

Aquarius v.3.0 Release 5 Springboard Introduction

To view a video demonstration of what is written here, click the hyperlink in the box below.

http://nrdata.nps.gov/Programs/Water/Aquarius/Videos/Introduction_Aquarius_3_Springboard_R5/Introduction_Aquarius_3_Springboard_R5.html

This document introduces the basic use of the Aquarius Springboard by importing some real time series data, examining and manipulating it, and then saving it to the database. If you haven't done so already, follow the instructions [here](#) to access the Aquarius Springboard on the NRSS server (inp2300fcvgett1 or GETT1). Choose 'Launch Springboard'. This Springboard Introduction begins with this screen after all the 'Location Folders' have appeared:

Notes:
Wait for all Location Folders to appear before beginning use.
What you see appearing here may vary depending on the current contents of the database and the folders that were open when Springboard was last used.

Location Identifier	Location Name	Location Type
ABLI_01	Test Data Test Test	Lake
ABLI_02	ABLI_02	Spring
Agate Springs	AGFO Springs	River/Stream Perennial
Badwater Boardwalk	Badwater	Spring
BELA-088	BELA-088	Lake
BELA-110	BELA-110	Lake
CARE_F1_instream	NCPN riparian monitoring Fremont River reach 1 instream well	River/Stream Perennial
China Garden Spring	China Garden Spring	Spring
D-1	D-1	Well

Date	Name	Comment
8/30/2012 11:49 AM	Mirtah	Test
3/1/2012 3:27 PM	HydroFolks	Hi
2/29/2012 3:23 PM	Friends	A pleasant trip to the site
11/17/2011 10:03 AM	Me..myself..and.I	Here is a remark or two about this

Note: Your screen images may appear slightly different than what is shown in this document due to changes in the structure and/or content of the Aquarius Database, what folders were open when Springboard was last used, and/or changes/updates to the Springboard interface.

Processing your time series data in Aquarius Springboard is different than Whiteboard in several respects. First, Springboard includes only a subset of the tools found in Whiteboard. This was intentionally done by Aquatic Informatics to simplify/streamline processing and make

it accessible through a web browser. Consequently, you can't do everything in Springboard that you can do in Whiteboard and some of the processes are different. (By the same token, there are things you can do in Springboard that you can't do in Whiteboard.) Second, when using Springboard you are working directly with the Aquarius Database. You can't save processes and data to a Whiteboard file. Data are automatically saved in the Aquarius Database.

Springboard takes a 'Location' centric view of time series data management. In order to import or append data (and do any processing, analysis, and reporting) the data must be stored in the Aquarius Database under a location. Consequently, before working with time series data in Springboard you'll need to create your monitoring location(s) in the database. Aquarius provides the means to organize locations into 'Location Folders' (in the hierarchy on the left in graphic below). We'll be creating location folders for each park and Vital Signs Network that want to use Aquarius. If you don't see your park or Vital Signs Network in the 'Location Folders' hierarchy, let me know. Underneath each park/network folder, we will organize locations into folders by project. You can create appropriate project folders for your park/network.

The screenshot shows the AQUARIUS Springboard web application. On the left, a 'Location Folders' tree is visible, with 'National Park Service' selected. The main content area displays a table of locations. A red box highlights the 'National Park Service' folder in the tree, and a red arrow points from it to the table. A text box explains that the table shows all 287 locations under the 'National Park Service' folder. The bottom of the interface shows a 'Visits' table and a 'Total locations: 287' status bar.

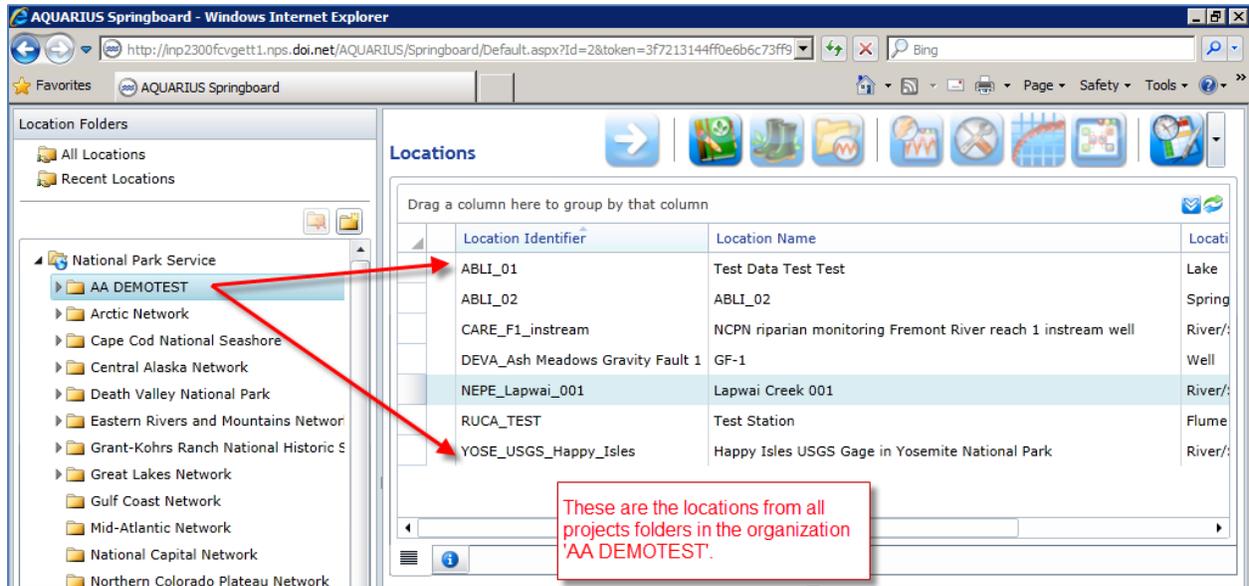
Location Identifier	Location Name	Location Type
ABLI_01	Test Data Test Test	Lake
ABLI_02	ABLI_02	Spring
Agate Springs	AGFO Springs	Perennial
Badwater Boardwalk	Badwater	
BELA-088	BELA-088	
BELA-110	BELA-110	
CARE_F1_instream	NCPN riparian monitoring Fremont River reach 1 instream well	River/Stream Perennial
China Garden Spring	China Garden Spring	Spring
D-1	D-1	Well

Date	Party	Comments
Test Data Test Test		
8/30/2012 11:49 AM	Miftah	Test
3/1/2012 3:27 PM	HydroFolks	Hi
2/29/2012 3:23 PM	Friends	A pleasant trip to the site
11/17/2011 10:03 AM	Me, myself, and I	Here is a remark or two about this

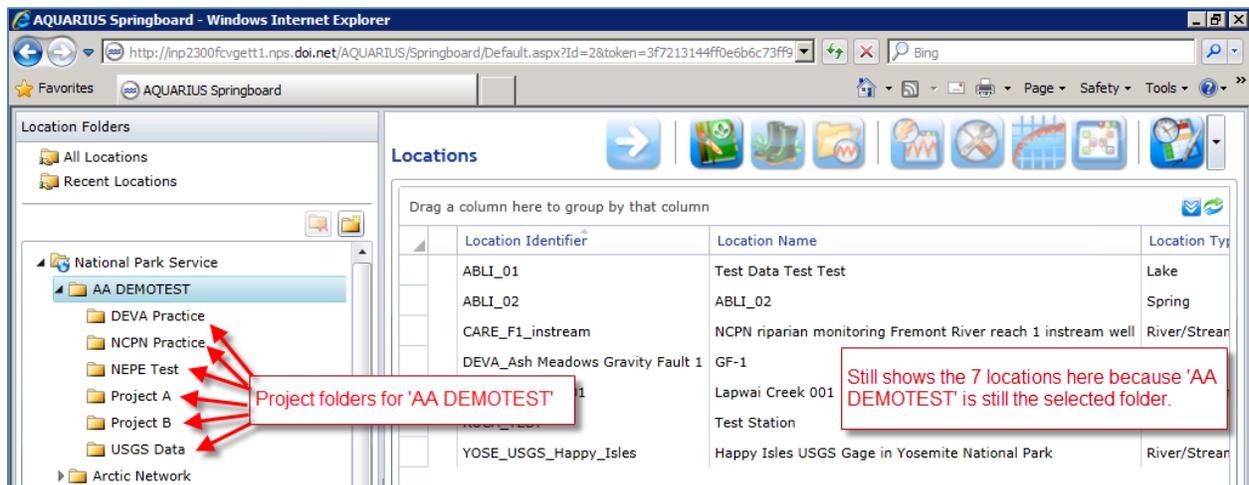
Total locations: 287

The 'AA DEMOTEST' park/network folder exists for temporary testing/experimentation (Anything stored therein may be deleted without notice). If you select 'AA DEMOTEST' in the

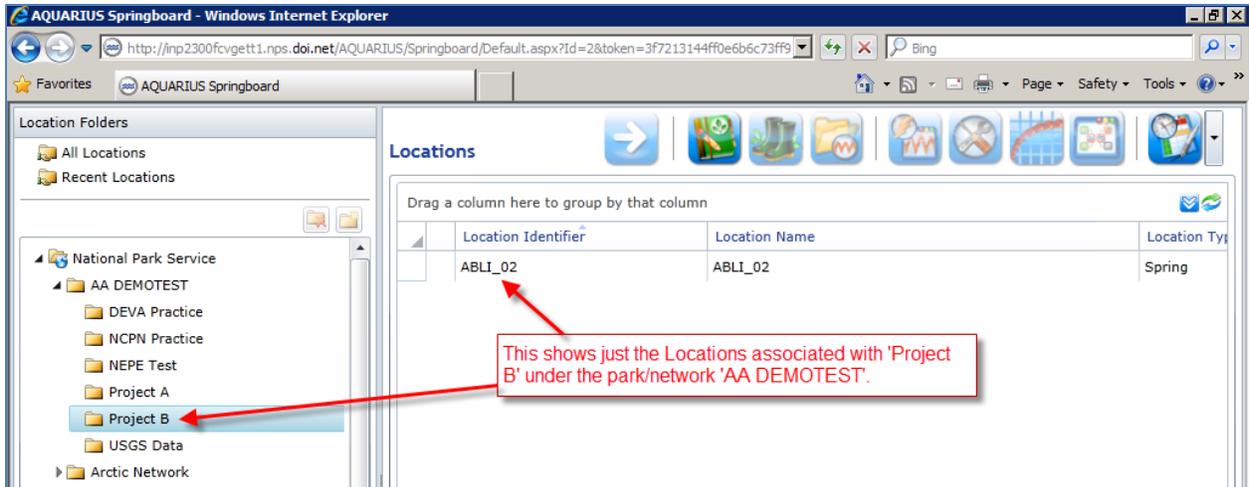
'Location Folders' hierarchy, you'll see the locations on the right that are just associated with the 'AA DEMOTEST' park/network. The actual number of locations that appear will vary depending on the current content of the Aquarius database.



If you click on the icon to the left of the 'AA DEMOTEST' park/network folder (the icon indicates the folder has subfolders), the 'AA DEMOTEST' park/network folder will open to reveal its project folders. The locations shown at the right, however, are still 'AA DEMOTEST' park/network locations.



To see just the locations associated with a particular project, select the project in the 'Location Folders' hierarchy and only that project's/folder's locations will appear on the right.

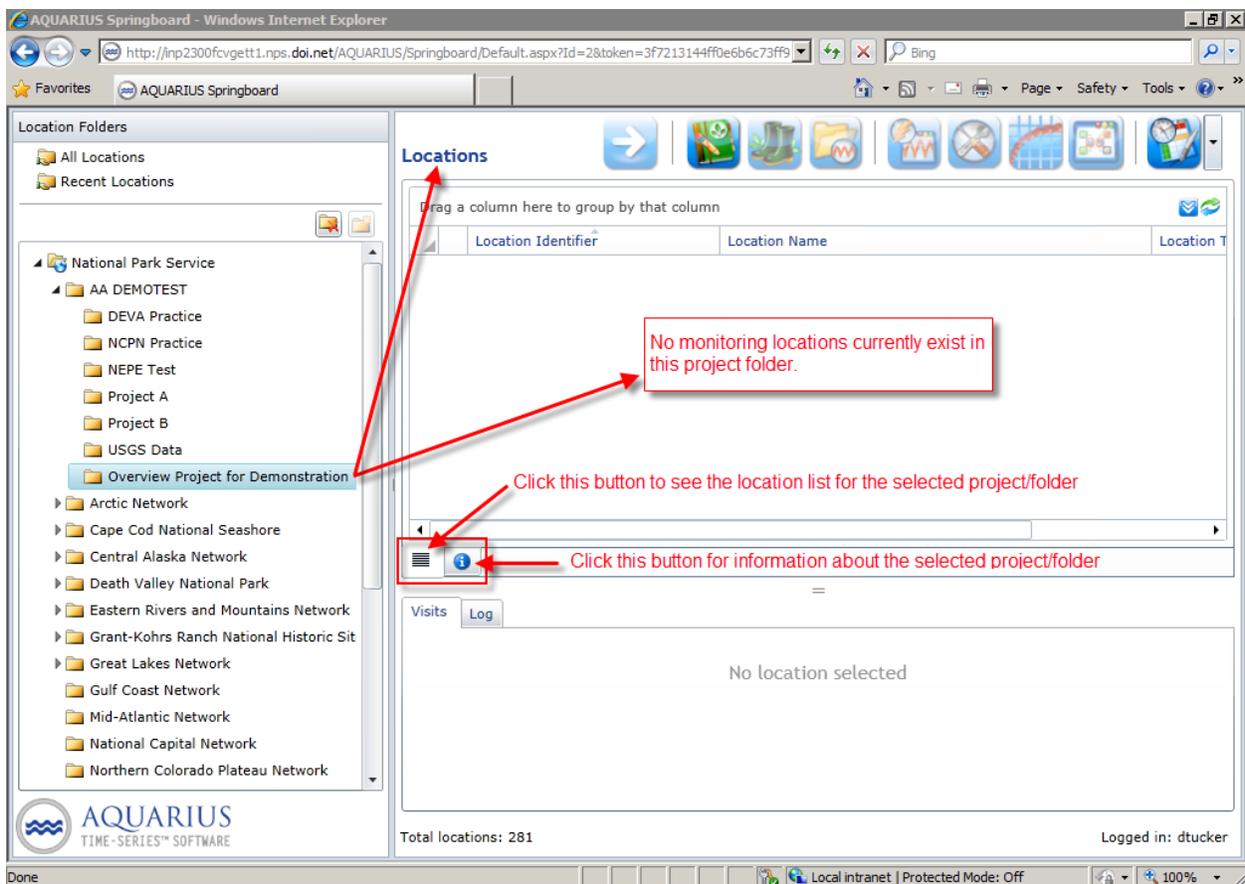


For this overview, like the Whiteboard overview, we'll import a time series data file produced by an In-Situ Troll 9000 Pro XP sonde for a location on the Colorado River in Rocky Mountain National Park near Little Yellowstone. The file appears below as saved from Microsoft Excel as a comma-separated 'CSV' file. The file basically consists of 12 columns (A-L) of data. The first two columns include the date and time; the last ten columns contain the measurements. Note: the columns can be in any order and can include data that you won't be importing. The only requirements are that there are date and time columns (or a single date/time column), at least one measured results column, and no empty rows in the data record between the first record and the last record.

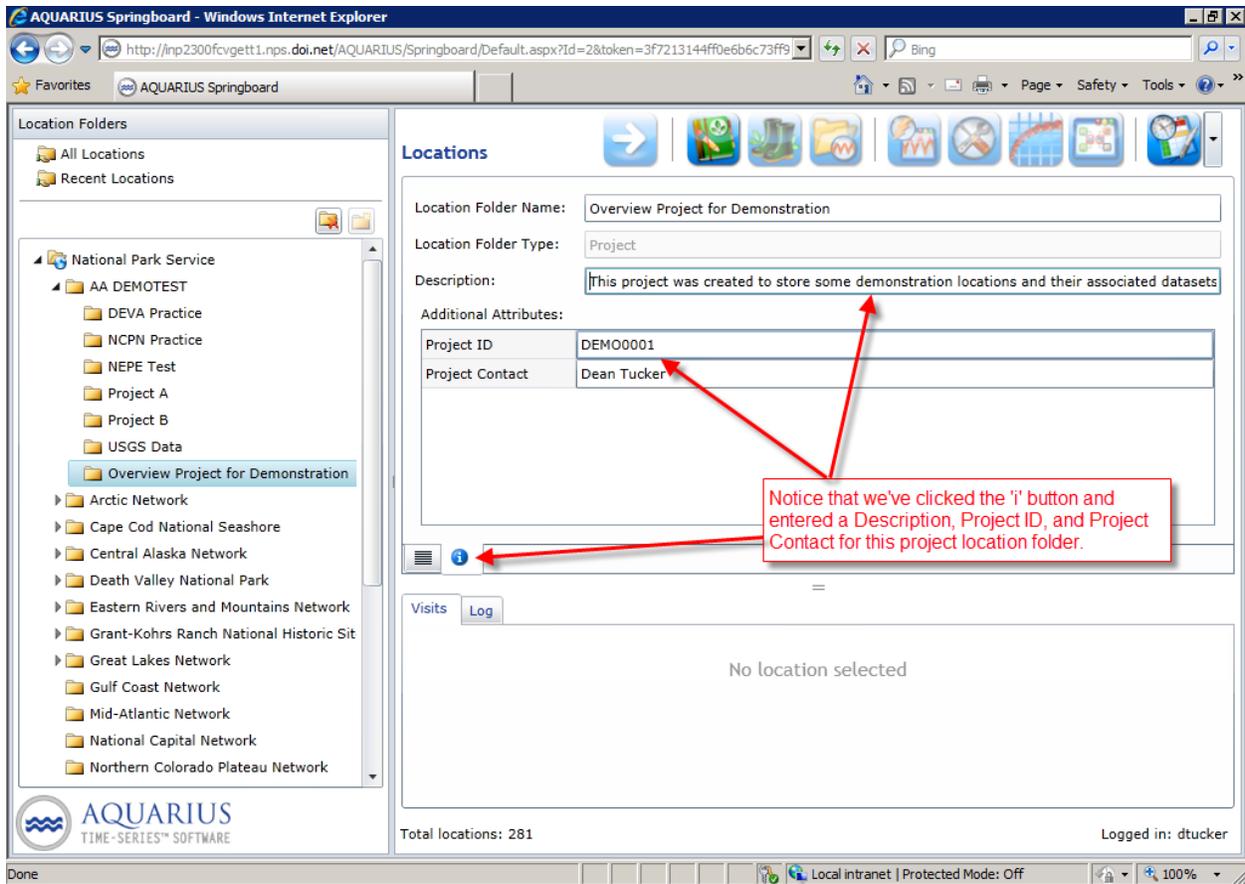
The screenshot shows a Microsoft Excel spreadsheet titled 'LIL_YELL_SOI_UPPTrollIFLDraw.csv'. The spreadsheet contains time series data from a Troll 9000 Pro XP sonde. The columns are labeled as follows: A: Date, B: Time, C: ET (min), D: Celsius, E: Feet H2O, F: mm Hg, G: FNU, H: Volts, I: pH, J: Rugged DO, K: Rugged DO Saturation, L: Conductivity. The data covers the period from 9/2/2010 1:30:00 PM to 10:30:00 PM.

