BECSys for Windows

USER'S GUIDE
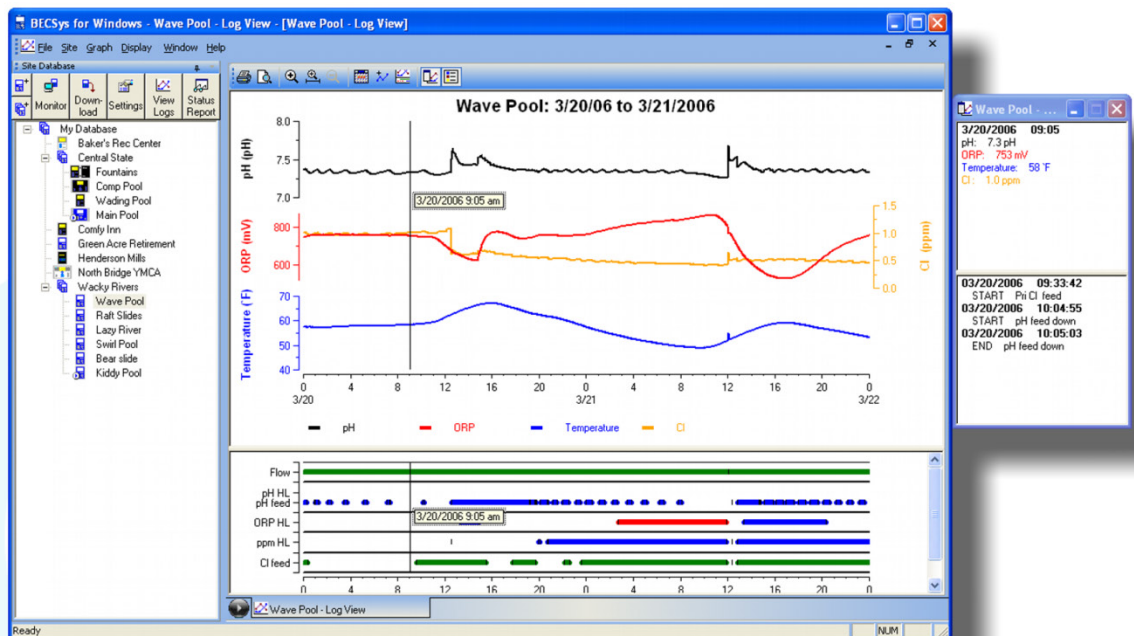

BECS
TECHNOLOGY

A: Features

BECSys for Windows is the complete PC communications package for remotely monitoring, configuring, and viewing history logs for any aquatic controller manufactured by BECS Technology, Inc. BECSys for Windows supports scheduling sites to automatically download their logs, allowing owners to maintain an uninterrupted record of their controller's performance. History logs may be viewed graphically or exported to a text format for importing into a spreadsheet or viewing by any text editor. The graphical view of the history logs allows zooming, customization of the data shown, and printing in either black and white or color. Status reports generated by the program at the time of a download give a complete listing of all of the controller's settings for historical records or offline viewing. Real time monitoring includes a textual menu tree listing all of the controller's inputs and settings, plus a graphical operator's console displaying the controller's current inputs, alarms, feed statuses, and allows directly modifying set points and feed modes by click and drag.

To ensure you receive the latest version of BECSys for Windows, please download the software by entering the following web address in a web browser:

<div align="center">

http://dnld.becsys.com

</div>

B: System Requirements

- Windows XP, 32 bit
- Windows Vista, 32 and 64 bit
- Windows 7, 32 and 64 bit
- Windows 8 & 8.1, 32 and 64 bit
- Windows 10, 32 and 64 bit

C: Installation

⚠️**You MUST be an Administrator to install BECSys for Windows**
1) Enter the following web address in a web browser: http://dnld.becsys.com
2) Under the "Downloads" section, click on the link listed below "BECSys for Windows" and save it to your local drive in a location you can find later.
3) After downloading the file, locate the file on your local drive.
4) Double click on the file.
5) Follow the prompts to install BECSys for Windows.
6) If installing on Windows XP or Windows Vista, you may get a warning stating the software has not passed Windows Logo Testing. This is okay. The warning is not about BECSys for Windows itself but a driver update. The installer is only updating information in the system so it can use a driver that comes with windows for USB direct connects to BECSys5/7/BW Gigabit boards. Windows 7 and later already have this information.
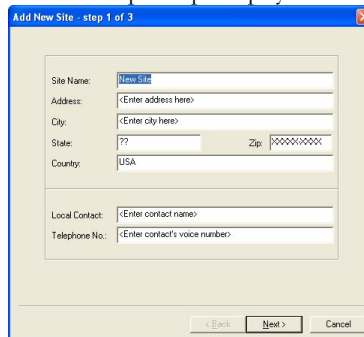7) Once it is finished installing **you must reboot the computer before using the program.**

