



Implementing Automated Data Flows



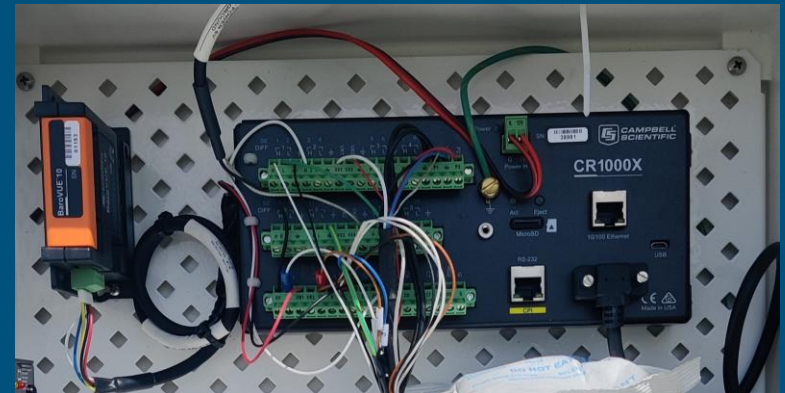
Part 2 Belize Example

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Stage 1 - AWS (Data logger)

1. At each weather station, data loggers are programmed to take meteorological samples every 10 seconds (6 samples each min)
 - wind measurements are sampled each second (1hz minimum)
2. The Samples are held in a buffer and select computations from those samples are stored every 5 mins (data Tx) or 10 mins (Satellite Tx)
 - a. Sample/Instantaneous - Temperature, Relative Humidity, Barometric Pressure, Solar Radiation
 - b. Average - Wind Speed and Direction,
 - c. Maximum - Temperature and Relative Humidity
 - d. Minimum - Temperature and Relative Humidity
 - e. Total/Sum - Rainfall and Solar Radiation
 - f. Standard deviations - Wind Speed and direction
 - g. Any other calculation that is deemed necessary





Stage 1 -AWS (Datalogger)



1. Currently testing basic QC procedures on datalogger with data quality value

This will give us an idea of the quality of the raw data calculated and stored in the 5 min tables

- Good data
- any skipped scans while making the computations?
- if there were skipped scans how many
- measurements failed QC checks?
- If so how many of those measurements were outside the range

Mobile Data monitor

- 9921201_sanestevan
- 9921801_augustpine
- 9921901_shipyard
- 9905602_puntagordaagr
- 9922501_hattievill
- 9905503_pomona
- 9922401_bellavista
- 9903903_hershey
- 9904802_melinda
- 9907302_spanisklookout
- 9924201_lemonal
- 9920701_benque
- 9924001_bullettreeroad
- 9923601_santaelena
- 9923501_hawkesworth
- 9923901_bulletreefalls
- 9904003_lademocracia
- 9901003_belmopan
- 9920501_kendal
- 9921101_littlebelize
- 9907902_farm11
- 9924701_coastguard
- 9924601_mollejon
- 9924801_chalillo
- 9920801_pob
- 9920301_puntagorda
- CR300_test
- 9923301_redbank
- 9923001_hillbank
- 9900502_baldybeacon
- 9924401_middlecaye
- 9924501_cayecaulker
- 9920901_sanpedro
- 9958303_pgja
- 9920401_ranchito
- 9920101_dangriga
- 9910002_gallonjug
- 9924401_barranco

List Alphabetically

T_5min1

Field	Value
RecNum	269
TimeStamp	2/7/2024 8:05:00 AM
BattV_Min	14.23 Volts
ENC_RH	75.64 %
ENC_RH_valid_percent	51.72414
RAIN_MM_Tot	0 mm
AT_C	18.49
AT_C_Max	18.5
AT_C_Min	18.15
AT_C_valid_percent	100
AT2_C	18.47 Deg C
AT2_C_Max	18.47 Deg C
AT2_C_Min	18.11 Deg C
AT2_C_valid_percent	100
RH_PER	76.98 %
RH_PER_Max	78.18 %
RH_PER_Min	76.94 %
RH_PER_valid_percent	100
WS_KNOT_S_WVT	3.775 knots
WD_DEG_D1_WVT	287.6 Deg
WS_KNOT_Max	6.152 knots
WS_KNOT_valid_perce	97
WS_KNOT_flagged_as	Valid
BP_MB	1019.9 hPa
BP_MB_valid_percent	100
SR_WMS	371.8 wms
SR_WMS_valid_percent	100
ST_C_last_value	0
ST_C_valid_percent	0
MaxWSgust	5.936333
Dir_of_Max	282.5012
DP_C	14.37 Deg C
WB_C	15.93 Deg C
HI_C	18.47 Deg C
WC_C	18.47 Deg C
WR_KM_Tot	0.601 kilometers

