

Quick instructions for testing the ContDataSumViz Shiny app

<https://contdatasumvizcontainerized-humble-sitatunga-bs.app.cloud.gov/>

VA DEQ stream data (12/28/22)

# Formatting the input file

You'll need to 'trim' your aggregated file

Remove the flag and comment fields for each individual QC test

Watch out for Excel adding commas into fields you remove (see next slide)

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1	SiteID	Date	Time	Date.Time	Water.Ten	Air.Logger	Air.RowID	Air.Temp.C	Water.Log	Water.Row	Discrete.W	Logger.De	Flag.Date.	Flag.Water	Flag.Air.Te	Flag.Discre	Month	Day	Year	MonthC
2	Hunting	2014-04-22	11:00:00	2014-04-22 11:00	NA	10302589	1	21.963	10302588	1	NA	start		X	P		4	22	2014	4
3	Hunting	2014-04-22	11:30:00	2014-04-22 11:30	NA	10302589	2	21.843	10302588	2	NA	NA		X	P		4	22	2014	4
4	Hunting	2014-04-22	12:00:00	2014-04-22 12:00	11.078	10302589	3	NA	10302588	3	NA	NA		P	X		4	22	2014	4
5	Hunting	2014-04-22	12:30:00	2014-04-22 12:30	11.151	10302589	4	NA	10302588	4	11	NA		P	X		4	22	2014	4
6	Hunting	2014-04-22	13:00:00	2014-04-22 13:00	11.321	10302589	5	NA	10302588	5	NA	NA		P	X		4	22	2014	4
7	Hunting	2014-04-22	13:30:00	2014-04-22 13:30	11.394	10302589	6	22.92	10302588	6	NA	NA		P	P		4	22	2014	4
8	Hunting	2014-04-22	14:00:00	2014-04-22 14:00	11.492	10302589	7	21.39	10302588	7	NA	NA		P	P		4	22	2014	4
9	Hunting	2014-04-22	14:30:00	2014-04-22 14:30	11.637	10302589	8	22.274	10302588	8	NA	NA		P	P		4	22	2014	4
10	Hunting	2014-04-22	15:00:00	2014-04-22 15:00	11.904	10302589	9	23.328	10302588	9	NA	NA		P	P		4	22	2014	4
11	Hunting	2014-04-22	15:30:00	2014-04-22 15:30	12.098	10302589	10	23.641	10302588	10	NA	NA		P	P		4	22	2014	4
12	Hunting	2014-04-22	16:00:00	2014-04-22 16:00	12.122	10302589	11	22.633	10302588	11	NA	NA		P	P		4	22	2014	4
13	Hunting	2014-04-22	16:30:00	2014-04-22 16:30	12.05	10302589	12	21.987	10302588	12	NA	NA		P	P		4	22	2014	4
14	Hunting	2014-04-22	17:00:00	2014-04-22 17:00	12.025	10302589	13	21.843	10302588	13	NA	NA		P	P		4	22	2014	4
15	Hunting	2014-04-22	17:30:00	2014-04-22 17:30	12.001	10302589	14	22.034	10302588	14	NA	NA		P	P		4	22	2014	4
16	Hunting	2014-04-22	18:00:00	2014-04-22 18:00	11.953	10302589	15	21.581	10302588	15	NA	NA		P	P		4	22	2014	4

Keep the fields shown in the test files I sent. Your streamlined file should be ready to go...

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	SiteID	Date	Time	Date.Time	Water.Temp.C	Air.Temp.C	Flag.Water.Temp.C	Flag.Air.Temp.C	Comment.MOD.Water.Temp.C	Comment.MOD.Air.Temp.C					
2	Hunting	2014-04-22	11:00:00	2014-04-22 11:00	NA	21.963	X	P							
3	Hunting	2014-04-22	11:30:00	2014-04-22 11:30	NA	21.843	X	P							
4	Hunting	2014-04-22	12:00:00	2014-04-22 12:00	11.078	NA	P	X							
5	Hunting	2014-04-22	12:30:00	2014-04-22 12:30	11.151	NA	P	X							
6	Hunting	2014-04-22	13:00:00	2014-04-22 13:00	11.321	NA	P	X							

When I 'trim' the files, sometimes I run into problems with commas being added into columns.