Date	Time	ET (min)	Celsius	Feet H2O	mm Hg	FNU	Volts	pH	Rugged DO	Rugged DO Saturation	Conductivity
9/2/2010	1:30:00 PM	0	10.66	0.301	543	2.7	6.639	7.99	7.88	99.6724	55.21
9/2/2010	2:00:00 PM	30	11.28	0.299	543	1.3	6.639	7.98	7.78	99.9125	55.18
9/2/2010	2:30:00 PM	60	11.53	0.69	543	0.8	6.639	7.95	7.72	99.738	55.09
9/2/2010	3:00:00 PM	90	11.78	0.714	543	-0.6	6.639	7.95	7.66	99.5807	55.07
9/2/2010	3:30:00 PM	120	11.63	0.723	543	-0.7	6.639	7.95	7.68	99.4729	55.17
9/2/2010	4:00:00 PM	150	11.32	0.751	543	-0.6	6.639	7.93	7.73	99.3652	55.21
9/2/2010	4:30:00 PM	180	10.77	0.784	543	-0.6	6.639	7.92	7.82	99.282	55.39
9/2/2010	5:00:00 PM	210	10.12	0.855	543	-0.8	6.639	7.9	7.92	98.9126	55.46
9/2/2010	5:30:00 PM	240	9.25	0.941	543	-0.6	6.639	7.88	8.05	98.4325	55.6
9/2/2010	6:00:00 PM	270	8.56	1.005	543	-1.1	6.639	7.86	8.16	98.2128	55.67
9/2/2010	6:30:00 PM	300	8.05	1.065	543	-1	6.639	7.83	8.24	97.9383	55.76
9/2/2010	7:00:00 PM	330	7.68	1.119	543	-0.7	6.639	7.82	8.31	97.7993	55.8
9/2/2010	7:30:00 PM	360	7.34	1.159	543	-0.7	6.639	7.79	8.36	97.6011	55.89
9/2/2010	8:00:00 PM	390	7.03	1.191	543	-0.6	6.639	7.77	8.41	97.4765	55.95
9/2/2010	8:30:00 PM	420	6.8	1.232	543	-0.6	6.639	7.76	8.47	97.5325	56.02
9/2/2010	9:00:00 PM	450	6.56	1.264	543	-1	6.639	7.76	8.52	97.5543	55.99
9/2/2010	9:30:00 PM	480	6.32	1.29	543	-1	6.639	7.76	8.58	97.6095	56.07
9/2/2010	10:00:00 PM	510	6.14	1.309	543	-0.6	6.639	7.75	8.62	97.6377	56.06
9/2/2010	10:30:00 PM	540	5.95	1.328	543	-1	6.639	7.75	8.66	97.628	56.12

The first step is to identify and/or create the 'Location Folders' and the location that will receive this time series data. Since these are demonstration data, we'll save them under the 'AA DEMOTEST' park/network folder. We could store the data under any of the existing projects for 'AA DEMOTEST', but rather than do that, let's create a new project under 'AA DEMOTEST'. Select the 'AA DEMOTEST' park/network in the 'Location Folders' hierarchy and then right-click 'AA DEMOTEST'. Select 'New Project'. Find the 'New Project' entry that is created and rename it with a concise but descriptive name. You can see below that I named this project 'Overview Project for Demonstration'. It is currently selected below in the 'Location Folders' hierarchy. The default view to the right displays a list of locations for the selected project/folder ... but we haven't created any locations for this project so the Locations panel is empty.

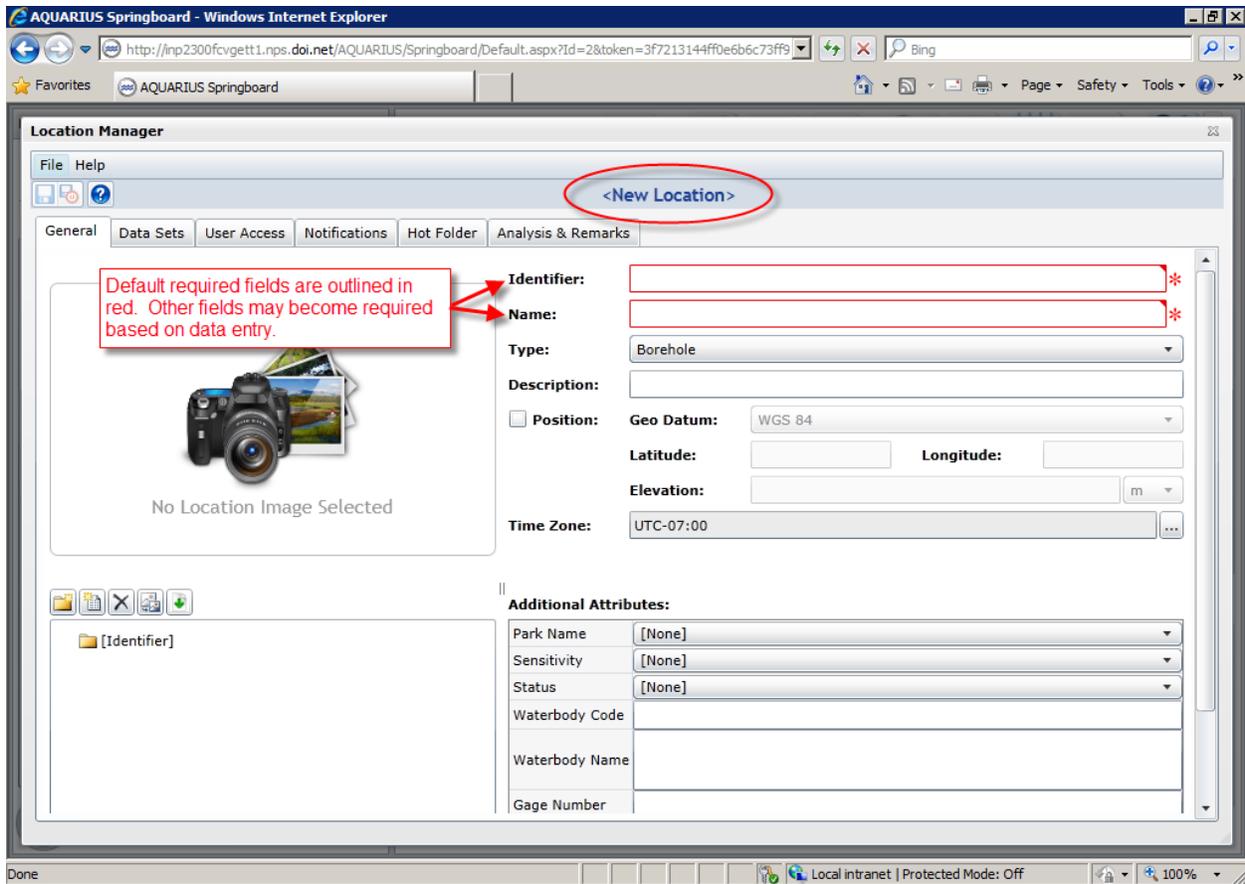


You can also click the  button to enter/view information about the project as shown below. Clicking on the list icon () will return you to the Locations list view for the selected project/folder.



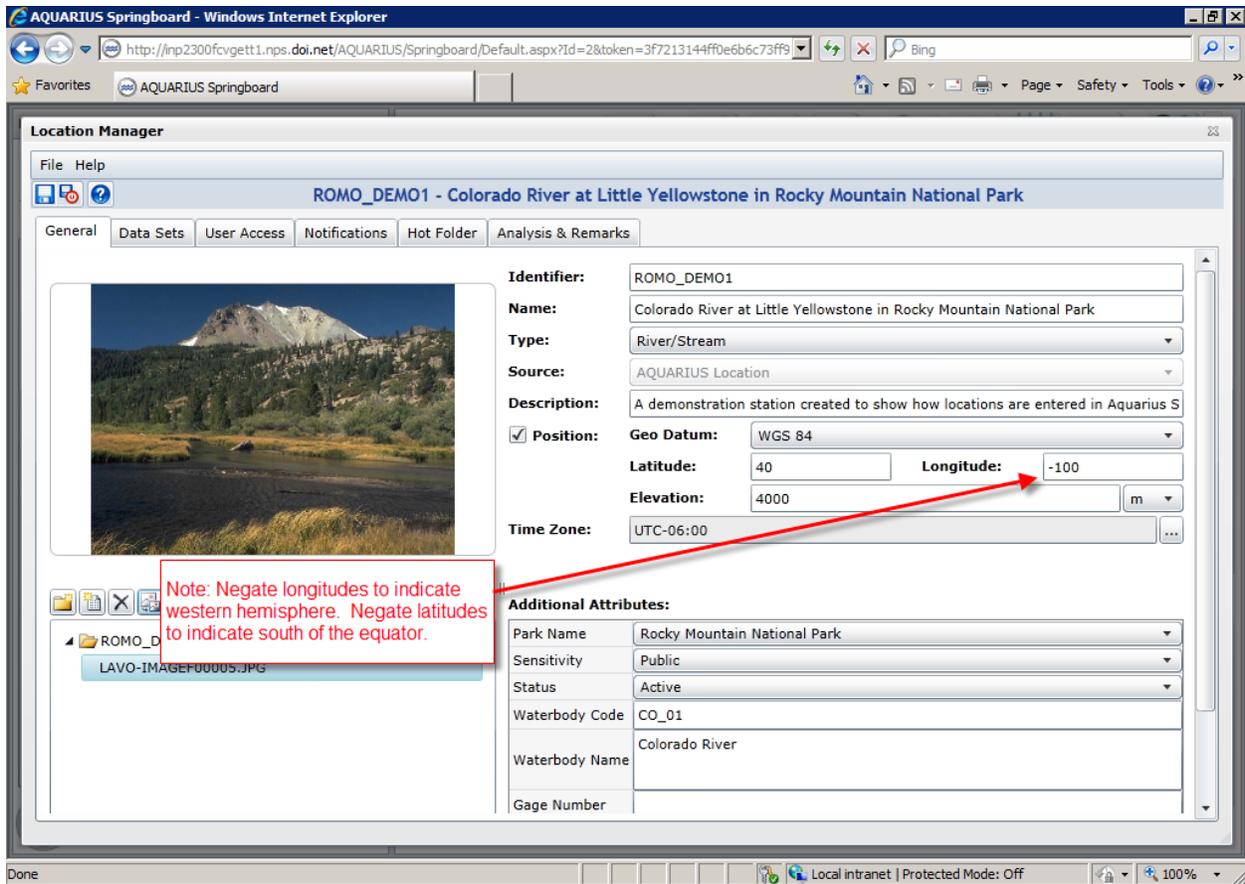
Note: The 'Additional Attributes' fields at the project/folder level are extensible by NPS.

Now that we've identified the park/network ('AA DEMOTEST') and the project ('Overview Project for Demonstration') folders, we must create a location if it doesn't already exist. With the 'Overview Project for Demonstration' project selected (left-click it if it isn't currently selected), right-click the 'Overview Project for Demonstration' and select 'New Location'. Alternatively, with the project selected, you could click the 'Location Manager' icon (📍) at the top of the screen. Aquarius will start the 'Location Manager' tool. The 'Location Manager' tool allows you to create and manage locations, data sets, user access, notifications, etc. Required fields are outlined in red.



Note: The 'Additional Attributes' fields for locations are extensible by NPS.

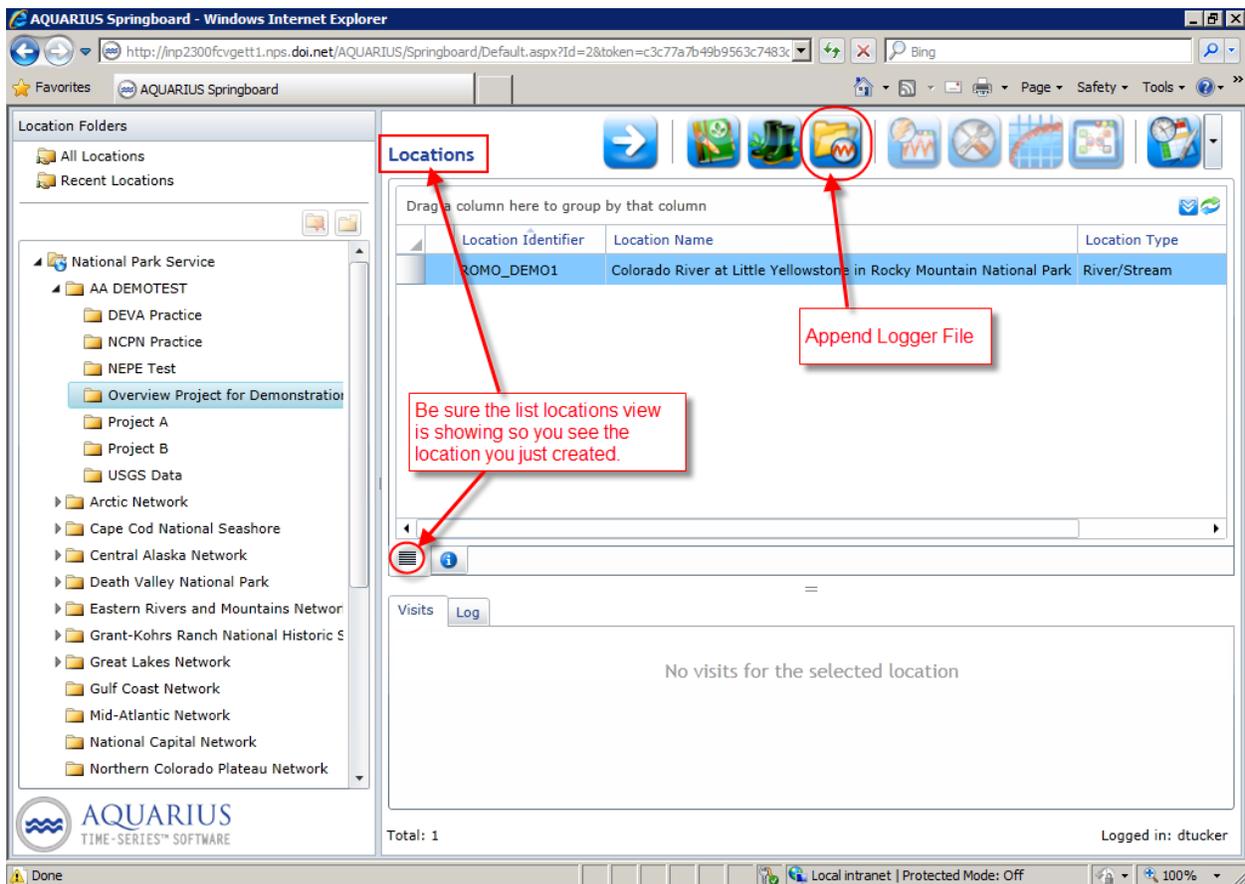
Enter some station location information as shown below. When you are done defining your location on the 'General' tab, click the 'Save & Exit' button () or 'File – Save & Exit' to return to Springboard. Notice that you can also click the 'Save' button () or 'File – Save' to save your entry at any time and continue working in the 'Location Manager'.



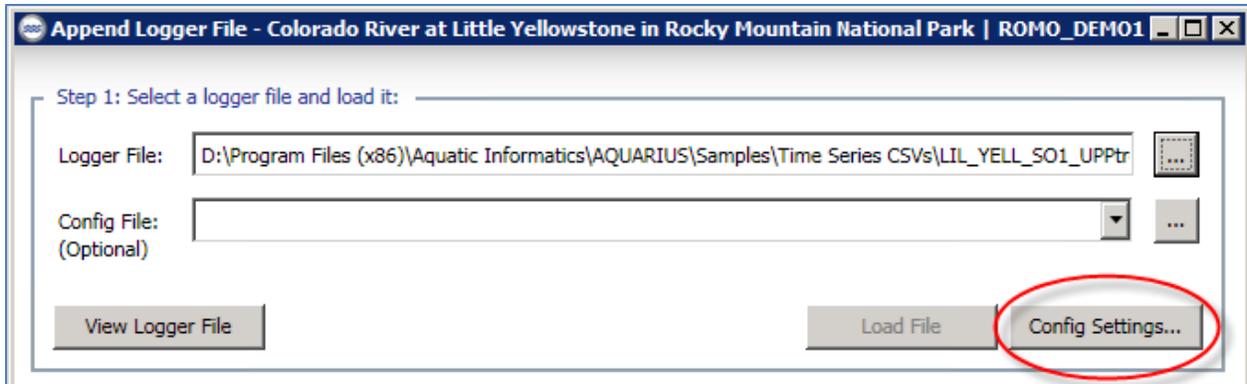
Once you have a location created in the Aquarius Database, you can store time series data sets for that location. Aquarius stores time series data sets in parameter 'containers'. You'll need to decide whether to store, for example, all the pH time series collected during multiple sonde deployments at a location in one pH container or whether to have separate pH containers for each sonde deployment or something in between (e.g. parameter by year, parameter by sonde, etc.). The advantage of one pH container is the organizational simplicity in archiving, analysis, and reporting of not having potentially hundreds of pH time series data set containers at a location. The disadvantage might be whether you really want to lump the deployment periods into one container, particularly if different sondes or sensors were used over time. This disadvantage will likely disappear when Aquatic Informatics enables assigning instruments and sensors to each result. Until then, the only way to potentially distinguish multiple deployments in a pH container is via the Source attribute which will contain the import file name.