Upon running BECSys for Windows the first time, BECSys for Windows determines the best location to store your new site database based on the operating system and the permissions the current user has, then prompts you to create a new site.

A site is a term we use to mean a single controller like a BECSys5 or BECSys7, or an RCM which can have one or more BECSys2s and/or BECSys3s connected to it. Think of a site as the device you want to connect to.
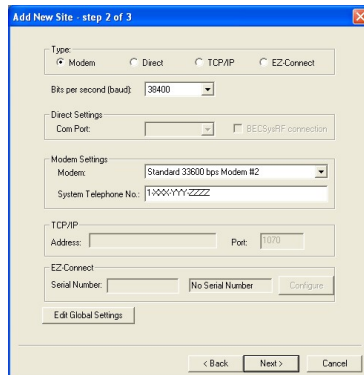
D - 1 Creating a New Site:

To create a new site, click on the [icon] button in the top left hand corner.

Creating a new site involves three steps. The first step will prompt you to enter the site information:

Enter all information you desire in this box and press "Next" to go to step 2.

Select the communications type from the buttons at the top, then select the baud rate the controller is configured to use (Modem and Direct only). For BECSys controllers, you should leave the baud rate at the default of 38400. If this is a modem connection, enter the system telephone number. Note that the TCP/IP selection is to be used only for connecting to BECSysRCMs and BECSys5s, BECSys7s, and BECSysBWs with BECSys Ethernet cards.

For BECSys controllers that support and use EZConnect, press the Configure button and enter the controller's serial number (or for BECSysRCMs the RCM's Ethernet MAC Address) and the eight digit authentication code when prompted. Authentication codes are generated on the controller and are case sensitive. See the controller manual (or RCM manual) for details on how to generate Authentication codes.

Once you have entered all of the information, press the "Next" button to get to the third and final step.
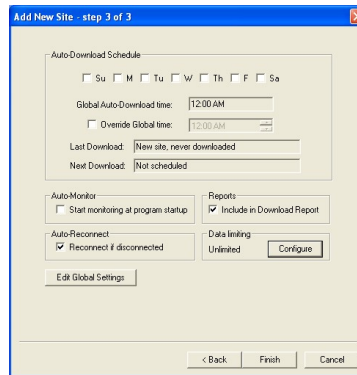
This next window allows you to setup an auto-download schedule and enable auto-monitor. If you would like to download the logs automatically, select the day or days you wish to download on, and specify a time by either overriding the global auto-download time or change the global auto-download time by clicking on the *Edit Global Settings* button.

If you wish for the program to automatically connect to the controller when the program starts, check the *Start monitoring at program startup.*

When a monitor connection is lost or times out, the user will be presented with a dialog stating that fact with the option to reconnect. If *Auto-Reconnect* option here is checked, the reconnect option on the connection lost or time out dialogs will be checked by default.
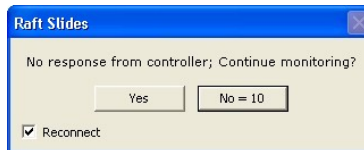
You can view a report showing the status of most recent downloads and details of the downloads for all sites with the *Include in Download Report* option checked. Uncheck this option if you do not want this site included in the report.

The Data limiting option is used to reduce the amount of data transmitted and received while monitoring on connections which you must pay for data such as cellular connections. See section E - 8: Data-Limit Option for more information on Data limiting.

Once you have all the options set, click the "Finish" button. You may now monitor or download the logs for the site we just created, or create more sites.