You can check for this by opening the file in Notepad (see below)

I'm sure there are better ways to avoid or deal with this, but I've had luck saving the trimmed file (with removed columns) as an Excel file before saving it as a CSV (but even then, I still have problems on occasion)

Hunting\_AW\_20140422\_20190425.csv - Notepad

File Edit Format View Help

```
SiteID,Date,Time,Date.Time,Water.Temp.C,Flag.Water.Temp.C,Comment.MOD.Water.Temp.C,Air.Temp.C,Flag.Air.Temp.C,Comment.MOD.Air.Temp.C
Hunting,2014-04-22,11:00:00,2014-04-22 11:00,NA,X,,21.963,P,
Hunting,2014-04-22,11:30:00,2014-04-22 11:30,NA,X,,21.843,P,
Hunting,2014-04-22,12:00:00,2014-04-22 12:00,11.078,P,,NA,X,
Hunting,2014-04-22,12:30:00,2014-04-22 12:30,11.151,P,,NA,X,
Hunting,2014-04-22,13:00:00,2014-04-22 13:00,11.321,P,,NA,X,
Hunting,2014-04-22,13:30:00,2014-04-22 13:30,11.394,P,,22.92,P,
Hunting,2014-04-22,14:00:00,2014-04-22 14:00,11.492,P,,21.39,P,
Hunting,2014-04-22,14:30:00,2014-04-22 14:30,11.637,P,,22.274,P,
Hunting,2014-04-22,15:00:00,2014-04-22 15:00,11.904,P,,23.328,P,
Hunting,2014-04-22,15:30:00,2014-04-22 15:30,12.098,P,,23.641,P,
```

# Data Visualization & Reporting

## For Regional Monitoring Networks

Upload Data Data Exploration Create Report

Upload your data

Browse... MD\_PRLN-626-S\_WaterAirTemp.csv

MD\_PRLN-626-

Use this file

Browse to your file, upload it

Click 'Use this file'

More options will appear...

Scroll down

https://contdatasumvizcontainerized-humble-sitatunga-bs.app.cloud.gov

New Tab BCGcalc ContDataSumViz-c... ContDataQC IssuesLog ContData... Tims QC app LakeMonitoR, v0.1.... BioMc

### Upload your data

Browse... trimmed\_DATA\_QC\_QB283\_AI

Upload complete

Use this file

Single site or multiple sites

Single site

Dataset

trimmed\_DATA\_QC\_QB283\_AW\_20150303\_2

Display

☒ Head

☐ Tail

☐ ColumnNames

Display file contents

### Plot Raw Data

Select datetime format

☐ %Y-%m-%d %H:%M:%S

☒ %Y-%m-%d %H:%M

☐ %d-%m-%Y %H:%M:%S

☐ %Y-%m-%d

Display time series

At this time, the Shiny app only works with Single sites (not multiple)

Click the 'display file contents' button

**Dataset**

MD\_PRLN-626-S\_WaterAirTemp.csv

**Display**

☒ Head

☐ Tail

☐ ColumnNames

Display file contents

Select datetime format

☒ %Y-%m-%d

☐ %H:%M:%S

☐ %Y-%m-%d %H:%M

☐ %d-%m-%Y

☐ %H:%M:%S

☐ %Y-%m-%d

☐ %d-%m-%Y

Run meta summary

Must select at least one parameter before 'run' (or crashes)

Select parameters to process

Run meta summary

Scroll down and check your input file



SITEYR	DATE	TIME	WATER_TEMP_C	AIR_TEMP_C	YEAR	SITEID	DATE.TIME	MONTHDAY
PRLN-626-S-2000	2000-06-01	0:20:00	13.01	NA	2000	PRLN-626-S	2000-06-01 0:20	01-Jun
PRLN-626-S-2000	2000-06-01	0:40:00	13.01	NA	2000	PRLN-626-S	2000-06-01 0:40	01-Jun
PRLN-626-S-2000	2000-06-01	1:00:00	13.01	NA	2000	PRLN-626-S	2000-06-01 1:00	01-Jun
PRLN-626-S-2000	2000-06-01	1:20:00	13.01	NA	2000	PRLN-626-S	2000-06-01 1:20	01-Jun
PRLN-626-S-2000	2000-06-01	1:40:00	13.01	NA	2000	PRLN-626-S	2000-06-01 1:40	01-Jun