You can create the parameter containers for a location in the 'Location Manager' and then append data into the containers using the 'Append Logger File' tool. Alternatively, you can use the 'Append Logger File' tool to create parameter containers from the initial import. That is the route we'll use below. We'll also quickly look at how to create the containers in 'Location Manager'. If you exited 'Location Manager' and returned to Springboard, be sure the list

Locations view (☰) is selected so you can see the location you just created. Select the location 'ROMO_DEMO1' and then click the 'Append Logger File' icon (📄) at the top of the screen.



The two-step 'Append Logger File' tool opens. (If the tool does not open, look for it in the Windows Task Bar and click it.) Click the ☰ icon to the right of the 'Logger File' box to browse to the location of the Little Yellowstone Colorado River logger file and select it. The next step is to define the configuration of the logger file so Aquarius understands the file's structure and which data you want to import. Click the 'Config Settings...' option button. Aquarius will initiate the same four step 'Import from File Wizard' that is used in Aquarius Whiteboard.

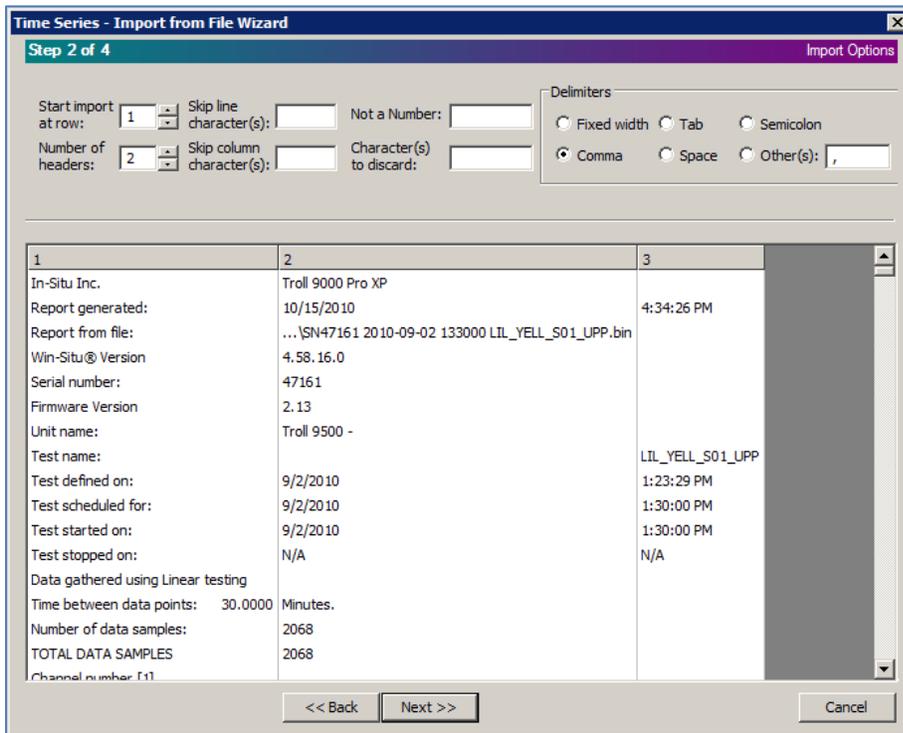


Note: Since we have a 'Config File' already created for this Little Yellowstone Colorado River logger file, you could click the  icon to the right of the 'Config File' box and browse and select the previously saved 'Config File'. If you do browse to and select the 'Config File' here (which is what you would want to do once you've previously done the import and saved the configuration for subsequent use with similarly formatted files), you should still click on 'Config Settings...' and follow along the steps below – you just won't have to do as much picking and choosing because the configuration options will be filled in from the 'Config File'. In real processing, rather than stepping through the 'Config Settings...', you'd select the 'Config File' and then click 'Load File' to complete Step 1 of the 'Append Logger File' tool.

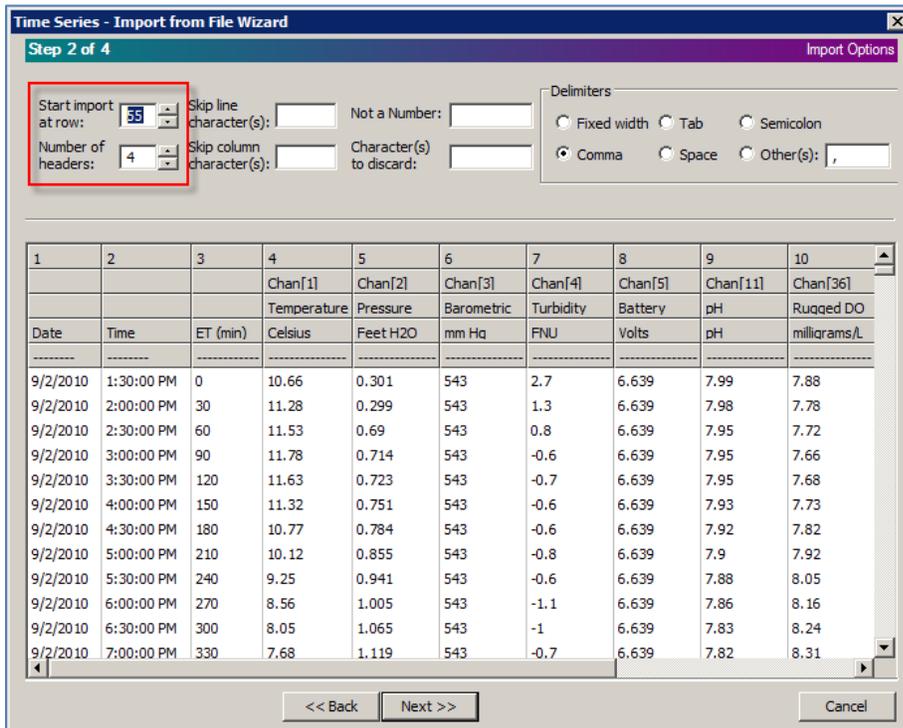
Step 1: Select the 'Time Series' radio button and 'Text File (CSV, etc.)' and then click 'Next >>'.



Step 2: Locate the data within the file and specify the column delimiter. Aquarius shows what the file looks like with the default specifications (Start import at row 1 and comma delimited).

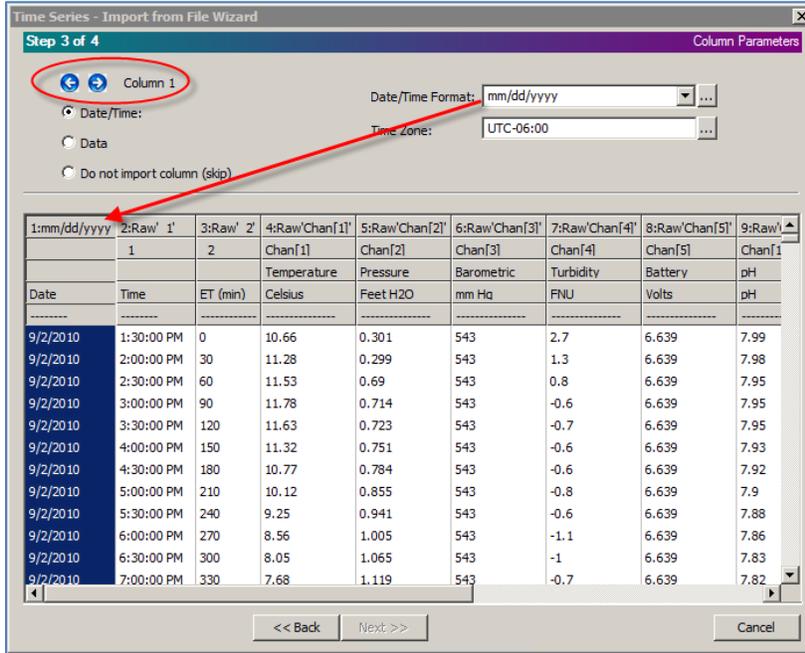


Change the 'Start import at row:' to 55 and the number of headers to 4 and then click 'Next >>'.

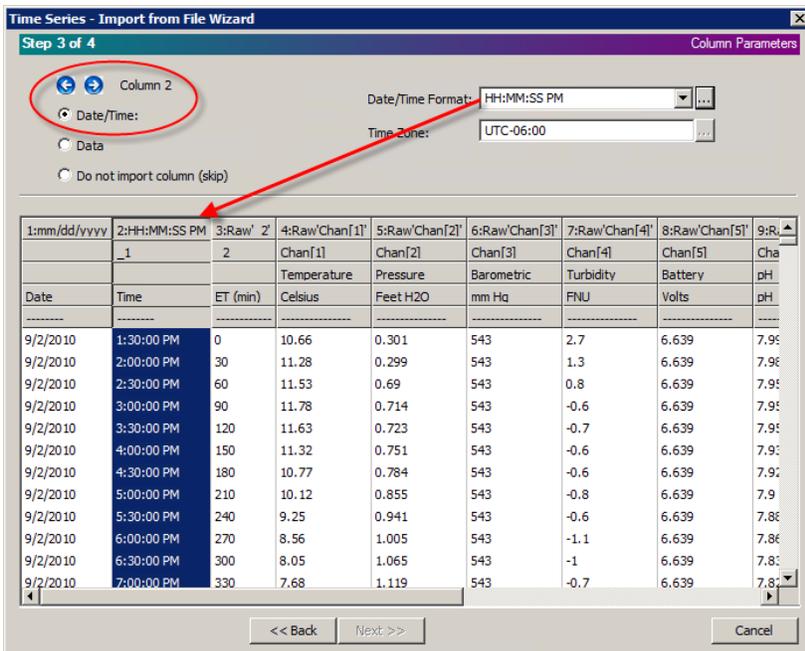


Step 3: Define what each column contains and whether to skip (not import) a column.

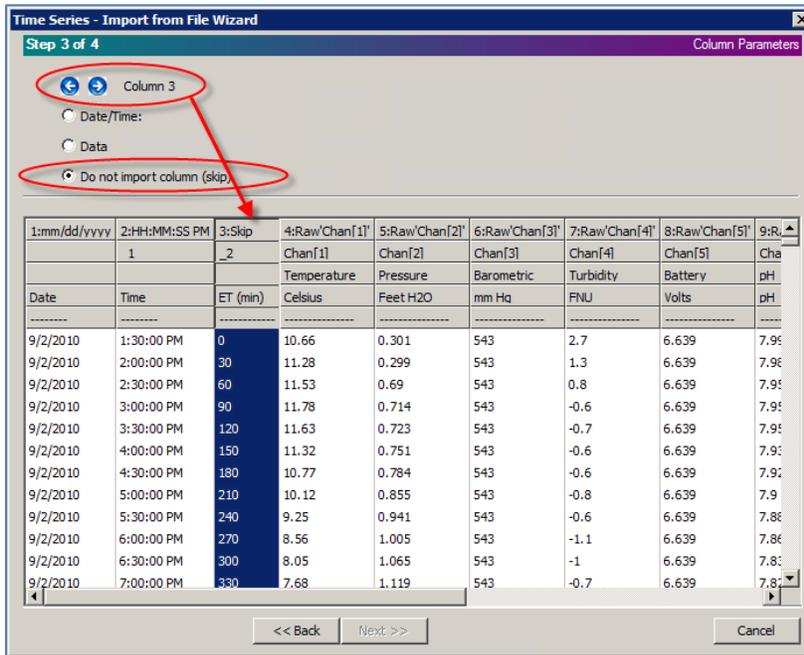
For column 1, indicate that it is a Date/Time, the format is 'mm/dd/yyyy', and the time zone is MDT (UTC-06:00).



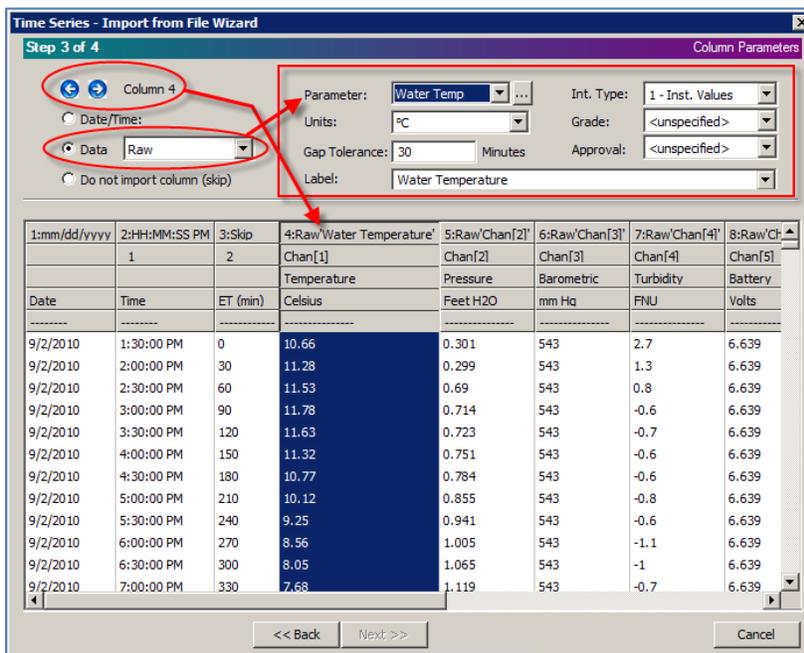
Use the blue arrows to change columns or simply click on the next column. For column 2, indicate that it is a Date/Time and the format is 'HH:MM:SS PM'. Leave the time zone set to MDT (UTC-06:00).



For column 3, click the radio button next to 'Do not import column (skip)'. This column contains elapsed time which we don't need.



For column 4, click the radio button for 'Data' and set it to 'Raw'. Select 'Water Temp' as the parameter, Units of degrees C, Gap Tolerance of 30 minutes, Int. Type of '1 - Inst. Values', and a label of 'Water Temperature'. You can also set Grades or Approvals here or do them later. For now, just leave them set to unspecified here.



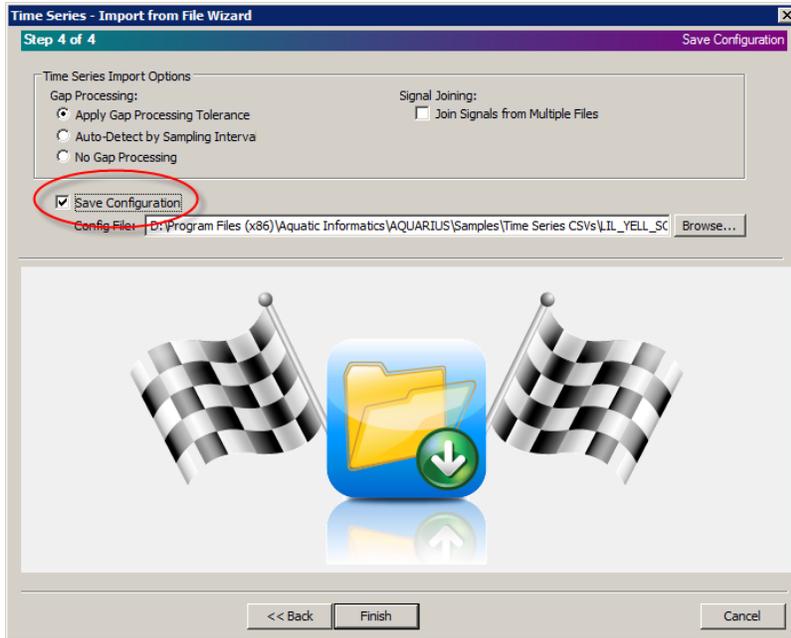
Continue to define columns 5 through 12 as done for water temperature. The appropriate entries are given below. Once all the columns are defined as per below, click 'Next >>'.