Mobile Data Format - CSV/.dat

```
"TOA5", "9905503_pomonaa", "CR300", "6319", "CR300.Std.11.02", "CPU:9905503_pomona_MODEM_03June2025.cr300", "28717", "T_5min1"
"TIMESTAMP", "RECORD", "BattV_Min", "BattV_TmN", "Rain_mm_Tot", "Enc_RH", "AirT_C", "AirT_C_Max", "AirT_C_TmX", "AirT_C_Min", "AirT_C_TmN", "ST1FT_C"
"TS", "RN", "Volts", "Volts", "mm", "", "Deg C", "Deg C", "Deg C", "Deg C", "Deg C", "Deg C"
"", "", "Min", "TmN", "Tot", "Smp", "Smp", "Max", "TmX", "Min", "TmN", "Smp"
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```

Satellite Tx - format

Custom ASCII

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T1220,12,78,0,209G,208G,769G,37G,3384G,135G,10184G,0B,0B,NAN,  
T1230,12,78,0,209G,207G,771G,29G,3351G,84G,10184G,51B,0B,NAN,  
T1240,12,78,0,209G,207G,774G,37G,3426G,113G,10186G,223G,0B,NAN,  
T1250,13,78,0,211G,208G,782G,31G,3384G,90G,10187G,630G,0B,NAN,  
T1300,14,77,0,212G,211G,812G,28G,3272G,87G,10188G,1013G,0B,NAN,  
T1310,14,74,0,212G,210G,829G,37G,3147G,90G,10188G,1380G,0B,NAN,  
T1120,12,78,0,210G,209G,736G,49G,3529G,139G,10177G,0B,0B,NAN,  
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T1140,12,78,0,211G,209G,754G,46G,3427G,126G,10179G,0B,0B,NAN,  
T1150,12,78,0,211G,210G,757G,46G,3398G,113G,10181G,0B,0B,NAN,  
T1200,12,78,0,210G,209G,759G,37G,3420G,110G,10182G,0B,0B,NAN,  
T1210,12,78,0,209G,209G,771G,35G,3365G,97G,10183G,0B,0B,NAN,  
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T1050,12,78,0,209G,208G,728G,59G,3598G,139G,10175G,0B,0B,NAN,  
T1100,12,78,0,209G,208G,737G,50G,3578G,119G,10176G,0B,0B,NAN,  
T1110,12,78,0,210G,208G,738G,55G,3564G,119G,10176G,0B,0B,NAN,  
T0920,12,81,0,209G,208G,810G,42G,3427G,106G,10172G,0B,0B,NAN,  
T0930,12,81,0,210G,209G,817G,42G,3421G,129G,10172G,0B,0B,NAN,  
T0940,12,80,0,210G,209G,818G,44G,3453G,110G,10172G,0B,0B,NAN,  
T0950,12,80,0,211G,209G,790G,51G,0G,132G,10172G,0B,0B,NAN,  
T1000,12,79,0,211G,211G,774G,57G,53G,126G,10172G,0B,0B,NAN,  
T1010,12,78,0,211G,210G,759G,57G,22G,126G,10173G,0B,0B,NAN,
```



Raw Data Storage

AWS(Data logger) (Stage 1)



Raw Data Storage (Stage 2)



Stage 2 - Raw Data Storage



1. Once the 5/10 minute data is measured and stored on the datalogger it is transmitted to NMS servers or directly to our CDMS via NOAA's LRGs(GOES DCPs).
2. Data files transmitted to the NMS using - RF, Wifi, Mobile, Satellite Modems.
3. Data files are received and stored on a data collecting server which also acts as an FTP server - called our "Data Store"
 - a. If communication is broken with the weather station, data is stored on the data logger until communication is re-established
4. The "Data Store" stores a wide range of raw data from
 - a. Weather Stations
 - b. Radar files
 - c. Lightning Detection network
 - d. Database backup files
 - e. Observation Network configuration files
5. The NMS chose this repository so that computer systems and select stakeholders wishing to get data can "Pull" data from the repository instead of the NMS bearing the responsibility of "pushing" data



Stage 2 - Raw Data Storage



Raw Data storage Computer

- 2U rack Workstation PC
- 8TB SATA HDD 0 Raid 1 configuration(redundancy)
- Windows 11
- AWS data reception software - manages our network of AWSs
- FTP Server software
- Python and code editor
- Necessary ports and software must be configured
- Hosts and runs important scripts
 - Hourly Data ingestion from Satellite stations
 - Hourly CSV generation for WIS2box
 - Daily Backups to cloud storage

**SERVER
CABINETS**



**WORKSTATION PCs
(Collect)s Data**



**DATABASE
SERVERS**





C.D.M.S.