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New Tab BCGcalc ContDataSumViz-c... ContDataQC IssuesLog ContData... Tims QC app LakeMonitorR, v0.1... BioMonTools Tetra Tech MFT TT FTP

**Upload Data** Data Exploration Create Report

Upload your data

Browse... MD\_PRLN-626-S\_WaterAirTemp.csv

Upload complete

Use this file

Single site or multiple sites

Single site

Dataset

MD\_PRLN-626-S\_WaterAirTemp.csv

Display

☒ Head

☐ Tail

☐ ColumnNames

Display file contents

Plot Raw Data

Select datetime format

☐ %Y-%m-%d  
%H:%M:%S

☒ %Y-%m-%d %H:%M

☐ %d-%m-%Y  
%H:%M:%S

☐ %Y-%m-%d

☐ %d-%m-%Y

☐ %m%d

Display time series

Must select at least one parameter before 'run' (or crashes)

Select parameters to process

I'd skip this. It is very slow

Select the appropriate datetime format.

I'd skip this (very slow)

**Dataset**

MD\_PRLN-626-S\_WaterAirTemp.csv

**Display**

☒ Head  
☐ Tail  
☐ ColumnNames

Display file contents

**Select datetime format**

☐ %Y-%m-%d  
%H:%M:%S  
☒ %Y-%m-%d %H:%M  
☐ %d-%m-%Y  
%H:%M:%S  
☐ %Y-%m-%d  
☐ %d-%m-%Y  
☐ %m%d

Display time series

Must select at least one parameter before 'run' (or crashes)

**Select parameters to process**

WATER\_TEMP\_C ✕  
AIR\_TEMP\_C ✕

Run meta summary

Select the parameters

Click 'run meta summary'

The meta summary will report on

- missing data
- ContDataQC flags (P, S, F)

If you have different data qualifiers or flags, it's fine to leave them in - the Shiny app ignores them



Review the metadata summary  
You may want to revisit your input file pending what you see

Upload Data

Data Exploration

Create Report

Upload your data

Browse...

DATA\_QC\_EB372\_AW\_20150306\_20210106\_093000

Upload complete

Use this file

Single site or multiple sites

Single site

Dataset

DATA\_QC\_EB372\_AW\_20150306\_20210106\_093000

Display

Head

Tail

Plot Raw Data

Select datetime format

- ☐ %Y-%m-%d  
%H:%M:%S  
☒ %Y-%m-%d  
%H:%M  
☐ %d-%m-%Y

Parameters	Number of days with missing data	Number of days with data flagged as fail	Number of days with data flagged as suspect	Number of days with data flagged not known
Water.Temp.C	726	13	38	0
Water.Level.ft	726	4	209	0

Period of record: 2015-03-06 to 2021-01-06 09:30:00

Total number of days in this period: 2133 days

Select data points to be excluded

- ☒ fail  
☐ suspect  
☐ flag not known

Calculate daily statistics

How to save daily statistics

- ☐ Per site Per parameter  
☒ Per site with all parameters  
☐ Per parameter

Save daily statistics

If ContDataQC flags (P, S, F) are in the input file, it will give you the choice of excluding data points based on whatever box(es) you select

**Dataset**

MD\_PRLN-626-S\_WaterAirTemp.csv

**Display**

☒ Head

☐ Tail

☐ ColumnNames

Display file contents

Select datetime format

☐ %Y-%m-%d  
%H:%M:%S

☒ %Y-%m-%d %H:%M

☐ %d-%m-%Y  
%H:%M:%S

☐ %Y-%m-%d

☐ %d-%m-%Y

☐ %m%d

Display time series

Must select at least one parameter before 'run' (or crashes)

Select parameters to process

WATER\_TEMP\_C ✕

AIR\_TEMP\_C ✕

Run meta summary

Parameters	Number of days with missing data	Number of flagged
WATER_TEMP_C	5507	No flag
AIR_TEMP_C	5863	No flag field found

Period of record: 2000-06-01 00:20:00 to 2020-08-31 23:40:00  
Total number of days in this period: 7396 days

Click 'calculate daily statistics'; you need to do this before the Data Exploration functions will work

How to save daily statistics

☐ Per site Per parameter

☒ Per site with all parameters

☐ Multiple sites together

I'd stick with this (it's the default) but you can pick 'per site per parameter' if you prefer.