Column	Parameter	Units	Gap Tolerance	Label	Int. Type
5	Stage	ft	30	Water Depth Above Sonde	1 - Inst. Values
6	Atmos Pres	mmHg	30	Barometric Pressure	1 - Inst. Values
7	Turbidity	FNU	30	Turbidity	1 - Inst. Values
8	Voltage	V	30	Battery Voltage	1 - Inst. Values
9	pH	pH	30	pH	1 - Inst. Values
10	O2 (Dis)	mg/l	30	Rugged Dissolved Oxygen	1 - Inst. Values
11	Dis Oxygen Sat	%	30	Rugged Dissolved Oxygen Saturation	1 - Inst. Values
12	Sp Cond	us/cm	30	Specific Conductance	1 - Inst. Values

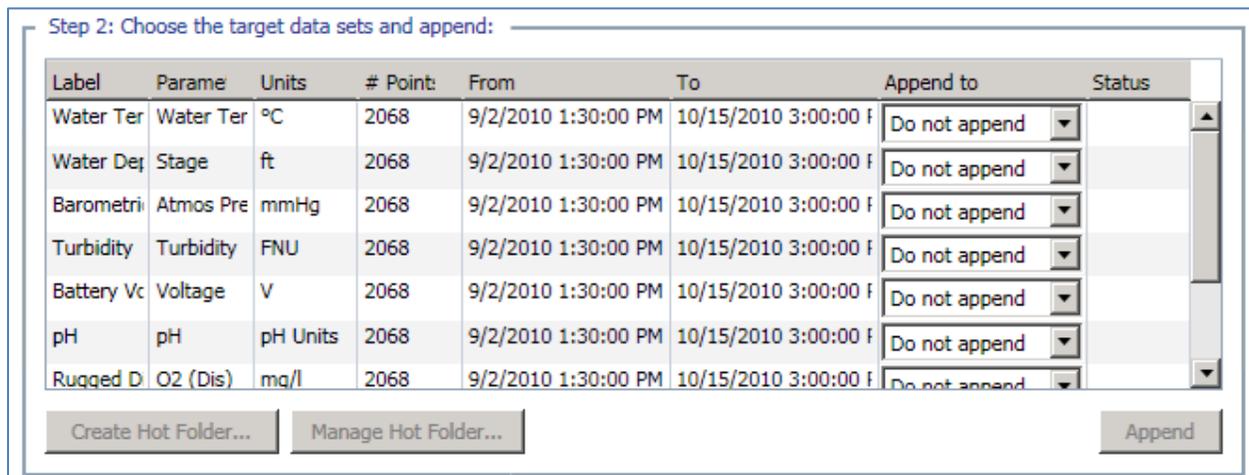
Aquarius automatically fills in a default unit of measure for each parameter. Be sure it is the unit of measure that you actually used. For example, the default for Stage is Meters, Turbidity is NTU, and Barometric Pressure is kPA. You'll want to change those units to match the units above.

Note: Gap Tolerance defines how much time can elapse between consecutive measurements after which Aquarius would identify a 'gap' in the time series. For important information on the complexities of Gap Tolerance, check out the [Aquarius Frequently Asked Questions](#). In brief, a previously defined time series Gap Tolerance entered for a data set container on the Location Manager's 'Data Set' tab that is greater than 0 takes precedence over the Gap Tolerance setting entered in Step 3 of the Import Wizard when appending into that existing dataset container. 'Int. Type' defines the interpolation type and is used for graphical and reporting purposes. Here '1 – Inst. Values' identifies these time series measurements as instantaneous values.

Step 4: Go with the default Gap Processing option which means Aquarius will identify any gaps longer than 30 minutes in the import file. Check the box next to 'Save Configuration' to save the import file definition/specification you created so you can re-use it with the same or similarly structured/formatted files in the future. When done, click 'Finish'.

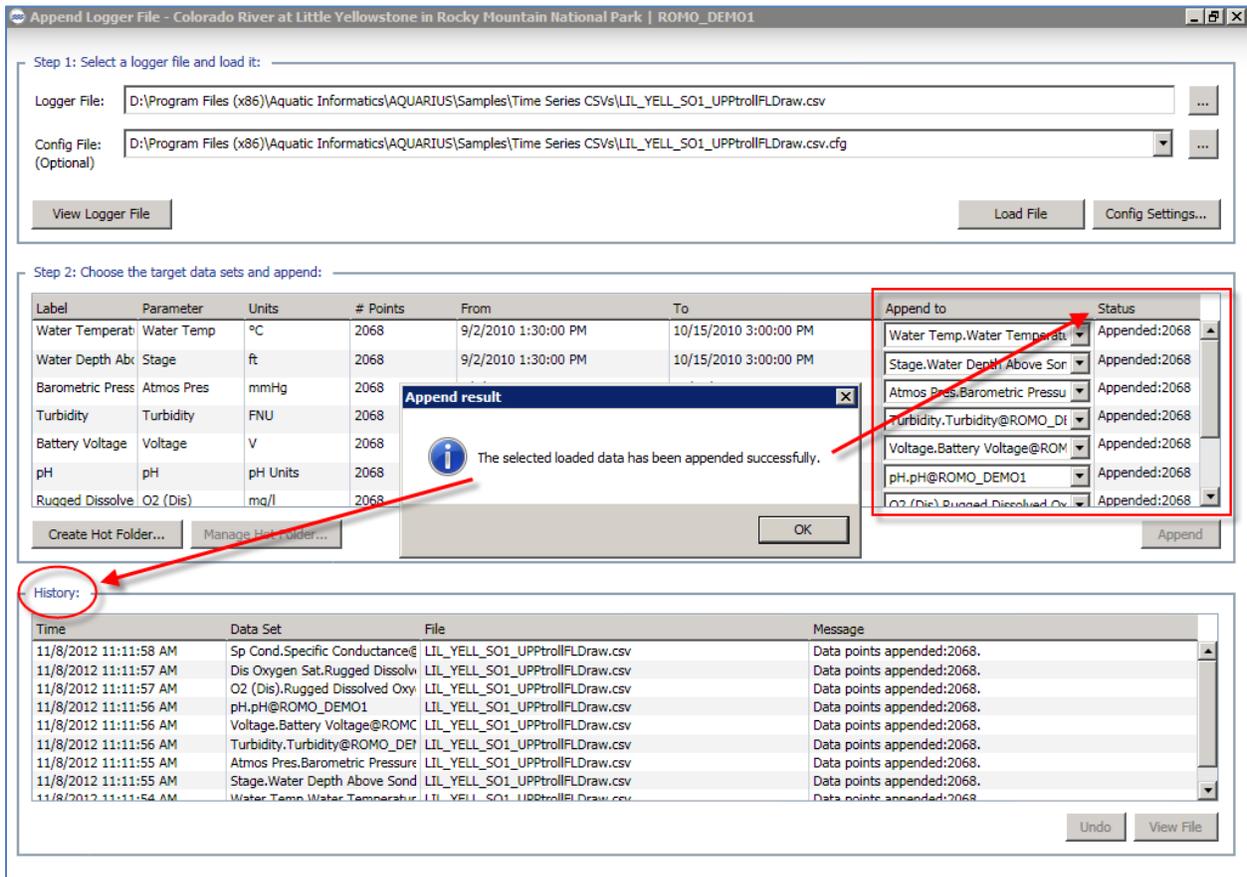
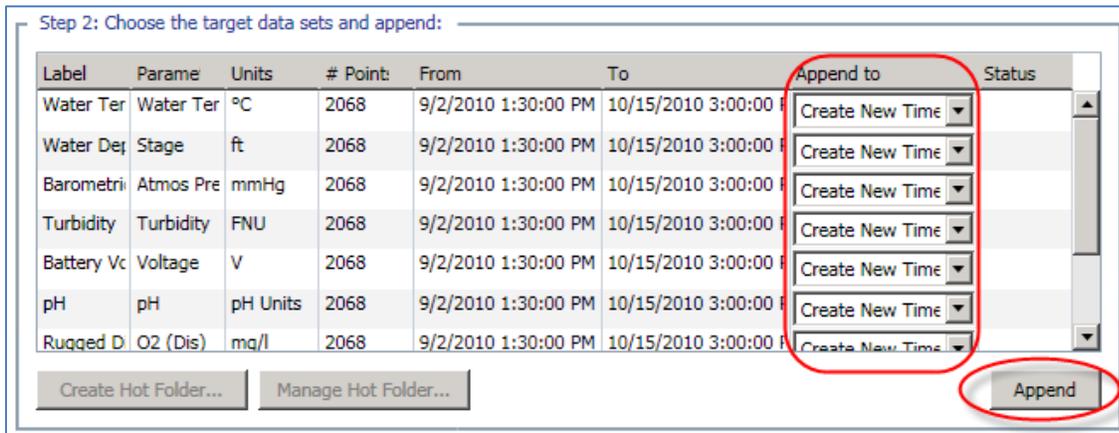


When the 'Import from File Wizard' completes you will be in Step 2 of the 'Append Logger File' tool.



In this step, the user tells Aquarius to which data set container they wish to append each parameter. In looking at the options under 'Append to', however, there is only 'Do not append' (which means it will be skipped) and 'Create New Time Series'. No existing data set containers appear because we didn't create them in 'Location Manager' before using the 'Append Logger File' tool. We will let the 'Append Logger File' tool create the new data set containers by selecting 'Create New Time Series' for each of the parameters. The 'Append Logger File' tool will use the information supplied in the 'Import from File Wizard' (parameter name, unit, etc.) to create the selected containers and then load the containers with the import data. Once

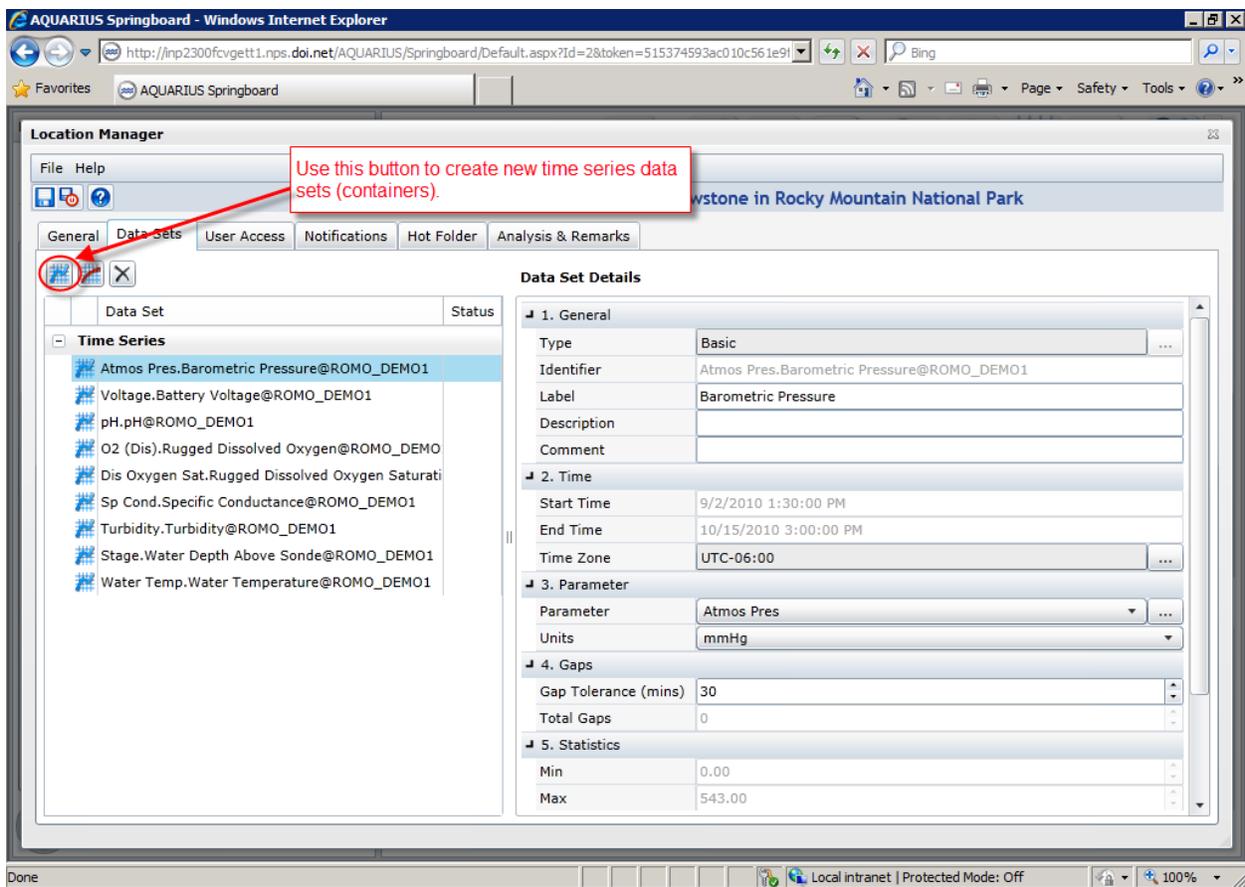
you've indicated how each time series should be handled with the 'Append to' combo box, the 'Append' button will become enabled. Click the 'Append' button.



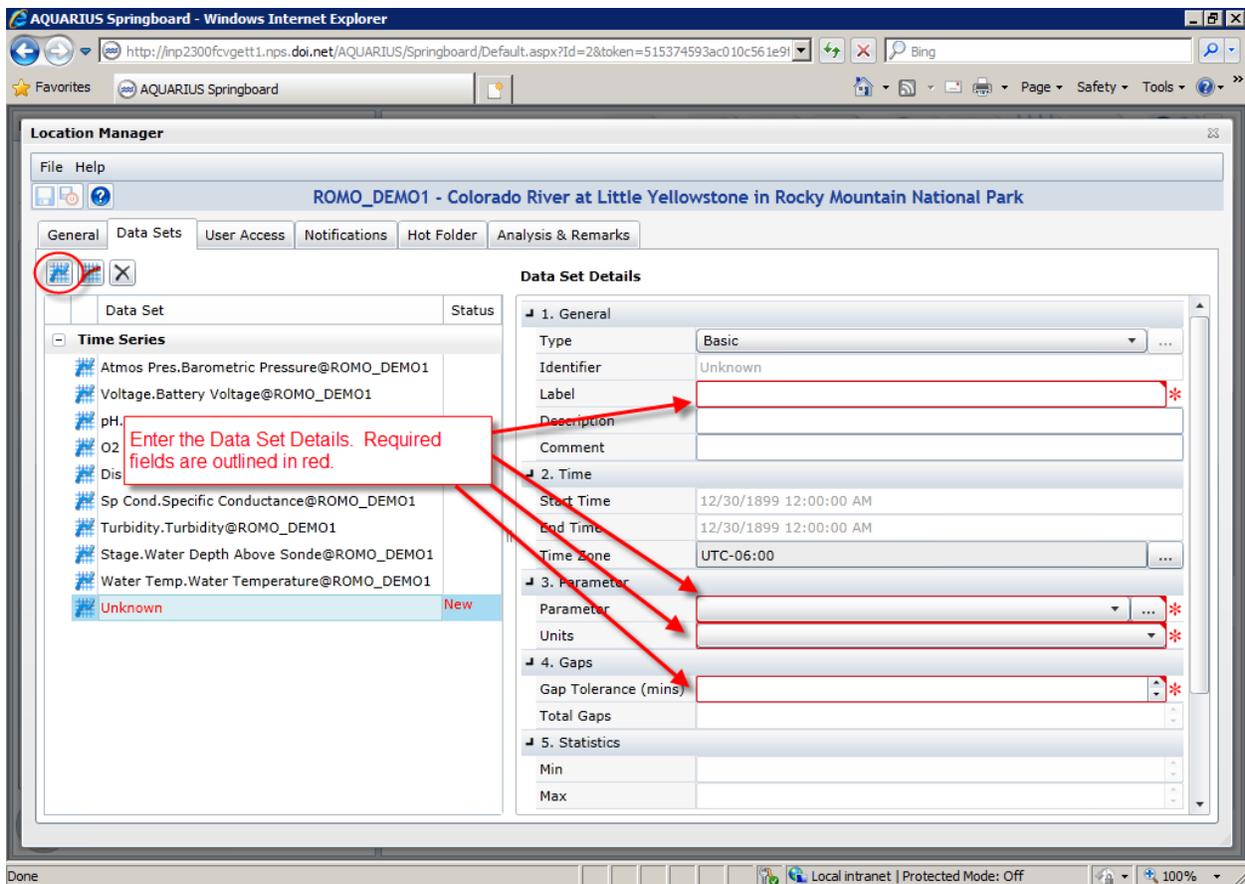
Note: If you append incorrectly, you can undo the append by selecting the 'Undo' button with the desired time series parameter data set(s) selected.

Aquarius creates the containers and appends the data. Notice it filled in the created container names in the 'Append to' combo boxes. If we had another file of data for these parameters at this location, we could now choose to append to the appropriate parameter container rather than choosing 'Create New Time Series' (unless we wanted the new data in separate containers). Let's look at the data set containers in 'Location Manager'.