AWS(Data logger) (Stage 1)



Raw Data Storage (Stage 2)



CDMS - Data Processing (Stage 3)

STAGE 3 - Data Processing

CLIMATE DATA MANAGEMENT SYSTEM

S.U.R.F.A.C.E. CDMS

How is raw data ingestion setup? (moving from data store to CDMS)

Surface Admin Area

Home > Wx > Ftp servers > bz - 192.168.3.166:5394

- Administrative region types + Add
- Administrative regions + Add
- Backup logs + Add
- Backup tasks + Add
- Code tables + Add
- Countries + Add
- Daily summary tasks + Add
- Data sources + Add
- Dcp messages + Add
- Decoders + Add
- Districts + Add
- Documents + Add
- Element decoders + Add
- Equipment + Add
- Equipment types + Add
- Flashes + Add
- Formats + Add
- Ftp servers + Add**
- Funding sources + Add
- Hourly summary tasks + Add
- Hydro ml prediction mappings + Add
- Hydro ml prediction stations + Add
- Hydro ml predictions + Add
- Intervals + Add
- Manufacturers + Add

Change ftp server

bz - 192.168.3.166:5394

Name:

Host:

Port:

Username:




Password:

Is active mode




Delete

Change station file ingestion




bz - 192.168.3.166:5394 - Chalillo - 9924801

Ftp server:   

Remote folder:

Station:   

File pattern:

Decoder:   

Cron schedule:

Utc offset minutes:

Delete from server

Is active

Is binary transfer

Is historical data

Is highfrequency data

Override data on conflict

Delete

SAT_TX325

BELIZE MANUAL DAILY DATA
BELIZE MANUAL HOURLY DATA
HOBO
HYDROLOGY
NESA
SAT_TX325
SURFACE
TOA5

Checking Data file ingestion...

Surface Admin Area WELCOME, DWAYNE. [VIEW SITE](#) / [CHANGE PASSWORD](#) / [LOG OUT](#)

Home > Wx > Station data files

- Rating curves + Add
- Sampling operations + Add
- Station communications + Add
- Station data file statuses + Add
- Station data files + Add**
- Station file ingestions + Add
- Station images + Add
- Station neighborhoods + Add
- Station profile equipment types + Add
- Station profiles + Add
- Station types + Add
- Station variables + Add
- Stations + Add
- Technicians + Add
- Units + Add
- Variable formats + Add
- Variables + Add
- Visit types + Add
- Watersheds + Add
- Wmo programs + Add
- Wmo regions + Add
- Wmo station types + Add