E - 1: Site information:

A site configured for Auto-Monitor will display a small arrow in a circle on its icon as shown:

A site configured for Auto-Download will display a small clock on its icon as shown:

A site configured for both Auto-Monitor and Auto-Download will display both:

A site that either couldn't connect or lost connection will turn red:

When your mouse cursor is sitting over the icon for a site, it will show a tool tip balloon with the following information:

1. System type and firmware version
2. Connection Information
3. If you can connect
4. The date and time the controller was last monitored.
5. The last time the controller data was downloaded.
6. If an auto-download is scheduled, the date and time for the next auto-download.
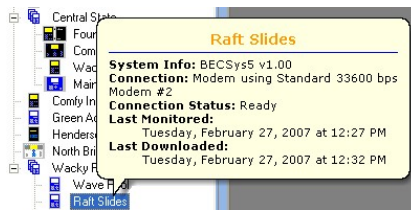
E - 2: Monitoring a Site:

To monitor a site, select the site and press the monitor button at the top of the screen. The connection should be established after a few moments.
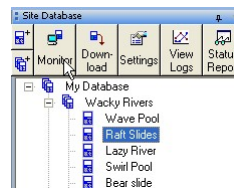
If this was a new site, site's icon will change to one that looks like the controller you connected to. This allows for easy controller identification.

E - 2.1: Logging on:

Next you should be presented with a login screen.
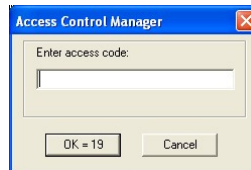
Enter your Access Code to gain access to the controller.

- For view only access, simply press OK without entering a code.
- For operator access, enter an operator's three digit code and press OK.
- For manager access, enter a manager's access code in the form "Mxxx" where xxx is the three digit manager code.
- If nothing is entered before the twenty second count down reaches zero, you will be logged on as view only.
- When logged on as view only, the user will be prompted for an access code when attempting to change a value.

E - 2.2: Chemistry and Mechanical Operator's Consoles:

The Operator's Console will appear once you have logged on. In the chemistry and mechanical screens, you can graphically monitor the controller and modify most of the control settings. The chemistry screen is available on all controllers except the BECSysBW, while the mechanical screen is only available on controllers capable of directly controlling the backwash of multiple filters such as the BECSys7 and BECSysBW.
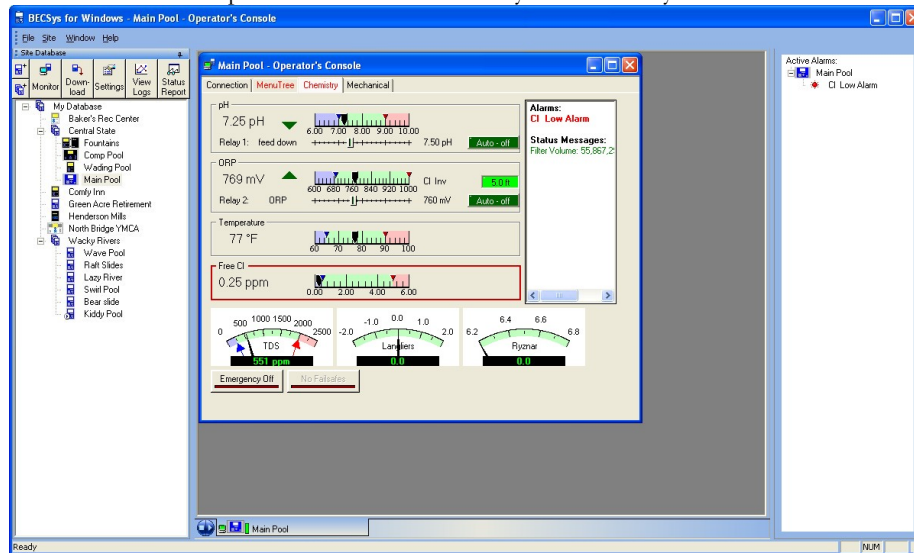

The different components to the chemistry and mechanical screens are explained below:

- Standard input gauge panels, found on both the chemistry and mechanical screens, contain an input gauge and an output any feeds which use that input for control.
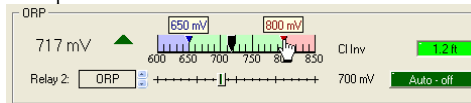
- The left-most value 717 mV is the current input reading that the ▼ on the gauge points to.
- The colored arrow shows the feed direction (up ▲, down ▼) and the current state of the feed: ▲ on, ▲ pause, ▲ off.
- To the right of the feed direction arrows is the input's gauge.