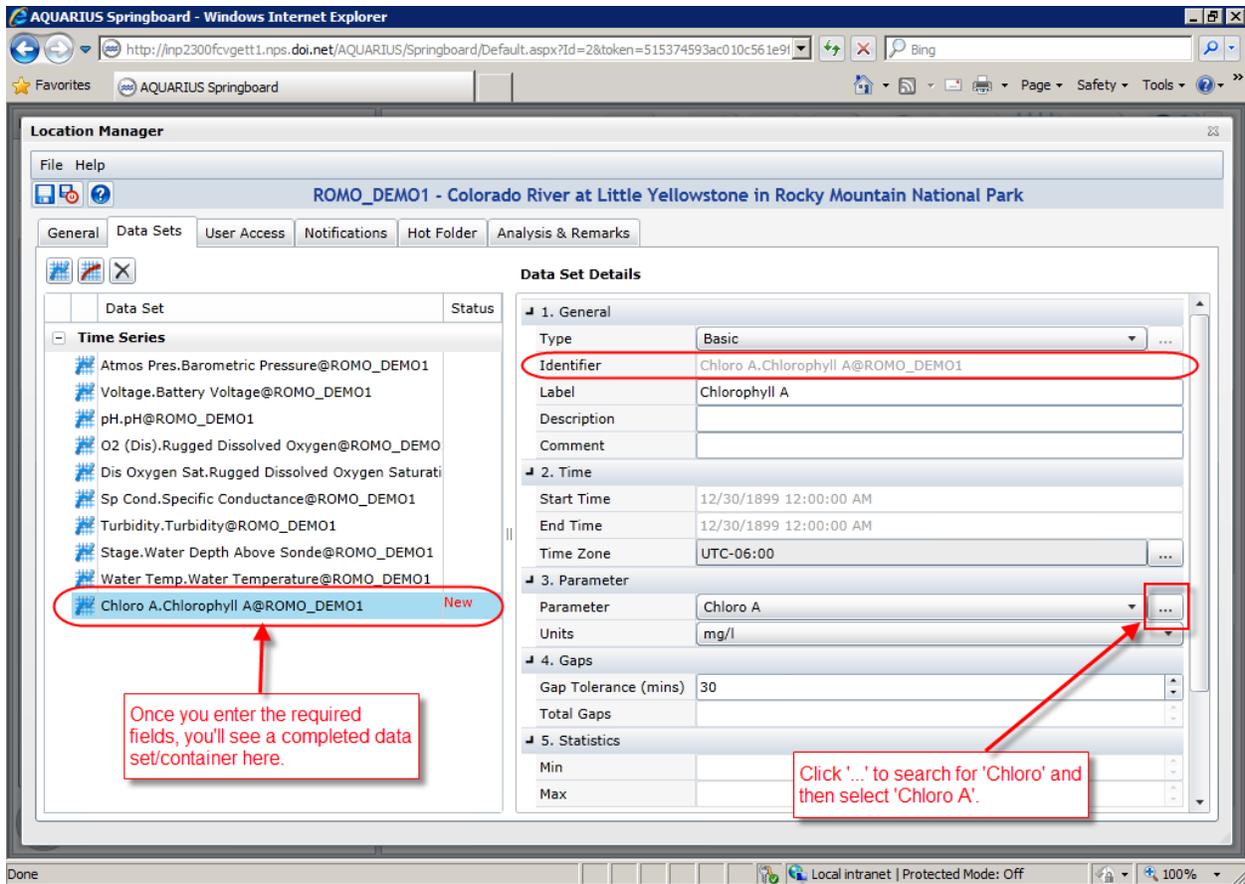
Close the 'Append Logger File' tool by clicking the  icon in the upper right corner of the window. Back in Springboard, with the 'Overview Project for Demonstration' project and the 'ROMO_DEMO1' location selected, either right-click on 'ROMO_DEMO1' and select 'Location Manager' or left-click the 'Location Manager' icon (). Click the 'Data Sets' tab. You'll see the 9 data set containers created by the 'Append Logger File' tool on the left. On the right are the details about the selected data set/container.



As mentioned above, before using the 'Append Logger File' tool, we could have used 'Location Manager' to define our parameter/data set containers and then appended into them. The ability of the 'Append Logger File' tool to create data set containers from the initial import is a time saver. You can, however, use the 'Location Manager' at any time to create a new data set container. To do this, click the 'New Time Series' button (.



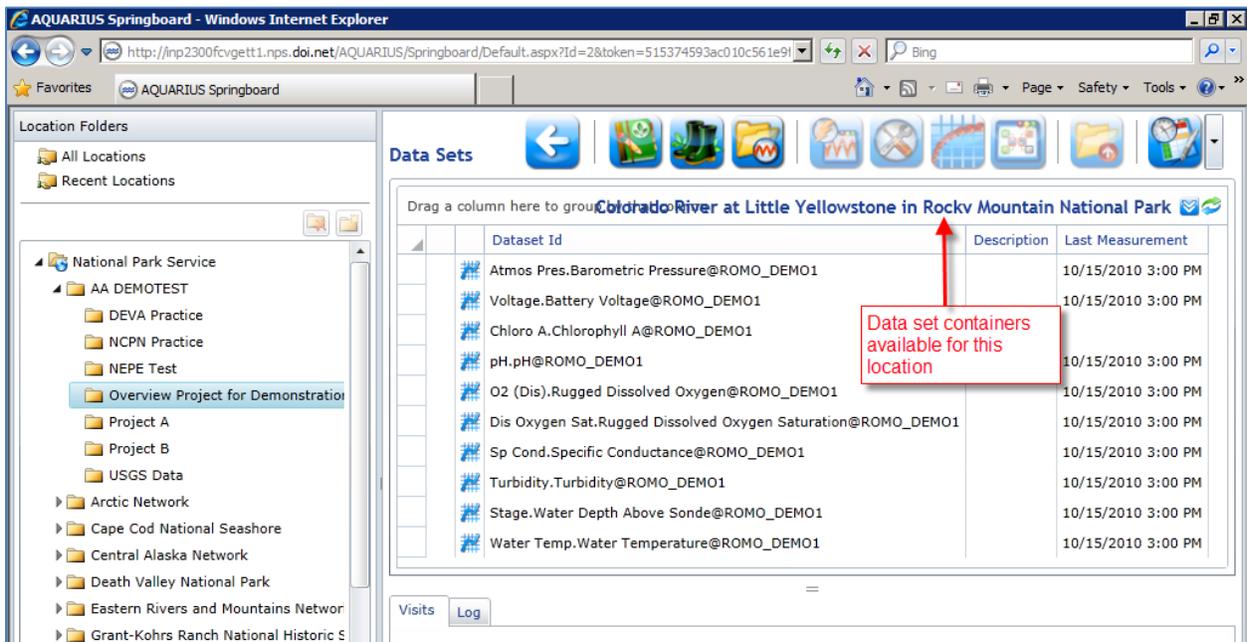
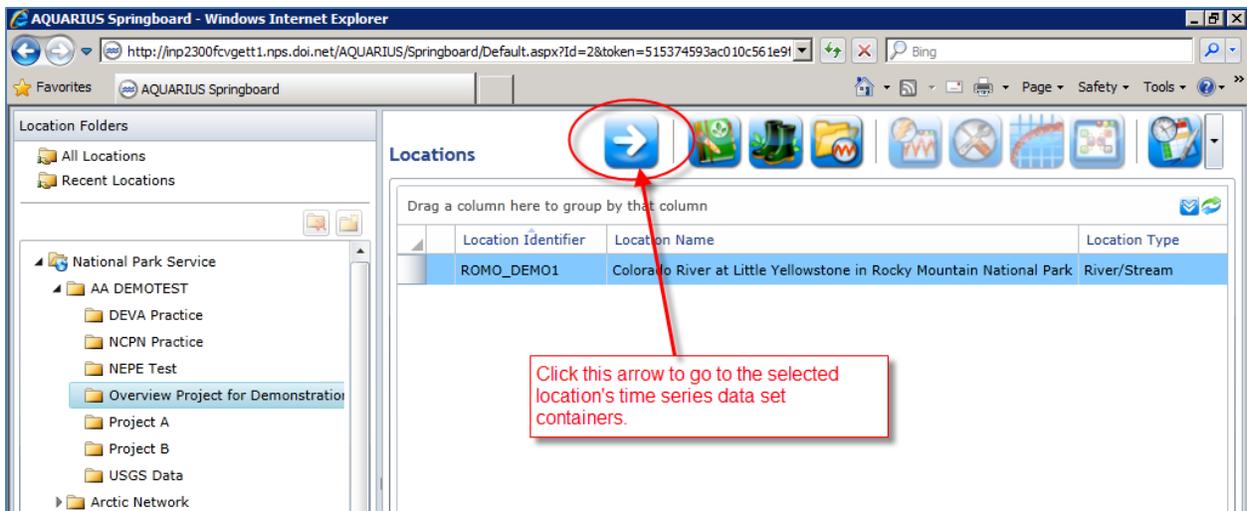
Enter the 'Data Set Details' for a 'Chloro A' time series parameter data set container as per below. Click the icon to the right of the Parameter box to search for the 'Chloro A' parameter. Aquarius will fill in a default unit of measure when a parameter is selected. Be sure to change the unit of measure as necessary if the default unit is not what was utilized.



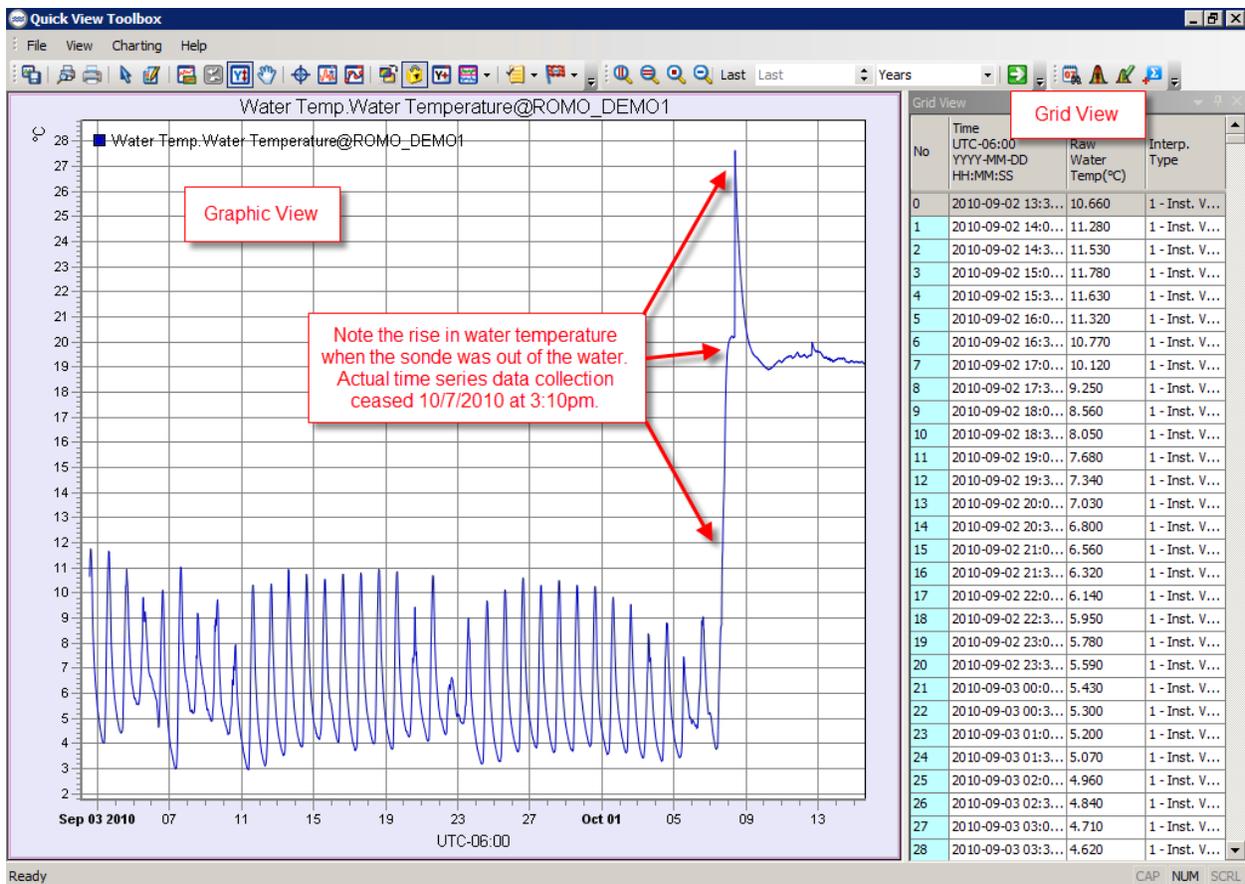
Notice how Aquarius builds the time series identifier by concatenating the Parameter, Label, and Location Identifier.

When you are done entering the info for the 'Chloro A' time series data set container on the 'Data Sets' tab, click the 'Save & Exit' button () or 'File – Save & Exit' to return to Springboard. Notice that you can also click the 'Save' button () or 'File – Save' to save your entries at any time and continue working in the 'Location Manager'.

Now let's see how to examine the time series data sets that we've created. Back in Springboard, with the 'Overview Project for Demonstration' project and the 'ROMO_DEMO1' location selected, click the 'Go To Data Sets' button () in the icon toolbar.

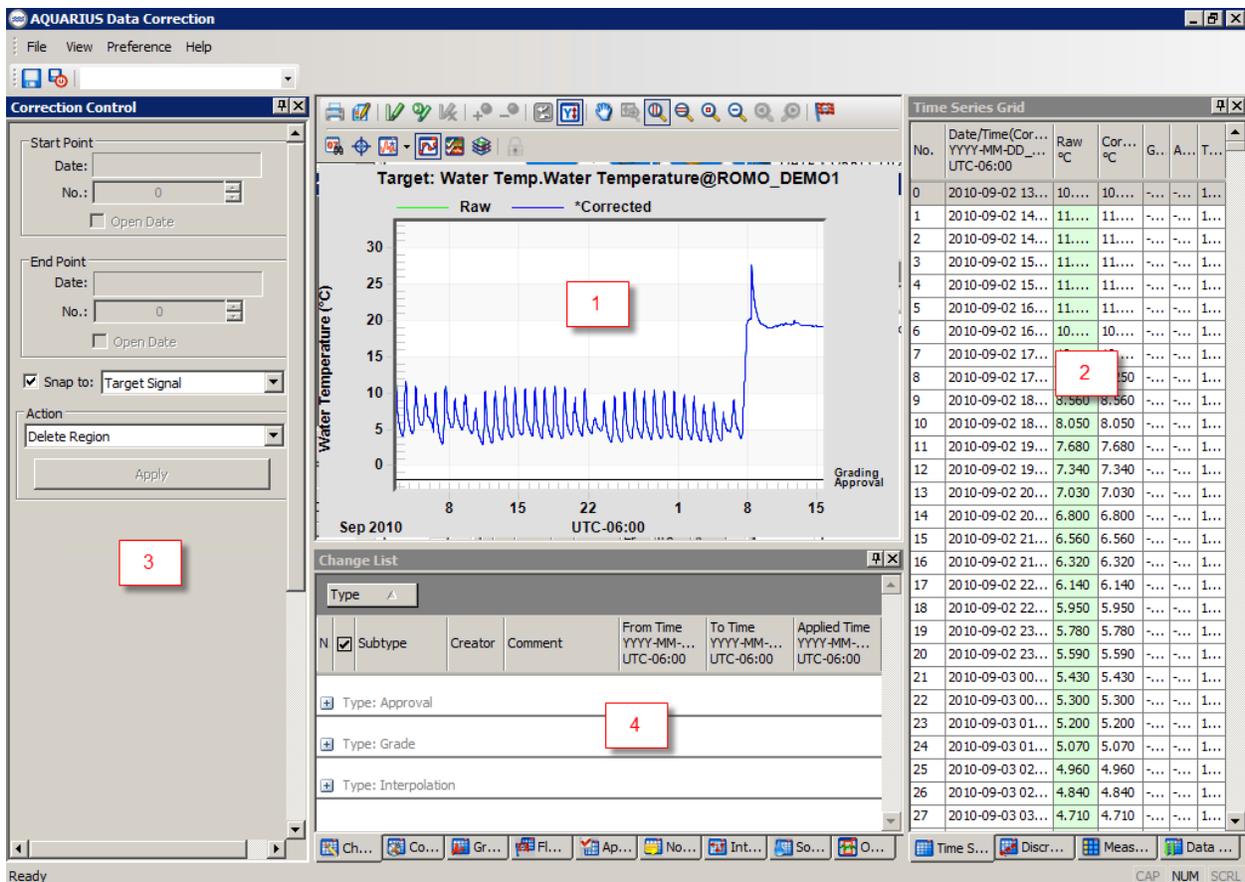


Click on the 'Water Temp' data set container to select it and then either right-click it and select 'Quick View' or left-click on the 'Quick View' icon (). Aquarius will show you a graphical depiction of the data on the left and a table (grid) view of the data on the right. What's displayed on the left in graphical view appears with a cyan row-header (in the first column) in the Grid View. To ensure that you are seeing all the data in the graph and grid, click the Reset Axis icon () above the graph and check that point number 0 is at the top in Grid View.



Click () in the upper right corner or 'File – Exit' to close the 'Quick View' tool. You will be returned to Springboard. Now let's remove the bad data after 10/7/2010 3:10pm when the sonde was removed from the water and change the 'Approval' attribute. Click on the 'Water Temp' data set container to select it and then either right-click it and select 'Data Correction' or left-click on the 'Data Correction' icon ().

As depicted below, the 'Data Correction' tool is a busy series of window panes that you can customize as desired by turning on/off, moving, and/or resizing the panes. In a nutshell, you basically use the graph (#1) and/or 'Time Series Grid' (#2) on the right (the default settings) to select the data to work with or to view the results of previous corrections. Corrections are applied using the 'Correction Control' (#3) pane on the left. You can see the changes in summary/list form at the bottom via the 'Change List' (#4) and its various tabs. If the screen doesn't appear as depicted below, choose 'View' and 'Go to default layout' from the main menu and then click the first tab ('Ch...') in pane #4 so it shows the 'Change List' rather than 'Overview'.



Let's trim/delete the erroneous data in the signal after 3pm on 10/7/2010. First, click on the 'Mark Region' tool (📏) above the graph. Then, to select those data, scroll down in the 'Time Series Grid' (#2) to point number 1684 with a date/time of '2010-10-07 15:30:00' and select it. You can then scroll to the last record (2067), hold down the shift key, and select it. That block selects the group of water temperature measurements from 1684 to 2067 inclusive and highlights them in blue while the selected measurement region is highlighted in cyan on the graph as shown below.

You can also use the 'Mark Region' tool (📏) to visually select a region of data on the graph. You can use the zoom tools to enlarge an area of the graph so you can see it more clearly while doing a 'Mark Region'/graphical selection. If you want to just quickly select all the time series parameter's measurements, click the 'Mark All Region' tool (📏). To deselect all the currently selected measurements, use the 'Delete Mark/Pivot Points' tool (🗑️).