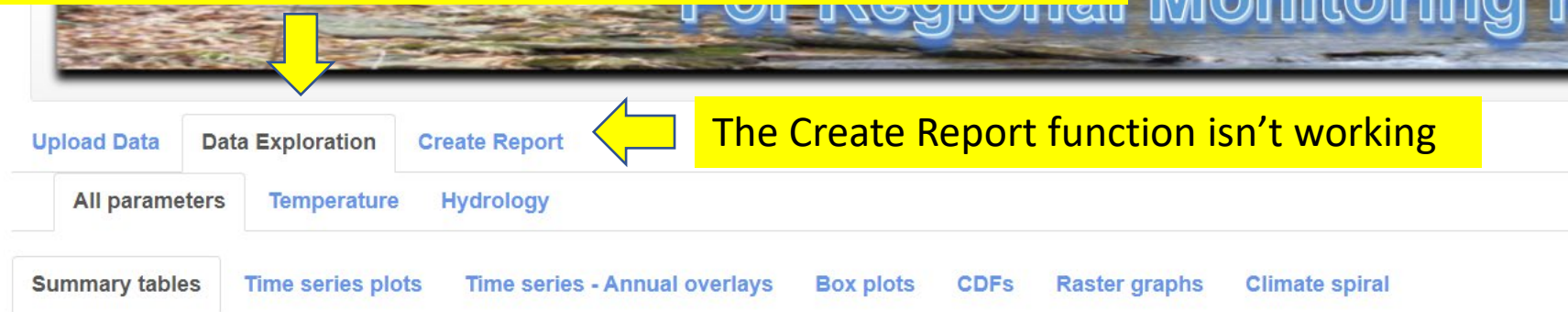
Calculate daily statistics

Save daily statistics

Optional – click here to download the file that the Data Exploration tables and graphics will be based on

SITEYR	DATE	TIME	WATER_TEMP_C	AIR_TEMP_C	YEAR	SITEID	DATE.TIME	MONTHDAY
PRLN-626-S-2000	2000-06-01	0:20:00	13.01	NA	2000	PRLN-626-S	2000-06-01 0:20	01-Jun
PRLN-626-S-2000	2000-06-01	0:40:00	13.01	NA	2000	PRLN-626-S	2000-06-01 0:40	01-Jun

Go to the **Data Exploration** tab  
you should be good to go (and be able to select variables  
from the drop-down menus)



Must calculate daily statistics before can proceed.  
'Upload Data' - 'Use this file' - 'Run meta survey' - 'Calculate daily statistics'

Select variable name  
WATER\_TEMP\_C

Summarise by  
☒ year/month  
☐ year  
☐ year/season  
☐ season

Select daily statistics metrics  
mean

Summarise

I'll send the link to the Dec 16 webinar recording in case you want to view that for a refresher on the various Data Exploration tabs (go to minute 0:26; it's about a half hour long)

https://contdatasumvizcontainerized-humble-sitatunga-bs.app.cloud.gov

# Data Visualization & Reporting For Regional Monitoring Networks

Calculating the daily statistics now...

Upload Data Data Export

Upload your data

Browse... NPS\_ERMNO

Upload complete

WaterTempC	27	No flag field found	No flag field found	No flag field found
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Use Single site

Per site Per parameter

Calculate daily statistics

If the screen grays out like this for more than 30 seconds, something has gone wrong (e.g., it might not like something in your input file)

If this happens, abort (close the website, reopen and try again)

If you reboot the website and see this error message, it needs a little more time to reset. Close the browser, wait a bit (usually 30 seconds works for me) and try again. It make take several tries...



https://contdatasumvizcontainerized-humble-sitatunga-bs.app.cloud.gov

404 Not Found: Requested route ('contdatasumvizcontainerized-humble-sitatunga-bs.app.cloud.gov') does not exist.