Select station data file to change ADD STATION DATA FILE +

Search

Action: Go 0 of 100 selected



<input type="checkbox"/>	CREATED AT	STATION	DECODER	STATUS	FILE SIZE	UTC OFFSET MINUTES	FILE PATH
<input type="checkbox"/>	Feb. 18, 2024, 2:10 p.m.	Carrie Bow - 9921001	TOA5	Skipped	11738	-360	/data/documents/ingest/TOA5/9921001/raw_data/2024/02/1
<input type="checkbox"/>	Feb. 18, 2024, 2:06 p.m.	Silk Grass Farm - 9923101	TOA5	Processed	21576	-360	/data/documents/ingest/TOA5/9923101/raw_data/2024/02/1
<input type="checkbox"/>	Feb. 18, 2024, 2:06 p.m.	Central Farm - 9902603	TOA5	Processed	10308	-360	/data/documents/ingest/TOA5/9902603/raw_data/2024/02/1
<input type="checkbox"/>	Feb. 18, 2024, 2:06 p.m.	Savannah - 9907102	TOA5	Processed	10350	-360	/data/documents/ingest/TOA5/9907102/raw_data/2024/02/1
<input type="checkbox"/>	Feb. 18, 2024, 2:06 p.m.	Altun Ha - 9922601	TOA5	Processed	9892	-360	/data/documents/ingest/TOA5/9922601/raw_data/2024/02/1
<input type="checkbox"/>	Feb. 18, 2024, 2:06 p.m.	Farm 11 - 9907902	TOA5	Processed	21922	-360	/data/documents/ingest/TOA5/9907902/raw_data/2024/02/1
<input type="checkbox"/>	Feb. 18, 2024, 2:05 p.m.	Carrie Bow - 9921001	TOA5	Skipped	11738	-360	/data/documents/ingest/TOA5/9921001/raw_data/2024/02/1
<input type="checkbox"/>	Feb. 18, 2024, 2:02 p.m.	La Gracia - 9910402	TOA5	Processed	10260	-360	/data/documents/ingest/TOA5/9910402/raw_data/2024/02/1
<input type="checkbox"/>	Feb. 18, 2024, 2:02 p.m.	Hillbank OW - 9923001	TOA5	Processed	6624	-360	/data/documents/ingest/TOA5/9923001/raw_data/2024/02/1
<input type="checkbox"/>	Feb. 18, 2024, 2:02 p.m.	Bullet Tree Falls - 9923901	TOA5	Processed	27598	-360	/data/documents/ingest/TOA5/9923901/raw_data/2024/02/1
<input type="checkbox"/>	Feb. 18, 2024, 2:02 p.m.	Santa Elena - 9923601	TOA5	Processed	21923	-360	/data/documents/ingest/TOA5/9923601/raw_data/2024/02/1
<input type="checkbox"/>	Feb. 18, 2024, 2:02 p.m.	Hawkesworth Bridge - 9923501	TOA5	Processed	21569	-360	/data/documents/ingest/TOA5/9923501/raw_data/2024/02/1
<input type="checkbox"/>	Feb. 18, 2024, 2:02 p.m.	Port of Belize - 9920801	TOA5	Processed	15003	-360	/data/documents/ingest/TOA5/9920801/raw_data/2024/02/1
<input type="checkbox"/>	Feb. 18, 2024, 2:02 p.m.	Ranchito - 9920401	TOA5	Processed	21438	-360	/data/documents/ingest/TOA5/9920401/raw_data/2024/02/1
<input type="checkbox"/>	Feb. 18, 2024, 2:02 p.m.	Punta Gorda Air - 9920301	TOA5	Processed	21104	-360	/data/documents/ingest/TOA5/9920301/raw_data/2024/02/1
<input type="checkbox"/>	Feb. 18, 2024, 2:02 p.m.	Placencia - 9920201	TOA5	Processed	21224	-360	/data/documents/ingest/TOA5/9920201/raw_data/2024/02/1

GOES /LRGS/ Satellite ingestion setup



50203E96


Dcp address:


First channel:


First channel type:  



Second channel:

Second channel type:  

First transmission time: [Now](#) | 
Note: You are 6 hours behind server time.



Transmission window: [Now](#) | 
Note: You are 6 hours behind server time.



Transmission period: [Now](#) | 
Note: You are 6 hours behind server time.



Last datetime: **Date:** [Today](#) | 
Time: [Now](#) | 
Note: You are 6 hours behind server time.



Config file: No file chosen



Mauger Caye - 9925001 50203E96 - 10m



Station:  



Noaa dcp:  

Decoder:  


Interval:  

Format:  

Start date: **Date:** [Today](#) | 
Time: [Now](#) | 
Note: You are 6 hours behind server time.

End date: **Date:** [Today](#) | 
Time: [Now](#) | 
Note: You are 6 hours behind server time.





- BELIZE MANUAL DAILY DATA**
- BELIZE MANUAL HOURLY DATA
- HOBO
- HYDROLOGY
- NESA
- SAT_TX325
- SURFACE
- TOA5

DCP message check...

Surface Admin Area WELCOME, DWAYNE. [VIEW SITE](#) / [CHANGE PASSWORD](#) / [LOG OUT](#)

Home > Wx > Dcp messagess

- WX
- Administrative region types + Add
- Administrative regions + Add
- Backup logs + Add
- Backup tasks + Add
- Code tables + Add
- Countries + Add
- Daily summary tasks + Add
- Data sources + Add
- Dcp messagess** + Add
- Decoders + Add
- Districts + Add
- Documents + Add
- Element decoders + Add
- Equipment + Add
- Equipment types + Add
- Flashes + Add
- Formats + Add
- Ftp servers + Add
- Funding sources + Add
- Hourly summary tasks + Add
- Hydro ml prediction mappings + Add
- Hydro ml prediction stations + Add