Mark Region tool

Correction Control (°C, UTC-06:00)

Start Point
Date: 2010-10-07 15:30:00
No.: 1684
 Open Date

End Point
Date: 2010-10-15 15:00:00
No.: 2067
 Open Date

Snap to: Target Signal

Action
Delete Region
Apply

Target: Water Temp.Water Temperature@ROMO_DEMO1

Water Temperature (°C)

Raw *Corrected

30
25
20
15
10
5
0

Sep 2010 8 15 22 1 8 15

UTC-06:00

Grading Approval

Change List

Type

N Subtype Creator

Type: Approval

Type: Grade

Type: Interpolation

Applied Time
YYY-MM-...
UTC-06:00

Time Series Grid

No.	Date/Time(Cor... YYYY-MM-DD... UTC-06:00	Raw °C	Cor... °C	G...	A...	T...
2040	2010-10-15 01...	19...	19...	...	...	1...
2041	2010-10-15 02...	19...	19...	...	...	1...
2042	2010-10-15 02...	19...	19...	...	...	1...
2043	2010-10-15 03...	19...	19...	...	...	1...
2044	2010-10-15 03...	19...	19...	...	...	1...
2045	2010-10-15 04...	19...	19...	...	...	1...
2046	2010-10-15 04...	19...	19...	...	...	1...
2047	2010-10-15 05...	19...	19...	...	...	1...
2048	2010-10-15 05...	19...	19...	...	...	1...
2049	2010-10-15 06...	19...	19...	...	...	1...
2050	2010-10-15 06...	19...	19...	...	...	1...
2051	2010-10-15 07...	19...	19...	...	...	1...
2052	2010-10-15 07...	19...	19...	...	...	1...
2053	2010-10-15 08...	19...	19...	...	...	1...
2054	2010-10-15 08...	19...	19...	...	...	1...
2055	2010-10-15 09...	19...	19...	...	...	1...
2056	2010-10-15 09...	19...	19...	...	...	1...
2057	2010-10-15 10...	19...	19...	...	...	1...
2058	2010-10-15 10...	19...	19...	...	...	1...
2059	2010-10-15 11...	19...	19...	...	...	1...
2060	2010-10-15 11...	19...	19...	...	...	1...
2061	2010-10-15 12...	19...	19...	...	...	1...
2062	2010-10-15 12...	19...	19...	...	...	1...
2063	2010-10-15 13...	19...	19...	...	...	1...
2064	2010-10-15 13...	19...	19...	...	...	1...
2065	2010-10-15 14...	19...	19...	...	...	1...
2066	2010-10-15 14...	19...	19...	...	...	1...
2067	2010-10-15 15...	19...	19...	...	...	1...

Ready

CAP NUM SCRL

Once you have the desired area selected/highlighted so the 'Start Point' is 1684 and the 'End Point' is 2067, use the 'Action' combo box in the 'Correction Control' to select 'Delete Region' and then click the 'Apply' button to actually apply the action.

With the proper block of data selected, use the 'Action' combo box to select 'Delete Region' and then click the 'Apply' button.

No.	Date/Time(Cor... YYYY-MM-DD... UTC-06:00	Raw °C	Cor... °C	G.	A.	T...
2040	2010-10-15 01...	19...	19...	...	...	1...
2041	2010-10-15 02...	19...	19...	...	...	1...
2042	2010-10-15 02...	19...	19...	...	...	1...
2043	2010-10-15 03...	19...	19...	...	...	1...
2044	2010-10-15 03...	19...	19...	...	...	1...
2045	2010-10-15 04...	19...	19...	...	...	1...
2046	2010-10-15 04...	19...	19...	...	...	1...
2047	2010-10-15 05...	19...	19...	...	...	1...
2048	2010-10-15 05...	19...	19...	...	...	1...
2049	2010-10-15 06...	19...	19...	...	...	1...
2050	2010-10-15 06...	19...	19...	...	...	1...
2051	2010-10-15 07...	19...	19...	...	...	1...
2052	2010-10-15 07...	19...	19...	...	...	1...
2053	2010-10-15 08...	19...	19...	...	...	1...
2054	2010-10-15 08...	19...	19...	...	...	1...
2055	2010-10-15 09...	19...	19...	...	...	1...
2056	2010-10-15 09...	19...	19...	...	...	1...
2057	2010-10-15 10...	19...	19...	...	...	1...
2058	2010-10-15 10...	19...	19...	...	...	1...
2059	2010-10-15 11...	19...	19...	...	...	1...
2060	2010-10-15 11...	19...	19...	...	...	1...
2061	2010-10-15 12...	19...	19...	...	...	1...
2062	2010-10-15 12...	19...	19...	...	...	1...
2063	2010-10-15 13...	19...	19...	...	...	1...
2064	2010-10-15 13...	19...	19...	...	...	1...
2065	2010-10-15 14...	19...	19...	...	...	1...
2066	2010-10-15 14...	19...	19...	...	...	1...
2067	2010-10-15 15...	19...	19...	...	...	1...

Aquarius will display an 'Apply Correction' form and allow you to attach a new comment (or retrieve a saved one) to the correction. Enter 'Sensor out of water' in the 'Comment' area. Notice the check box to 'Clear the marked region'. Leaving it checked will deselect the selected set of observations once they are deleted. At times you may want to leave this option unchecked if you are doing multiple corrections or attribute changes to the same selected set of data.

Click 'OK' to finalize the 'Delete Region' correction.

Apply Correction

User Name: dtucker

From Time: 2010-10-07 15:30:00

End Time: 2010-10-15 15:00:00

Processing Priority

Pre-processing Normal Post-processing

Comment:

Sensor out of water

Saved Comments:

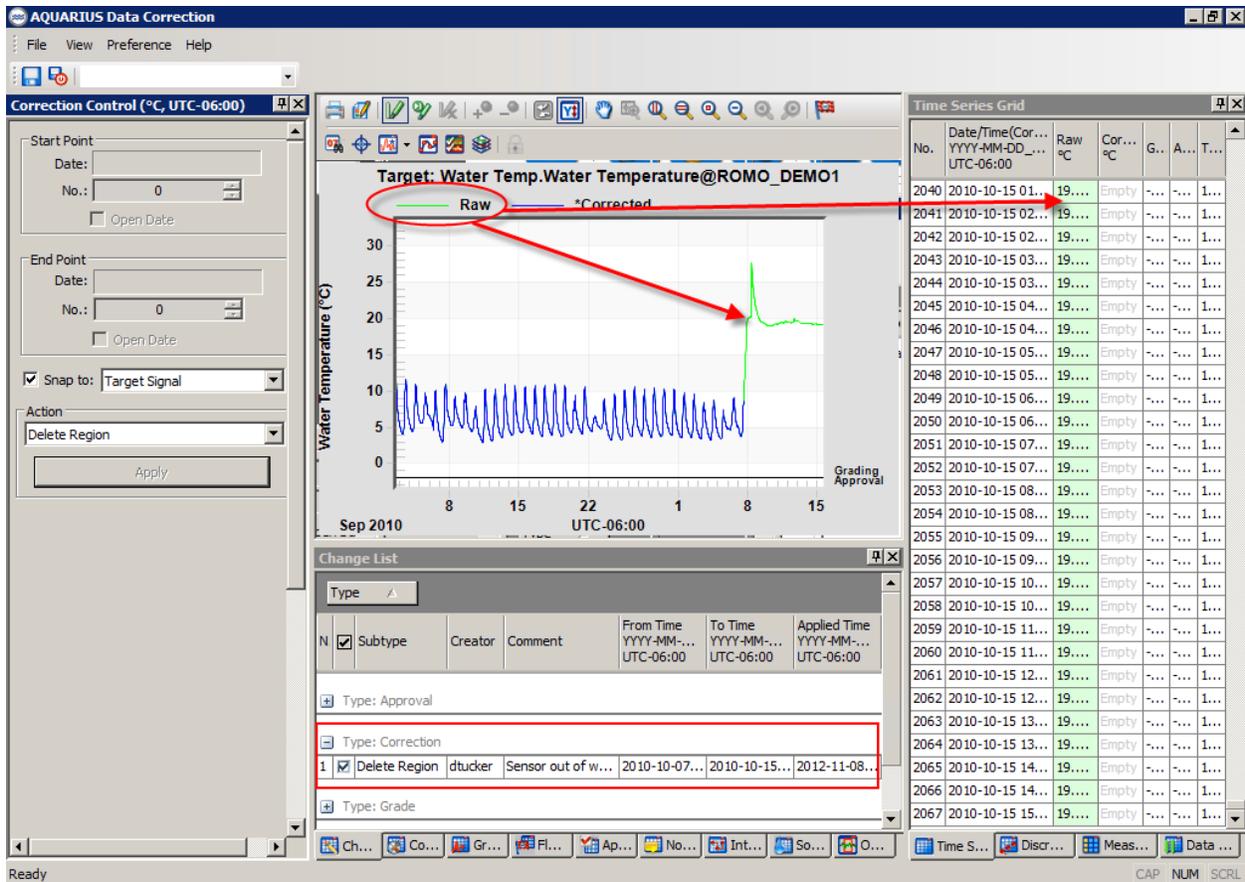
High probability that sediment was lodged against turbidity sensor
Post deployment, sonde out of water, in-transit.

You can select to apply previously saved comments from here

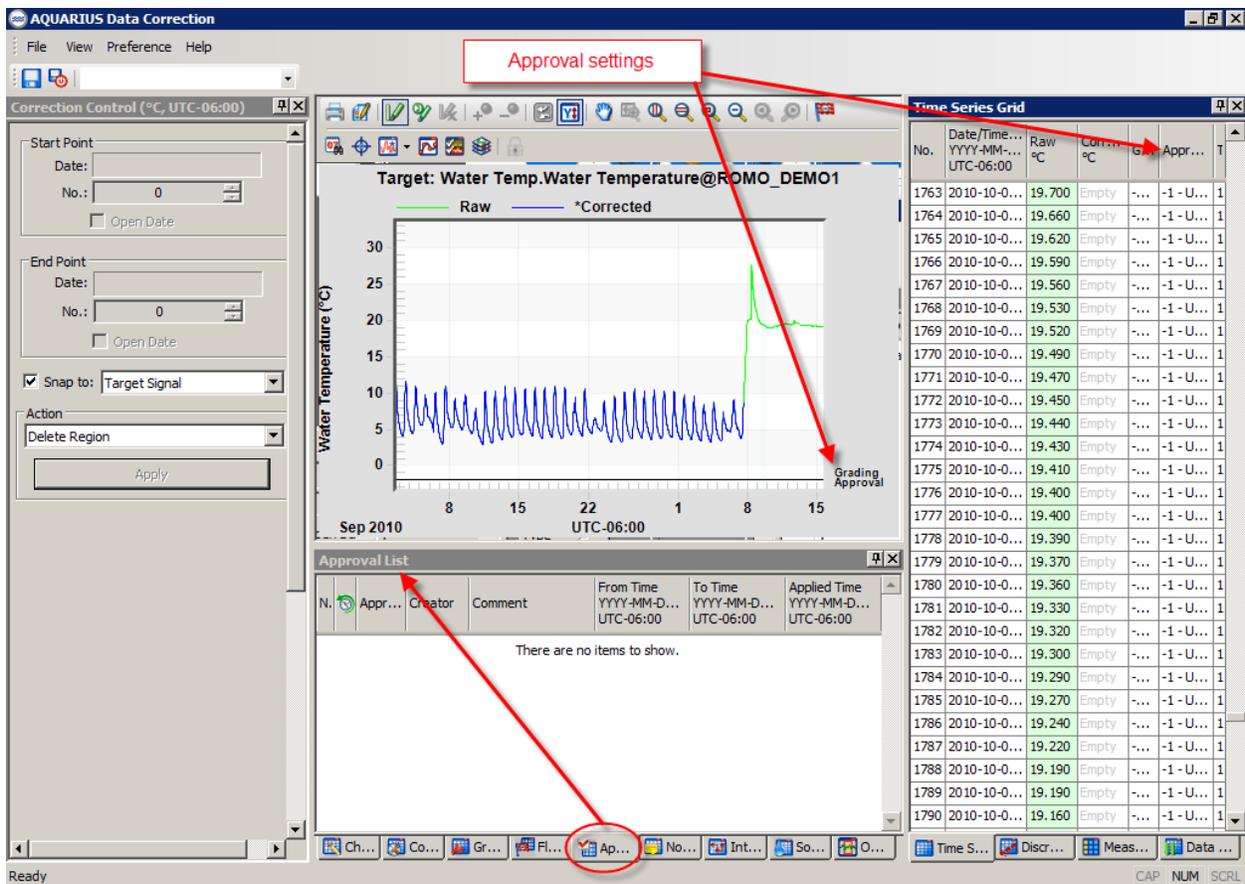
Clear the marked region

Cancel OK

The 'Data Correction' toolbox deletes the data. Notice in the graph, the portion of the time series that was deleted appears as a green line as it is still part of the 'Raw' (original) data. Aquarius doesn't change the original data. The correct(ed) time series is the blue line. In the 'Time Series Grid' notice that the raw/original data values are still all there and are in green-shaded cells. The adjoining corrected column now shows the word 'Empty' next to raw data that has been deleted. Note in the 'Change List' where the 'Delete Region' correction appears. You can use this to toggle on or off the deleted region to restore it to the corrected signal if desired. Aquarius only maintains the raw data stream. It generates the corrected data stream on the fly by applying the user specified corrections.



Now we'll change the 'Approval' attribute for all the measurements in the corrected signal using the 'Data Correction' toolbox. Click on the 'Approval' (or 'Ap...') tab in the 'Change List' (you may need to enlarge the 'Change List' area) to see what approvals have been applied to the data. You'll notice the 'Approval List' is empty. In the 'Time Series Grid' and on the graph you can see the 'Approval' attribute (1 – Unspecified) for each measurement. When we used the 'Append Logger File' tool to import the data, we didn't set an approval attribute so the 'Approval List' is empty – although technically the data imported with an '1 – Unspecified' approval setting.



The first step to set approvals is to select or mark the region to which you want to apply the approval. You could use the 'Mark All Region' tool () to quickly select all the observations in the time series but that would also cause the deleted region's observations to be selected and their approvals would be set to '3 – Approved' too. Instead, use the 'Time Series Grid' and/or the graphical selection tools to select from 'Start Point' 0 to 'End Point' 1683. You can also use the 'End Point' 'No.' in the 'Correction Control' to set the selection range. Then select 'Set Approval' from the 'Action' combo box as shown below.

Target: Water Temp.Water Temperature@ROMO_DEMO1

Water Temperature (°C)

Raw *Corrected

30
25
20
15
10
5
0

Sep 2010 8 15 22 1 8 15

UTC-06:00

Grading Approval

Approval List

No.	Date/Time... YYYY-MM-... UTC-06:00	Raw °C	Corr... °C	G...	Appr...	T
0	2010-09-0...	10.660	10.660	...	-1 - U...	1
1	2010-09-0...	11.280	11.280	...	-1 - U...	1
2	2010-09-0...	11.530	11.530	...	-1 - U...	1
3	2010-09-0...	11.780	11.780	...	-1 - U...	1
4	2010-09-0...	11.630	11.630	...	-1 - U...	1
5	2010-09-0...	11.320	11.320	...	-1 - U...	1
6	2010-09-0...	10.770	10.770	...	-1 - U...	1
7	2010-09-0...	10.120	10.120	...	-1 - U...	1
8	2010-09-0...	9.250	9.250	...	-1 - U...	1
9	2010-09-0...	8.560	8.560	...	-1 - U...	1
10	2010-09-0...	8.050	8.050	...	-1 - U...	1
11	2010-09-0...	7.680	7.680	...	-1 - U...	1
12	2010-09-0...	7.340	7.340	...	-1 - U...	1
13	2010-09-0...	7.030	7.030	...	-1 - U...	1
14	2010-09-0...	6.800	6.800	...	-1 - U...	1
15	2010-09-0...	6.560	6.560	...	-1 - U...	1
16	2010-09-0...	6.320	6.320	...	-1 - U...	1
17	2010-09-0...	6.140	6.140	...	-1 - U...	1
18	2010-09-0...	5.950	5.950	...	-1 - U...	1
19	2010-09-0...	5.780	5.780	...	-1 - U...	1
20	2010-09-0...	5.590	5.590	...	-1 - U...	1
21	2010-09-0...	5.430	5.430	...	-1 - U...	1
22	2010-09-0...	5.300	5.300	...	-1 - U...	1
23	2010-09-0...	5.200	5.200	...	-1 - U...	1
24	2010-09-0...	5.070	5.070	...	-1 - U...	1
25	2010-09-0...	4.960	4.960	...	-1 - U...	1
26	2010-09-0...	4.840	4.840	...	-1 - U...	1
27	2010-09-0...	4.710	4.710	...	-1 - U...	1

Action

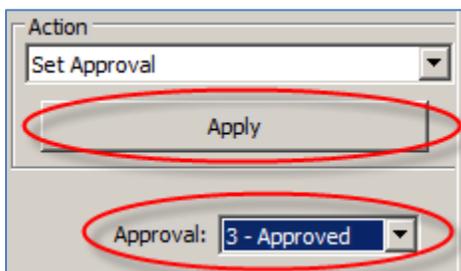
- Set Approval
- Drift Correction
- Offset Correction
- Percent Correction
- Multi-Point Drift Correction
- Amplification
- Delete Region
- Revert to Raw data
- Adjustable Trim Correction
- Trim Flagged Values
- Delete Specific Values
- Fill Data Gaps
- Threshold Correction/Flagging
- Copy and Paste
- Recession Curve
- Resample
- Clock Drift Correction
- USGS Multi-point Correction
- Set Approval
- Set Grade
- Set Flag
- Set Interpolation Type
- Set Note

Approval: 3 - Approved

Apply

Select from point 0 to 1683 inclusive and then use the 'Action' combo box to select 'Set Approval'.

Use the 'Approval:' combo box to set the approval to '3 – Approved' and then click the 'Apply' button.



The 'Set Approval' form will appear and allow you to add a comment if desired. If you leave the 'Clear the marked region' option unchecked, this range of data will remain selected and you can apply other corrections or set other attributes (notes, grades, flags, etc.). For now, just click 'OK'.

