Record Sensor Configuration Changes

	Model # out	Serial# out	Model # in	Serial# in	(ft)	(in)
Temp/RH	HMP155	F3810047	HMP155	F3810054		
Solar Radiation						
Wind Speed/Dir						
Snow depth	SR50a Special	6753	NOT REPLACED			
Soil Temp 1						
Soil Temp 2						
Soil Temp 3						
Precipitation						
Barometric pressure						
Datalogger						
Temp 1						

Comments

Swap HMP155 ☒ Replace YAGI ☒ Swap SD card on camera ☒

Secure tripod legs ☒

- STE & STEZ Both at same depth on arrival at ~ 10 cm.
- STEZ reinstalled to 20 cm.
- Condensation in camera lens on arrival. REMOVED + DRIED + REINSTALLED
- BATTERY FOR CAMERA WAS AT 11.3V. SWAPPED (BLUE RIVER) BATTERY W/ ONE OF THE GOOD BATTERIES FOR THE STATION. Now on Sun Extender
- SWAPPED YAGI ANTENNA after reset
- CAMERA: UPDATED Firmware from V.16 to V.25. Swapped SD cards. Images stopped in early June for unknown reason - probably low downloaded config file to desktop. Replaced desiccant in camera

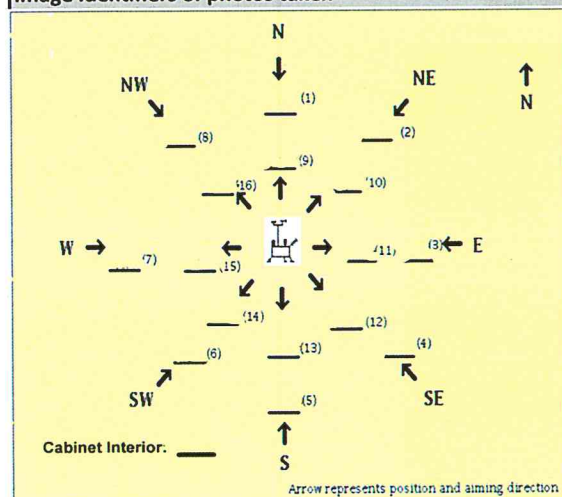
Battery for Camera
11.3
voltage.

WFMI Maintenance Narrative

(Fill out prior to submission of NAMS post-trip update. Update may contain several station visits.)

- On arrival, camera connection screen required reset. See screenshot.
- SR50a reading sensor height. Copper colored film was damaged and we ripped off the remaining film. After that SR50a still reading sensor height, but not clicking. Pulled out sensor and will replace next visit (no spare)
- Swapped YAGI
- Levelled Tipping Bucket.
- Battery, Camera and SR50 questionable at station!
- Sevanson 8/8. checked BV OK, checked Camera, OK, Installed SR50a height = 88, reading 88.95

Image identifiers of photos taken



#	To/From	Direction	Photo Numbers
1	Towards station	N	
2		NE	
3		E	
4		SE	
5		S	
6		SW	
7		W	
8		NW	
9	From station	N	
10		NE	
11		E	
12		SE	
13		S	
14		SW	
15		W	
16		NW	
17	Enclosure	Inside	