Select dcp messages to change

ADD DCP MESSAGES +

Action: Go 0 of 100 selected

<input type="checkbox"/>	NOAA DCP	STATION	DATETIME	FREQUENCY OFFSET	FAILURE CODE	DATA QUALITY
<input type="checkbox"/>	5020B650	Camp 6 - F&E Farm - 9924901	Feb. 18, 2024, 1:33 p.m.	-0	G	N
<input type="checkbox"/>	502046D4	Golden Stream - 9922301	Feb. 18, 2024, 1:31 p.m.	-0	G	N
<input type="checkbox"/>	50209E6E	Barton Creek - 9900703	Feb. 18, 2024, 1:26 p.m.	-0	G	N
<input type="checkbox"/>	502005DE	Half Moon Caye - 9958801	Feb. 18, 2024, 1:25 p.m.	-0	G	N
<input type="checkbox"/>	5020734E	Corazon - 9922201	Feb. 18, 2024, 1:22 p.m.	-0	G	N
<input type="checkbox"/>	5020734E	Corazon - 9922201	Feb. 18, 2024, 1:21 p.m.	-0	?	P
<input type="checkbox"/>	5020734E	Corazon - 9922201	Feb. 18, 2024, 1:20 p.m.	-0	G	N
<input type="checkbox"/>	5020734E	Corazon - 9922201	Feb. 18, 2024, 1:19 p.m.	-0	G	N
<input type="checkbox"/>	50204806	Calabash Caye - 9924301	Feb. 18, 2024, 1:19 p.m.	-0	G	N
<input type="checkbox"/>	5020734E	Corazon - 9922201	Feb. 18, 2024, 1:19 p.m.	-0	G	N
<input type="checkbox"/>	50203E96	Mauger Caye - 9925001	Feb. 18, 2024, 1:18 p.m.	+0	G	N
<input type="checkbox"/>	50202DE0	Santa Martha - 9921301	Feb. 18, 2024, 1:18 p.m.	+0	G	N
<input type="checkbox"/>	5020734E	Corazon - 9922201	Feb. 18, 2024, 1:18 p.m.	-0	G	N
<input type="checkbox"/>	5020734E	Corazon - 9922201	Feb. 18, 2024, 1:17 p.m.	-0	G	N
<input type="checkbox"/>	5020734E	Corazon - 9922201	Feb. 18, 2024, 1:16 p.m.	-0	G	N
<input type="checkbox"/>	5020734E	Corazon - 9922201	Feb. 18, 2024, 1:15 p.m.	-0	G	N
<input type="checkbox"/>	5020734E	Corazon - 9922201	Feb. 18, 2024, 1:13 p.m.	-0	?	P
<input type="checkbox"/>	5020734E	Corazon - 9922201	Feb. 18, 2024, 1:11 p.m.	-0	?	F

DCP message check...

Surface Admin Area WELCOME, DWAYNE. [VIEW SITE](#) / [CHANGE PASSWORD](#) / [LOG OUT](#)

Home > Wx > Dcp messages > DcpMessages object (441715)

AUTH TOKEN

Tokens + Add

AUTHENTICATION AND AUTHORIZATION

Groups + Add

Users + Add

PERIODIC TASKS

Clocked + Add

Crontabs + Add

Intervals + Add

Periodic tasks + Add

Solar events + Add

WX

Administrative region types + Add

Administrative regions + Add

Backup logs + Add

Backup tasks + Add

Code tables + Add

Countries + Add

Daily summary tasks + Add

Data sources + Add

Dcp messages + Add

Decoders + Add

Districts + Add

Documents + Add

Element decoders + Add

Change dcp messages

DcpMessages object (441715) HISTORY

Noaa dcp: 5020B650 ✎ + ✕

Datetime: Date: 2024-02-18 Today | 📅
Time: 13:33:16 Now | ⌚
Note: You are 6 hours behind server time.

Failure code: G

Signal strength: 36

Frequency offset: -0

Modulation index: N

Data quality: N

Channel: 117

Spacecraft indicator: E

Data source: Sioux Falls, East ✎ + ✕

Message data length: 00380

Payload:

```
T1240,12,57,04,207C,201C,937C,23B,510B,71B,9735C,29C,0B,NAN,  
T1250,12,57,06,201C,199C,957C,14B,678B,29B,9737C,43C,0B,NAN,  
T1300,12,56,18,199C,197C,965C,19B,440B,38B,9739C,55C,0B,NAN,  
T1310,12,56,2,198C,197C,975C,12B,2139B,16B,9741C,59C,0B,NAN,  
T1320,12,56,34,197C,195C,975C,12B,1964B,12B,9740C,129C,0B,NAN,  
T1330,13,56,12,196G,195G,979G,12B,3437B,12B,9742G,145G,0B,NAN,
```

SURFACE CDMS

System for Unified Real-time monitoring and Forecasting of Atmospheric and Climatic Events