Set Approval

User Name: dtucker

From Time: 2010-09-02 13:30:00

End Time: 2010-10-07 15:00:00

Processing Priority

Pre-processing Normal Post-processing

Comment:

Set Approval: 3 - Approved

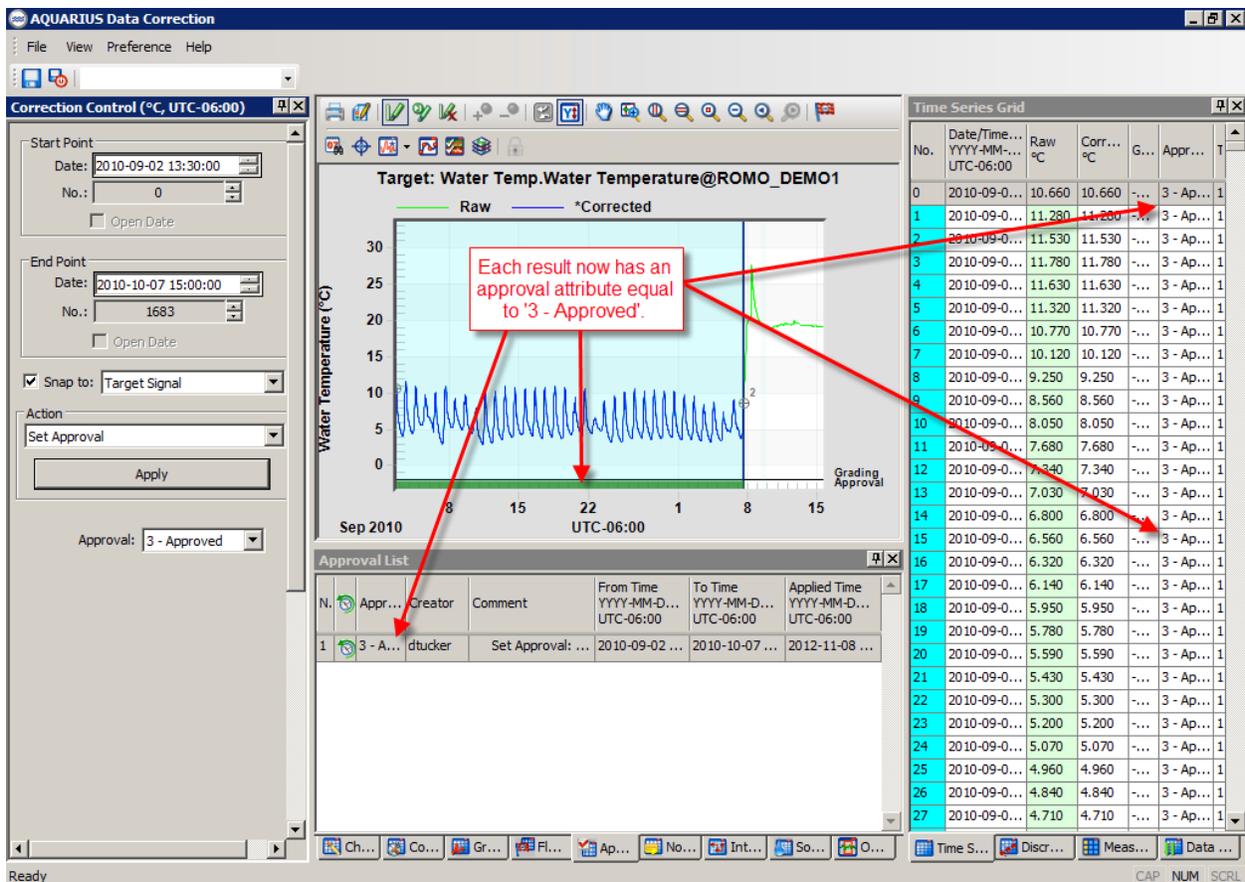
Saved Comments:

Depth data collected with unvented cable; uncorrected for barom
Barometric pressure fixed at site and constant throughout deploy

Clear the marked region

Cancel OK

Aquarius will update the 'Approval' attribute on each selected result in the 'Time Series Grid', graphically display the range (in green in the graph) of the approval, and add the approval to the 'Approval List'. Notice also that the selected range of data stayed selected in the graph, 'Time Series Grid', and 'Correction Control'.

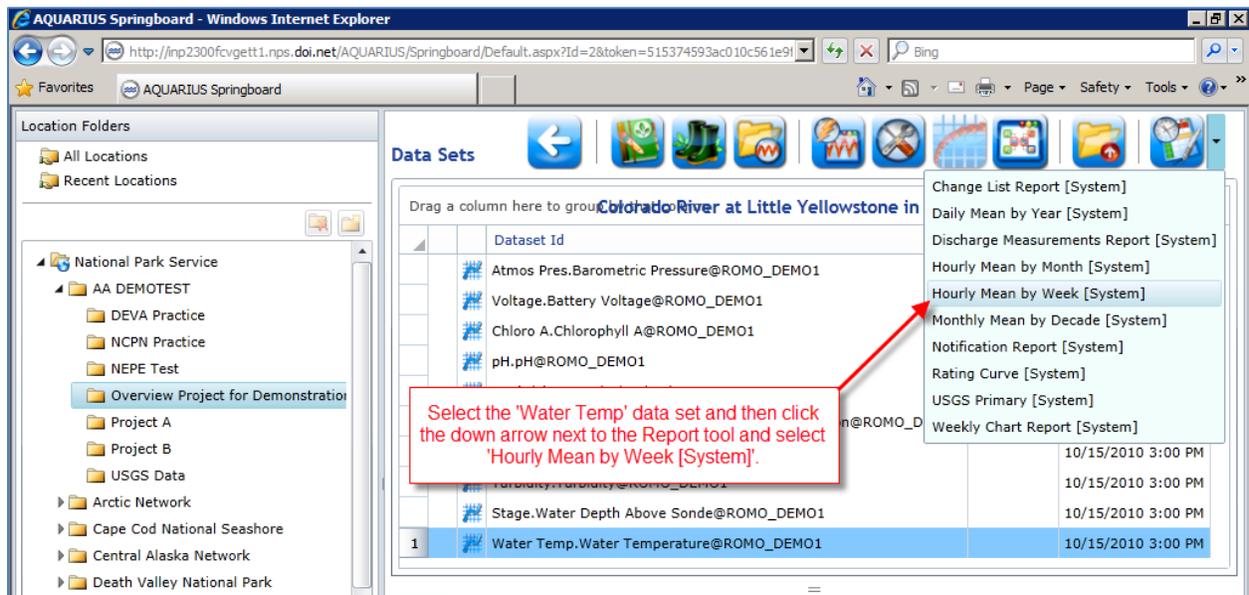


You will likely use the 'Data Correction' toolbox quite frequently to process (correct for drift or fouling) each time series as per your protocol and/or assign relevant attributes (flags, grades, notes, approvals, etc.). As the 'Data Correction' toolbox is used to both correct and edit (set attributes) results, it is somewhat of a misnomer. Aquarius never changes the raw (original) data.

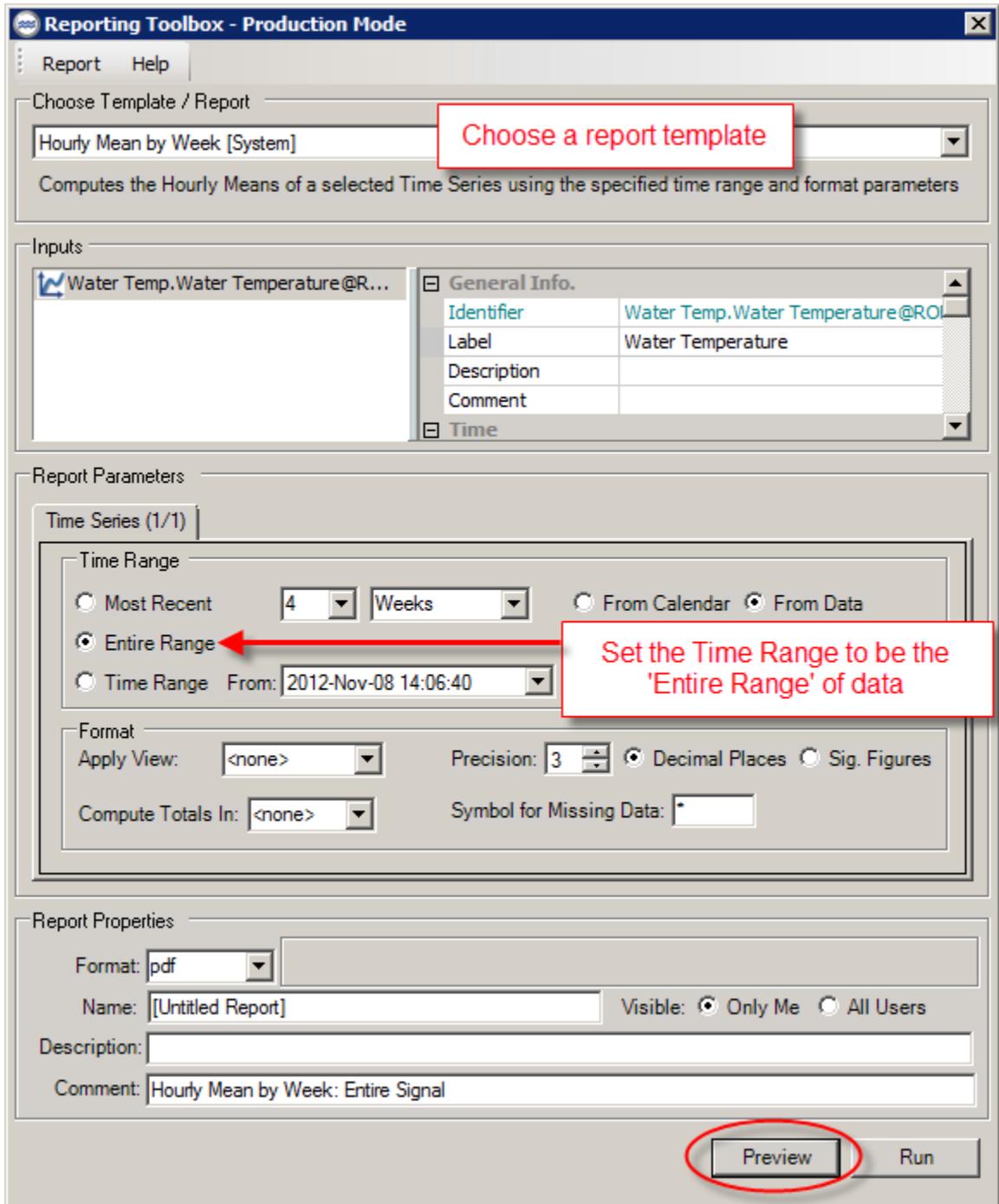
When you are done correcting or editing a time series in the 'Data Correction' toolbox, click the 'Save & Exit' button () or 'File – Save & Exit' to return to Springboard. Notice that you can also click the 'Save' button () or 'File – Save' to save your corrections at any time and continue working in the 'Data Correction' toolbox. For each data set (time series parameter/container) at a location, you'll need to jump from Springboard to the 'Data Correction' tool to correct and edit it as per your protocol.

Now let's generate a report on the water temperature time series data set container. From Springboard, with the 'Overview Project for Demonstration' project and the 'ROMO_DEMO1' location selected, and with the location's data sets being displayed, select the water temperature data set container and then either right-click on the water temperature data set container and select 'Report Tool' or left-click on the drop down next to the Report Tool icon (

and select 'Hourly Mean by Week (System)'. If the Report Tool doesn't appear, check the Task Bar to see if it opened there.



If you entered the tool by selecting 'Hourly Mean by Week [System]' that template will be automatically selected; otherwise go ahead and select from the combo box now. Notice the summary of the input port parameter. Under 'Time Series (1/1)' set the 'Time Range' to be 'Entire Range'. Click the 'Preview' button at the bottom. Aquarius will display the report in the Report Sharp-Shooter viewer. If you click the 'Run' button, Aquarius will allow you to save a copy of the report in a variety of different formats with the default being as a PDF file. When done previewing the report either click the **X** in the upper right or select 'File – Exit Viewer'. You will be returned to the 'Report' toolbox. Click **X** to close the 'Report' toolbox and return to Springboard.



[Untitled Report] - Preview report

File View Navigate Document Help

100%

Hourly Mean by Week

[Untitled Report]

Page 1 of 7

Identifier: Water Temp.Water Temperature@ROMO_DEMO1
 Location: Colorado River at Little Yellowstone in Rocky Mountain
 Units: °C
 Filter: None

Week of: Aug 29, 2010 Aggr: * Min: * Max: *

Hour	Aug 29	Aug 30	Aug 31	Sep 1	Sep 2	Sep 3	Sep 4
00:00	* UN	* UN	* UN	* UN		5.308 UN	5.413 UN
01:00	* UN	* UN	* UN	* UN		5.075 UN	5.208 UN
02:00	* UN	* UN	* UN	* UN		4.837 UN	5.000 UN
03:00	* UN	* UN	* UN	* UN		4.620 UN	4.818 UN
04:00	* UN	* UN	* UN	* UN		4.440 UN	4.663 UN
05:00	* UN	* UN	* UN	* UN		4.277 UN	4.550 UN
06:00	* UN	* UN	* UN	* UN		4.135 UN	4.473 UN
07:00	* UN	* UN	* UN	* UN		4.050 UN	4.445 UN
08:00	* UN	* UN	* UN	* UN		4.028 UN	4.468 UN
09:00	* UN	* UN	* UN	* UN		4.235 UN	4.715 UN
10:00	* UN	* UN	* UN	* UN		5.175 UN	5.715 UN
11:00	* UN	* UN	* UN	* UN		6.963 UN	7.108 UN
12:00	* UN	* UN	* UN	* UN		8.875 UN	8.577 UN
13:00	* UN	* UN	* UN	* UN		10.388 UN	10.045 UN
14:00	* UN	* UN	* UN	* UN		11.530 UN	10.528 UN
15:00	* UN	* UN	* UN	* UN		11.590 UN	10.610 UN
16:00	* UN	* UN	* UN	* UN		10.745 UN	9.900 UN
17:00	* UN	* UN	* UN	* UN		9.295 UN	8.852 UN
18:00	* UN	* UN	* UN	* UN		8.085 UN	7.968 UN
19:00	* UN	* UN	* UN	* UN		7.348 UN	7.415 UN
20:00	* UN	* UN	* UN	* UN		6.797 UN	6.920 UN
21:00	* UN	* UN	* UN	* UN		6.335 UN	6.560 UN
22:00	* UN	* UN	* UN	* UN		5.955 UN	6.308 UN
23:00	* UN	* UN	* UN	* UN		5.597 UN	6.130 UN
Mean	*	*	*	*	*	6.637 UN	6.686 UN

Page 1 of 7 Zoom 100%

Now let's export the water temperature time series data set container. From Springboard, with the 'Overview Project for Demonstration' project and the 'ROMO_DEMO1' location selected and with the location's data sets being displayed, select the water temperature data set container and then either right-click on the water temperature data set and select 'Export Time Series...' or left-click on the Export Time Series icon (📄). The time series that were selected for export will appear at the top. Change the 'Data Reporting Range' if desired. The default is the entire range. You can also elect whether to export a resampling of the raw data by setting the 'Processing Type' to 'Interpolation'. For now just leave the defaults as set and click 'Export to CSV'.

Export Time Series

Identifier	Units	Samples	Time Zone	Location Identifier
Water Temp.Water Temperature@ROMO_DEMO1	°C	2068	UTC-06:00	ROMO_DEMO1

Whatever time series data sets/containers you had selected will appear here for inclusion in the export.

Data Reporting Range

Time Zone: UTC-06:00 ...

Start Date: 9/2/2010

End Date: 10/15/2010

Data Processing

Processing Type: (None)

Resampling Interval: Hourly

Starting Time: 12:00 AM

Aquarius will create the export CSV and display the form shown below. You'll need to click on the 'Save CSV File...' to actually write the CSV file to disk.

Export Time Series

Export Results

Time Series	Status
Water Temp.Water Temperature@ROMO_DEMO_1	Successful

Comma-Separated Values (CSV) File

Status: Successfully Created
Size: 69.3 KB

Chart File

Status: Not Requested
Size: (none)

Opening the CSV file in Microsoft Excel shows that Aquarius exported a column for Date-Time followed by Value, Grade, Approval, and Interpolation Code columns for Water Temperature as shown below. The values exported are the corrected values. If you scroll the spreadsheet to the end of this time series you'll see the empty cells for the region of data that was deleted when the sonde was out of water.

	A	B	C	D
1		Water Temp.	Water Temperature@ROMO_DEMO_1	Water Temp.
2	yyyy-MM-dd HH:mm:ss.fff	°C		Water Temp.
3	Date-Time	Value	Grade	Approval
4	9/2/10 1:30 PM		10.66	
5	9/2/10 2:00 PM		11.28	
6	9/2/10 2:30 PM		11.53	
7	9/2/10 3:00 PM		11.78	
8	9/2/10 3:30 PM		11.63	
9	9/2/10 4:00 PM		11.32	
10	9/2/10 4:30 PM		10.77	
11	9/2/10 5:00 PM		10.12	
12	9/2/10 5:30 PM		9.25	
13	9/2/10 6:00 PM		8.56	
14	9/2/10 6:30 PM		8.05	
15	9/2/10 7:00 PM		7.68	
16	9/2/10 7:30 PM		7.34	
17	9/2/10 8:00 PM		7.03	
18	9/2/10 8:30 PM		6.8	
19	9/2/10 9:00 PM		6.56	
20	9/2/10 9:30 PM		6.32	
21	9/2/10 10:00 PM		6.14	
22	9/2/10 10:30 PM		5.95	
23	9/2/10 11:00 PM		5.78	
24	9/2/10 11:30 PM		5.59	
25	9/3/10 12:00 AM		5.43	

A disadvantage of the Springboard interface is that it doesn't have as many tools for analyzing and processing data as the Whiteboard interface. One Springboard tool that helps mitigate that problem is the new 'Whiteboard' tool that allows you to quickly open one or more time series on the Aquarius Whiteboard. Let's see how the new 'Whiteboard' tool can be used. From Springboard, with the 'Overview Project for Demonstration' project and the 'ROMO_DEMO1' location selected and with the location's data sets being displayed, hold down the 'Ctrl' key and select the water temperature, pH, and turbidity data set containers and then either right-click on one of those three containers and select 'Whiteboard' or just left-click on the 'Whiteboard' icon (🧩) at the top of the screen. Springboard will launch the Aquarius Workstation Whiteboard and populate it with the 'Read from Server' tool having three ports – each loaded with the data from the three data set containers we selected in Springboard.

AQUARIUS Springboard - Windows Internet Explorer

http://inp2300fcvgett1.nps.doi.net/AQUARIUS/Springboard/Default.aspx?id=2&token=aab4fe4d978aa49c8af89

Location Folders

- All Locations
- Recent Locations
- National Park Service
 - AA DEMOTEST
 - DEVA Practice
 - NCPN Practice
 - NEPE Test
 - USGS Data
 - Arctic Network
 - Cape Cod National Seashore
 - Central Alaska Network
 - Death Valley National Park
 - Eastern Rivers and Mountains Network
 - Grant-Kohrs Ranch National Historic S
 - Great Lakes Network
 - Gulf Coast Network
 - Mid-Atlantic Network
 - National Capital Network
 - Northern Colorado Plateau Network

Data Sets

Colorado River at Little Yellowstone in Rocky Mountain National Park

Dataset Id	Description	Last Measurement
Atmos Pres.Barometric Pressure@ROMO_DEMO1		10/15/2010 3:00 PM
Voltage.Battery Voltage@ROMO_DEMO1		10/15/2010 3:00 PM
Chloro A.Chlorophyll A@ROMO_DEMO1		10/15/2010 3:00 PM
2 pH.pH@ROMO_DEMO1		10/15/2010 3:00 PM
Resolved Oxygen@ROMO_DEMO1		10/15/2010 3:00 PM
Red Dissolved Oxygen Saturation@ROMO_DEMO1		10/15/2010 3:00 PM
Conductance@ROMO_DEMO1		10/15/2010 3:00 PM
3 Turbidity.Turbidity@ROMO_DEMO1		10/15/2010 3:00 PM
Stage.Water Depth Above Sonde@ROMO_DEMO1		10/15/2010 3:00 PM
1 Water Temp.Water Temperature@ROMO_DEMO1		10/15/2010 3:00 PM

Select one or more data set containers and then click the 'Whiteboard' icon.

Visits Log

No visits for the selected location

Finished launching QuickViewApp.Document successful. Logged in: dtucker

AquariusWorkstation - [ReadFromServer-09112012082736.aqw]

File Edit View Tools Window Help

Toolboxes

Data Input

- Import from Data Portal
- Import from File
- Import via ODBC
- Manual Data Entry
- Read from v2.7 DB
- Read from Server
- Sensor Communication

Data Pre-Processing

- Flagging and QA/QC
- Correction
- Modeling
- Rating Curve Development
- Math and Statistics
- Visualization and Reporting
- Data Output

ReadFromServer-09112012082...

Aquarius Whiteboard launched from Springboard with three data set containers.

Read from Server

Time Series

Water Temp.Water Temperature@ROMO_DEMO1

Description :

Comment :

Last Modified Time : 2012-11-08 13:55:24.140

Last Modified By : Middle_tier

Start Time : 9/2/2010 1:30:00 PM

End Time : 10/15/2010 3:00:00 PM

Time Zone : UTC-06:00

Units : °C

Minimum Value : 2.98

Maximum Value : 11.78

Mean Value : 5.91331

Total Samples : 2068

Start Value : 10.66

End Value : 0

Gap Processing Tolerance, minutes : 30

Total Gaps : 1

Sampling Rate, minutes : 30

Correction Items : 1

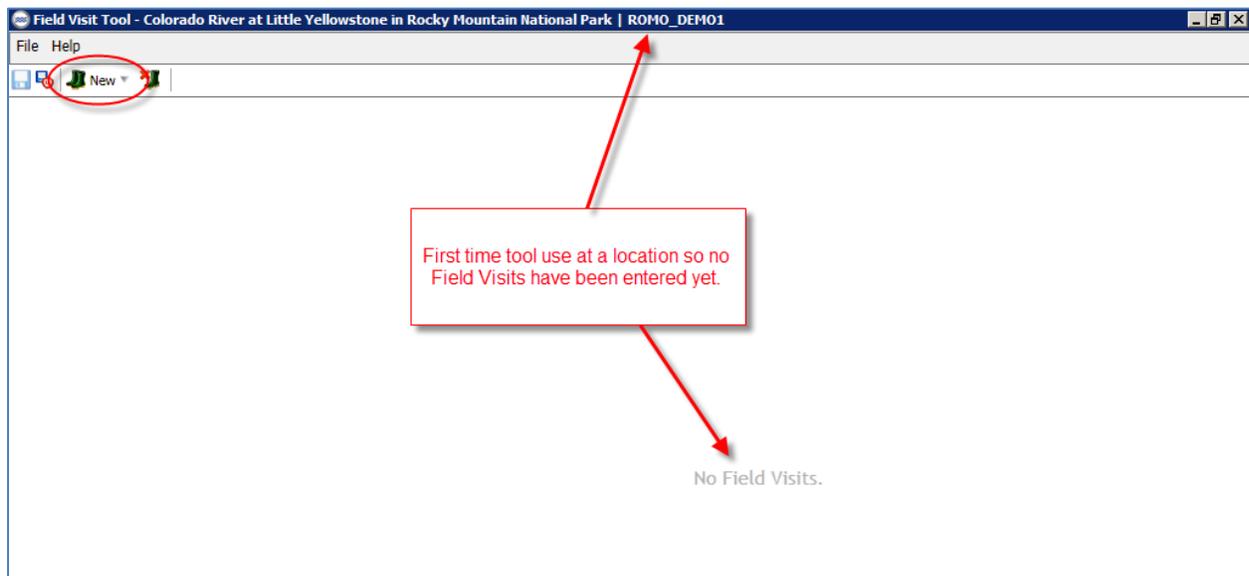
Flagged Regions : 0

Graded Regions : 1

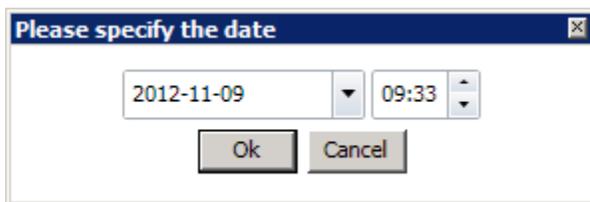
Ready Server: inp2300fcvgett1.nps.doi.net User: dtucker CAP NUM SCRL

Note that while this gives you a quick way to get data from Springboard (and the Aquarius Database) into the Aquarius Workstation Whiteboard, any changes you make to the data in Whiteboard are not automatically saved in the Aquarius Database. You must specifically use the 'Write to Server' tool in Whiteboard to save database changes. That is a big difference between Springboard and Whiteboard. Springboard always interacts with the Aquarius Database.

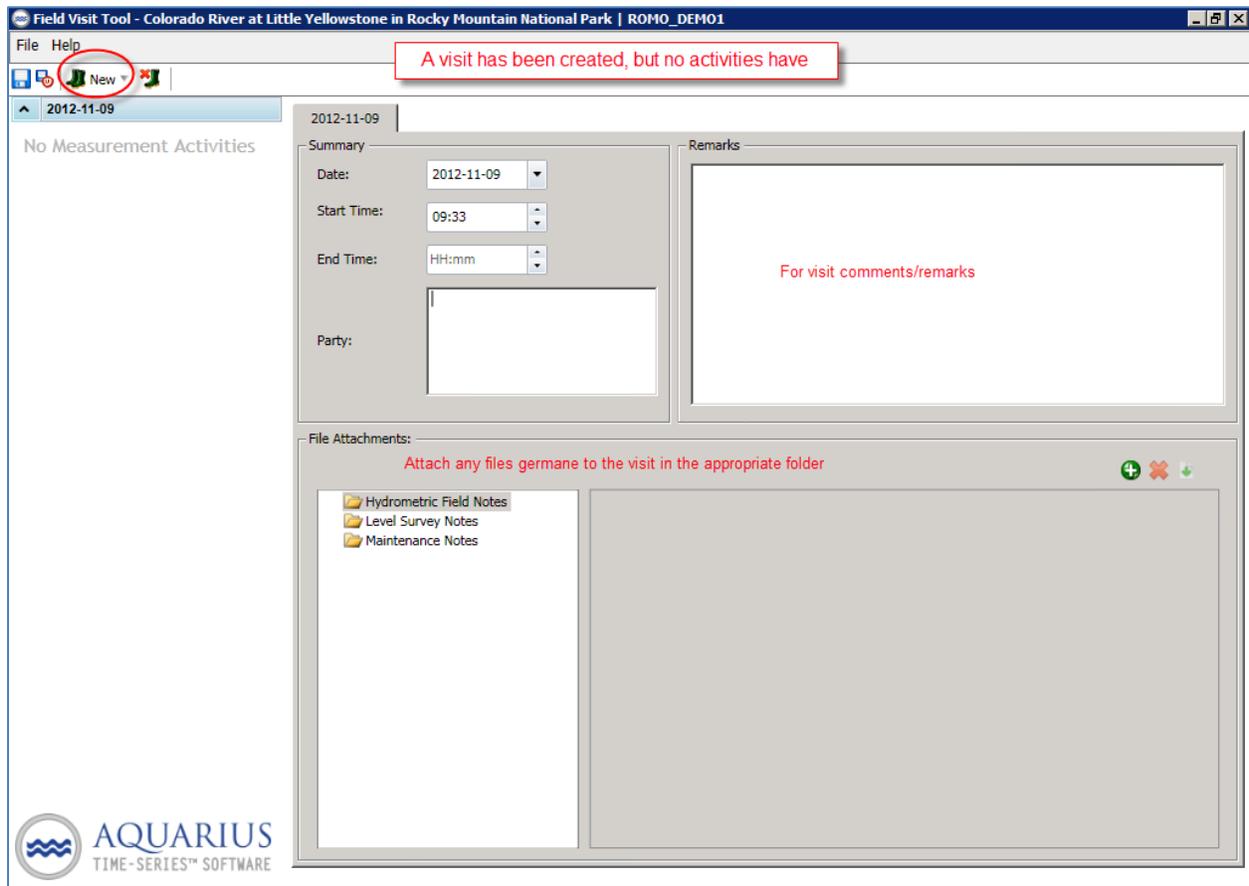
Let's conclude this Overview of Aquarius Springboard with a quick look at the 'Field Visit' tool. The 'Field Visit' tool allows you to enter or import discrete measurements and observations made during field visits. Measurements and observations are organized/grouped into activities. From Springboard, with the 'Overview Project for Demonstration' project and the 'ROMO_DEMO1' location selected, you can right-click on 'ROMO_DEMO1' and select 'Field Visit' or just left-click on the 'Field Visit' icon (🌳) at the top of the screen. The 'Field Visit' tool will load and show all field visits. Since no field visits have been entered for 'ROMO_DEMO1' yet, the tool indicates that. Click the 'New' button and then select 'Field Visit'.



Enter the date and time for the 'Field Visit' and click 'OK'.



Aquarius will show an empty 'Field Visit' form. Click the 'New' button again and this time select 'Measurement Activity'.



Aquarius will display an empty activity form. To enter the results of measurements and observations for the activity, click the  icon.



Aquarius adds a default empty result record in the 'Observations' and 'Aggregated Results' areas. The record defaults to the visit time for the activity time. The parameter and units are from the last result entered. Let's go ahead and change the parameter to specific conductance by clicking in the parameter cell and then clicking the magnifying glass. Type 'specific' in the 'Search:' box and then select 'Sp Cond' and click 'OK'. Notice Aquarius filled in the default units for specific conductance as us/cm. Be sure to always check. The default unit of measure it chooses may not be what you used. Click in the value cell and enter '154'. Click the  icon to add another result record. Notice it repeated the specific conductance entry (except for the value). Edit this record so it is for pH with a value of '6.9'. Tip: when searching for pH in the 'Search:' box, type 'pH' and add a space on the end. Continue entering any other results as desired for this activity. Activities provide a logical grouping for results on a visit. If you want to add additional activities on this visit, use the 'New' button and select 'Measurement Activity'. If you are done with this visit and want to create a new visit, use the 'New' button and select 'Field Visit'.

When done entering field visits, click the 'Save Field Visit and Exit' button () or 'File – Save and Exit' to return to Springboard. Notice that you can also click the 'Save Changes' button () or 'File – Save' to save your entries at any time and continue entering field visits and activities.

Field Visit Tool - Colorado River at Little Yellowstone in Rocky Mountain National Park | ROMO_DEMO1

File Help

2012-11-09

Sp Cond 154 @ 09:33
pH 6.90 @ 09:33

Measurement Id: Activity Name: Conditions: Approval Level:

Observations:

Source	Time	Parameter	Qualifier	Value	Units	Corr.	C.Value	Grade
Manually Entered	09:33	Sp Cond		154	µS/cm	0	154	
Manually Entered	09:33	pH		6.9	pH	0	6.9	

Results on an activity are added here.

Aggregated Results:

Source	Time	Parameter	Value	Units	Grade	Remark
Manually Entered	09:33	Sp Cond	154	µS/cm		
Manually Entered	09:33	pH	6.9	pH		

AQUARIUS
TIME-SERIES™ SOFTWARE

When you return to Springboard, you won't see your just entered field visits until you refresh Springboard. The easiest way to refresh Springboard is to reload/refresh the page by left-click the icon adjacent to the URL. Visits to a location will appear at the bottom of the screen under the 'Visits' tab as shown below. If you are looking at the 'Data Sets' for a location (using the 'Go To Data Sets' button () in the icon toolbar), you will see the field visits listed as separate data set containers for each parameter as shown below.

AQUARIUS Springboard - Windows Internet Explorer

http://inp2300fvcgett1.nps.doi.net/AQUARIUS/Springboard/Default.aspx?id=2&token=aab4fe4d978aa49c8af89

Location Folders

- All Locations
- Recent Locations
- National Park Service
 - AA DEMOTEST
 - DEVA Practice
 - NCPN Practice
 - NEPE Test
 - Overview Project for Demonstration
 - Project A
 - Project B
 - USGS Data
 - Arctic Network
 - Cape Cod National Seashore
 - Central Alaska Network
 - Death Valley National Park
 - Eastern Rivers and Mountains Network
 - Grant-Kohrs Ranch National Historic S
 - Great Lakes Network
 - Gulf Coast Network
 - Mid-Atlantic Network
 - National Capital Network
 - Northern Colorado Plateau Network

Locations

Drag a column here to group by that column

Location Identifier	Location Name	Location Type
ROMO_DEMO1	Colorado River at Little Yellowstone in Rocky Mountain National Park	River/Stream

Field visits are listed here for the subject location.

Visits Log

Date	Party	Comments
Colorado River at Little Yellowstone in Rocky Mountain National Park		
11/9/2012 9:33 AM		

Total: 1

Logged in: dtucker

AQUARIUS Springboard - Windows Internet Explorer

http://inp2300fvcgett1.nps.doi.net/AQUARIUS/Springboard/Default.aspx?id=2&token=aab4fe4d978aa49c8af89

Location Folders

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 - Gulf Coast Network
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 - National Capital Network
 - Northern Colorado Plateau Network

Data Sets

Drag a column here to group by that column

Colorado River at Little Yellowstone in Rocky Mountain National Park

Dataset Id	Time	Element
Atmos Pres.Barometric Pressure@ROMO_DEMO1	10/15/2010 3:00 PM	
Voltage.Battery Voltage@ROMO_DEMO1	10/15/2010 3:00 PM	
Chloro A.Chlorophyll A@ROMO_DEMO1	10/15/2010 3:00 PM	
pH.Field Visits@ROMO_DEMO1	11/9/2012 11:01 AM	
Sp Cond.Field Visits@ROMO_DEMO1	11/9/2012 11:01 AM	
pH.pH@ROMO_DEMO1	10/15/2010 3:00 PM	
O2 (Dis).R	10/15/2010 3:00 PM	
Dis Oxygen	10/15/2010 3:00 PM	
Sp Cond.Sp	10/15/2010 3:00 PM	
Turbidity.Turbidity@ROMO_DEMO1	10/15/2010 3:00 PM	

These show a later time because I added an additional visit and activity.

All field visit results for a parameter are stored in a field visit data set container.

Visits Log

Date	Party	Comments
Colorado River at Little Yellowstone in Rocky Mountain National Park		

Total data sets: 12

Logged in: dtucker

That concludes this quick introduction to the Aquarius Springboard. Aquarius is a sophisticated system with many capabilities beyond what was briefly demonstrated here. Consult the on-line help and the additional resources below for more information on how to harness these capabilities for your park or network.

Important Note:

When you complete your Aquarius session by exiting Whiteboard (or closing the Springboard web page), be sure to also right-click on the Aquarius Assistant icon in the Task Bar and choose 'Exit' to free up the license you were using sooner for other would-be users.

Additional Resources:

The Aquatic Informatics support portal at http://aquaticinformatics.com/main/%3FSupport_Login provides a lot of 'How To' videos for both Whiteboard and Springboard. To log into the Aquarius 360 support portal, you'll need a username and password which can be obtained via an email request to support@aquaticinformatics.com.