- Supports multiple data entry methods(key entry, excel, AWS files)
- Aggregates Sub-hourly data intervals to: Hourly, Daily, Monthly, Yearly
- Monitors weather station performance & data flow
- Input and stores station maintenance reports
- Stores metadata for stations and instruments
- Automatic QC Procedures
 - Range, Step and Persistence AQC checks
- WMO compliance
 - Generates WMO messages from database(Synop, CLIMAT, DayCLI)
 - Automatic data push to WIS2box/WIS2.0 node
 - Integrates with WMO OSCAR for metadata management
- Open Source Application
 - Project - <https://github.com/opencdms/surface>
- Tech Stack
 - Docker
 - Postgres with TimescaleDB
 - Python/Django Framework
 - VueJS frontend
 - Restful API



SURFACE
SYSTEM FOR UNIFIED REAL-TIME MONITORING AND FORECASTING
OF ATMOSPHERIC AND CLIMATIC EVENTS

Username
admin

Password
.....

Keep connected

LOG IN



Data Flow

AWS(Data logger) (Stage 1)



Raw Data Storage (Stage 2)



CDMS - Data Processing (Stage 3)



Data Output - Display/Access/Transmission(Stage 4)

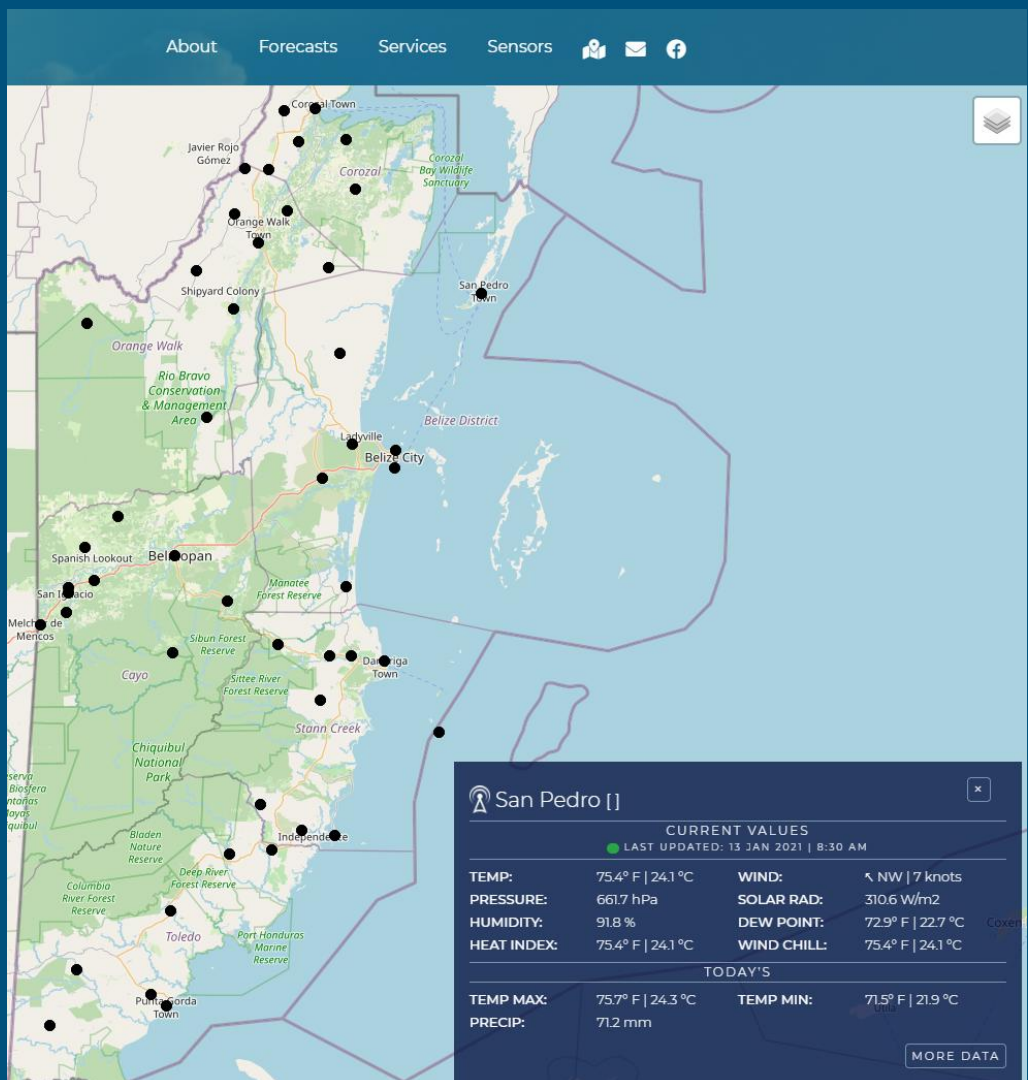
Stage 4 - Data output

CDMS

- Stakeholders can request login access

Django REST API - (select endpoints available)

- Facilitates automated requests for data
 - C.I.M.H.
 - San Ignacio Early Warning/Taiwan
 - C.A.F.F.G. - Central American Flash Flood and Guidance
 - CCRIF/CATIE - Rainfall analysis
 - NMS WEBSITE
- WIS2box
 - Hourly Script queries database to generate csv file



WIS2 PUBLISHING DASHBOARD

Refresh
1m

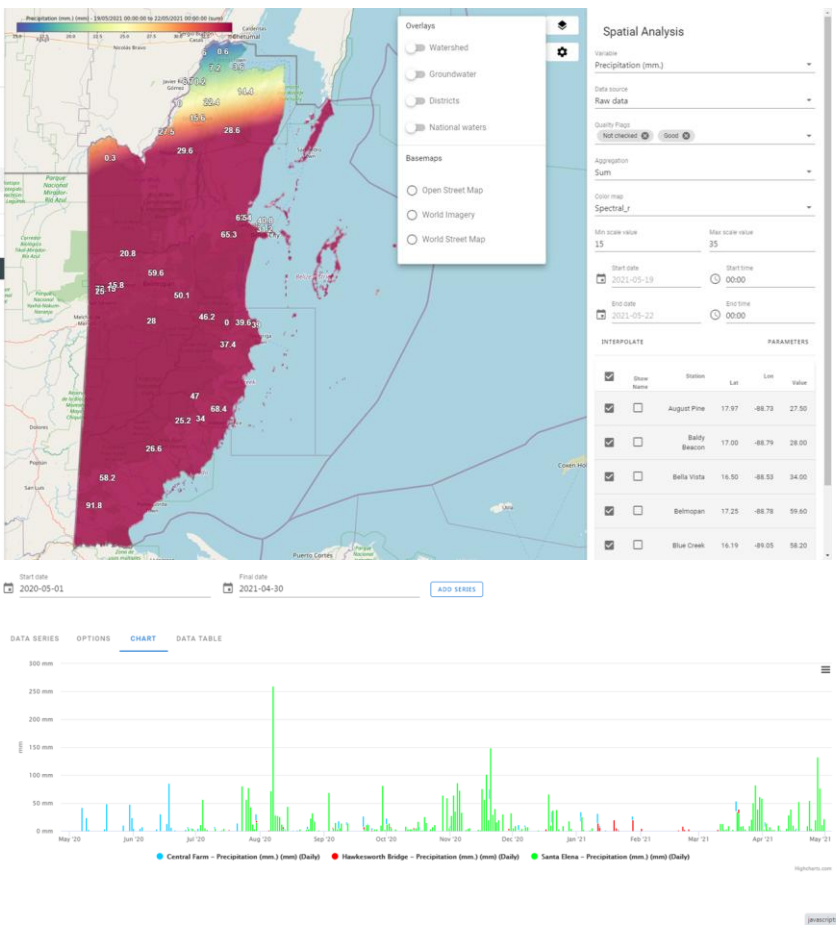
WIS2BOX SETTINGS

Station Data Publishing Status

Station Name	WSI	Publish last 24 hrs	Fail last 24 hrs	Action	Status
Phillip Goldson Int'l Synop PGIAAWS	0-20000-0-78583	24	0	PUSH NOW	Publishing Hybrid GTS Manual Synoptic
PGIAAWS	0-20000-0-78583	0	0		Not Publishing Automatic
Placencia	0-84-100-9920201	23	1	PUSH NOW	Publishing Automatic
Tower Hill	0-84-100-9907603	23	1	PUSH NOW	Publishing Automatic
San Pedro	0-84-100-9920901	0	0		Not Publishing Automatic
Ranchito	0-84-100-9920401	4	19	PUSH NOW	Publishing Automatic
Punta Gorda Air	0-84-100-9920301	9	15	PUSH NOW	Publishing Automatic
Belmopan	0-84-100-9901003	23	1	PUSH NOW	Publishing Automatic
Gallon Jug	0-84-100-9910002	14	10	PUSH NOW	Publishing Automatic
Baldy Beacon	0-84-100-9900502	21	3	PUSH NOW	Publishing Automatic



Various reports and outputs



- DISCOTT
- STATIONS
- MAINTENANCE
- DATA
- PRODUCTS
- STATION REPORT
- VARIABLE REPORT
- STATION COMPARE
- SPATIAL ANALYSIS
- DAILY MEANS
- ADMINISTRATIVE AREA
- LOGOUT

STATION REPORT



API OUTPUT in JSON

1. Raw Data - Maximum of 7 Days of data allowed per request

- NO Date/Time - Last 7 days of data returned by default
https://dev.nms.gov.bz/api/rawdata/?search_type=station&search_value=8
- With Date/Time
https://dev.nms.gov.bz/api/rawdata/?search_type=station&search_value=122&search_date_start=2020-05-10T00:00:00Z&search_date_end=2020-05-13T00:00:00Z

2. Hourly Data - Maximum of 30 Days of data allowed per request

- NO Date/Time - Last 32 days of data returned by default
https://dev.nms.gov.bz/api/hourlysummaries/?search_type=station&search_value=122
- With Date/Time
https://dev.nms.gov.bz/api/hourlysummaries/?search_type=station&search_value=122&search_date_start=2020-05-01T01:00:00Z&search_date_end=2020-05-14T00:00:00Z

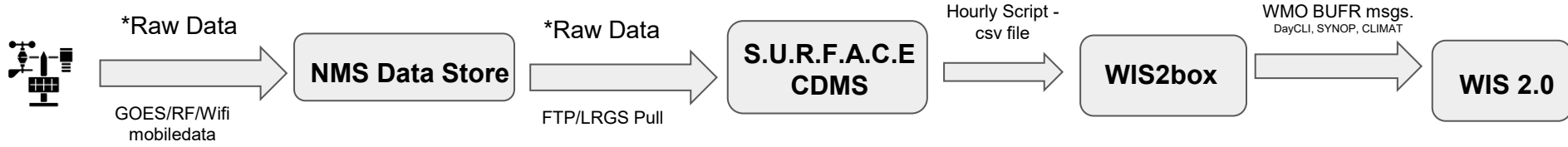
3. Daily Data - Maximum of 1 year of data allowed per request

- NO Date/Time - Last 365 days of data returned by default
https://dev.nms.gov.bz/api/dailysummaries/?search_type=station&search_value=122
- With Date/Time
https://dev.nms.gov.bz/api/dailysummaries/?search_type=station&search_value=122&search_date_start=2020-05-01&search_date_end=2020-05-30

```
"station": {
  "id": 215,
  "name": "Mauger Caye",
  "alias_name": "TASA",
  "begin_date": "2024-02-12T00:00:01Z",
  "end_date": null,
  "longitude": -87.772195,
  "latitude": 17.606921,
  "elevation": 1.0,
  "code": "9925001",
  "wmo": null,
  "wigos": null,
  "organization": null,
  "observer": null,
  "watershed": "Belize River",
  "z": null,
  "datum": null,
  "zone": null,
  "ground_water_province": null,
  "river_code": null,
  "river_course": null,
  "catchment_area_station": null,
  "river_origin": null,
  "eastings": null,
  "northing": null,
  "river_outlet": null,
  "river_length": null,
  "local_land_use": null,
  "soil_type": null,
  "site_description": null,
  "land_surface_elevation": null,
  "screen_length": null,
  "top_casing_land_surface": null,
  "depth_midpoint": null,
  "screen_size": null,
  "casing_type": null,
  "casing_diameter": null,
  "existing_gauges": null,
  "flow_direction_at_station": null,
  "flow_direction_above_station": null,
  "flow_direction_below_station": null,
  "bank_full_stage": null,
  "bridge_level": null,
  "access_point": null,
  "temporary_benchmark": null,
  "mean_sea_level": null,
  "data_type": null,
```

```
"station_name": "Mauger Caye",
"station_id": 215,
"past24h": [
  {
    "value": 12.0,
    "variable": {
      "name": "Battery Voltage",
      "symbol": "BATTERY",
      "unit_name": "Volts",
      "unit_symbol": "V"
    }
  },
  {
    "value": 0.0,
    "variable": {
      "name": "Precipitation (mm.)",
      "symbol": "PRECIP",
      "unit_name": "Millimeters",
      "unit_symbol": "mm"
    }
  },
  {
    "value": 1011.1,
    "variable": {
      "name": "Pressure at Station Level",
      "symbol": "PRESSTN",
      "unit_name": "Hectopascals",
      "unit_symbol": "hPa"
    }
  },
  {
    "value": 68.7,
    "variable": {
      "name": "Relative Humidity",
      "symbol": "RH",
      "unit_name": "Percent",
      "unit_symbol": "%"
    }
  },
  {
    "value": 0.0,
    "variable": {
      "name": "Soil Temperature at 1 feet",
      "symbol": "TSOIL1",
      "unit_name": "Celsius Degrees",
      "unit_symbol": "°C"
    }
  }
]
```

Belize WIS 2.0 Implementation





Questions?