- The large black pointer ▼ is your current reading which cannot be changed manually. The smaller blue ▼ and red ▼ triangles are your low and high alarms set points. When the cursor is over the gauge, tool tips pop up above the high and low set points showing their values. To change those values, click on the triangle you want to change, and drag it to the desired value. A dialog box will appear asking you to confirm the value you want to set the alarm value to.
- If the feed has in inventory input connected, the inventory level or state is displayed to the right of the input gauge. Cl Inv ▮ 1.2 ft
- Each feed using the input will have an assigned relay Relay 2:, a set point type ORP, a set point slider and current value ‡‡‡‡‡‡‡‡‡II‡‡‡‡‡‡‡‡‡ 700 mV, and a relay button Auto - off.
  - o If the feed has more than one set point, the set point type will have scroll arrows next to it allowing you to scroll through the different set points.
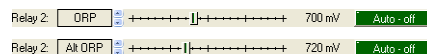
  - o The slider ‡‡‡‡‡‡‡‡II‡‡‡‡‡‡‡‡‡ 700 mV allows you to change the selected feed set point. Click and drag the slider to the desired value. A dialog box will appear asking you to confirm the value you want to set the set point value to. The set point's current value is displayed to the right of the slider.

10818 Midwest Industrial Blvd, St. Louis, MO 63132   www.becs.com

- o The relay button Auto - off allows you to change the feed mode for the assigned relay. You can change the modes to Auto, Manual On, and Manual Off. This button also indicates the current state of the relay (Auto - on / Auto - off / Auto - Paused).

- The bottom of the chemistry screen may show Langliers, Ryznar, or other needle gauges.

  On the BECSys5 and BECSys7 controllers, you may input the values used to calculate Langliers and Ryznar by clicking on the displayed value below the needles.

- The Emergency Off button Emergency Off! is only shown on systems which have this feature, and does the same thing as if you were at the controller – it turns everything off. Note that for safety reasons, remotely toggling the Emergency off is not available for operators and managers.

- The failsafe button Reset Failsafe allows resetting any active failsafe alarms. If no failsafe alarms are active, the button No Failsafes is disabled.

- The text window to the far right lists the current alarms and any status messages shown on the controller itself.

- On the mechanical page, a single panel may contain up to six angular gauges depending on the configuration of the controller.
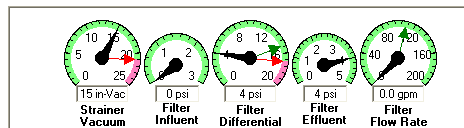
  These gauges may have arrows for high (red) and low (blue) alarm set points, along with other arrows indicating other types of set points such as backwash trigger levels (green). Like the previous gauges, tool tips will pop up above any set points on a gauge to show their values whenever the cursor is over that gauge. To change a set point, simply click and drag the arrow to the value desired. A dialog box will appear asking you to confirm the value you want to set the set point value to.

- Also on the mechanical page, there may be a panel for backwash operations. This panel allows the user to remotely start or stop a backwash, and shows the current status of a backwash that is in progress.
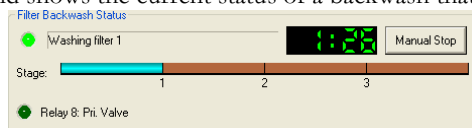
E - 2.3: The Menu Tree Operator's Console:

You may swap to the menu tree view by clicking its tab at the top of the operator's console window. The menu tree contains more settings than the graphical operator's consoles do, and are generally organized in the same order as found on the controller.
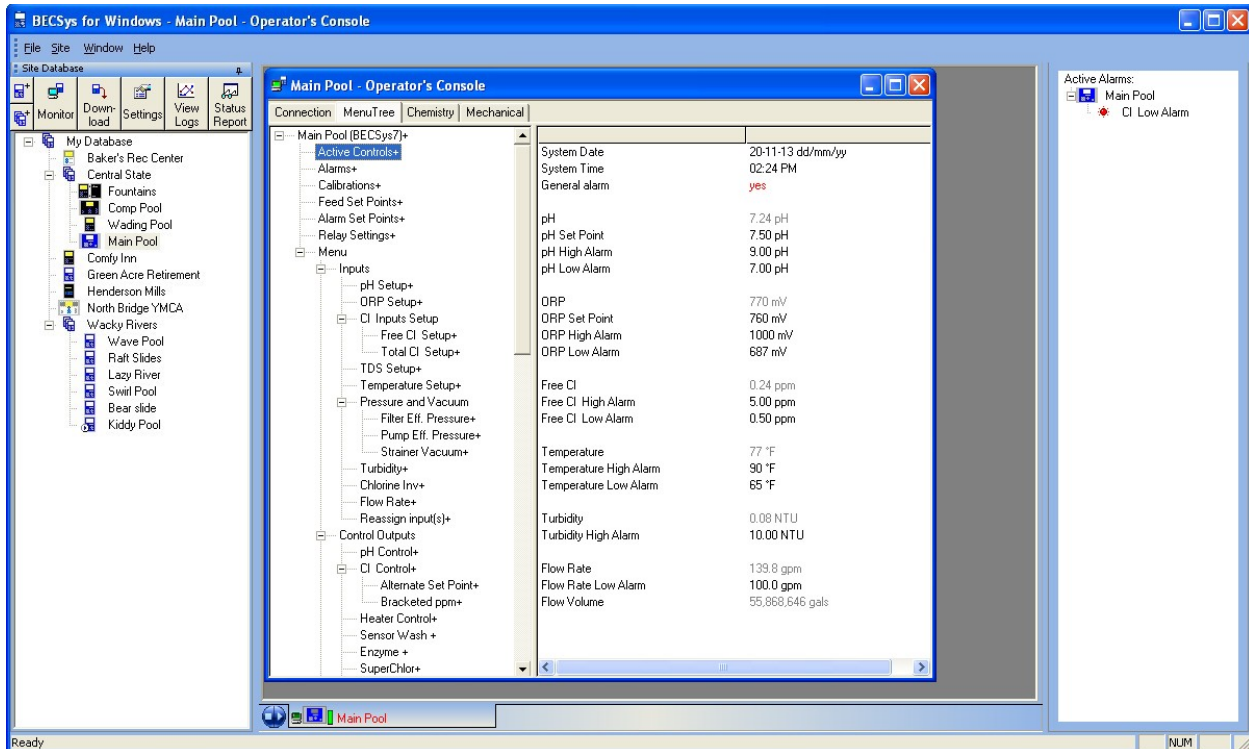
- You can change certain values in the Menu Tree that you are unable to change in the chemistry or mechanical screens. For example the date can be changed by clicking it once. This will bring up a dialog box for you to enter the new value in.
- Grayed values on the right pane are "Read only" and cannot be changed.
- Menu tree branches ![Inputs pH Setup+ ORP Setup+] with a + at the end of their labels contain items you can view if you click on that branch. Branches without a + are empty.

E - 2.4: Disconnect a Monitor Session:

To disconnect from the controller, click the "X" at the top of the operator's console window. You will see a dialog box similar to the following. Select "Yes" and the program will disconnect from the controller.
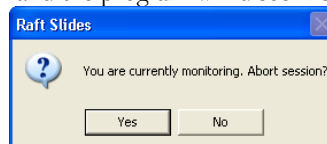

If you were connected via a modem, there will be six second delay before you can select the "Monitor" or "Download" button again on any site which connects via that modem.

E - 3: History Logs

E - 3.1: Downloading Logs from a Site:

1. Select the site you wish to download by clicking on it.
2. Click the "Download" button at the top of the Site Database window. This will connect to the site if you were not already monitoring it and then send commands to get the data from the controller.
   During this process the Connection tab will show the current status.
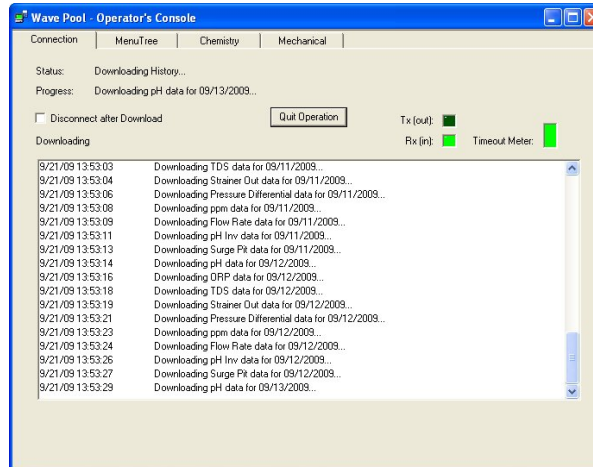
3. Once the computer has downloaded all the logs, if you were previously monitoring the site and you did not set the Disconnect after Download, you will continue to monitor. Otherwise it will automatically disconnect from the controller.
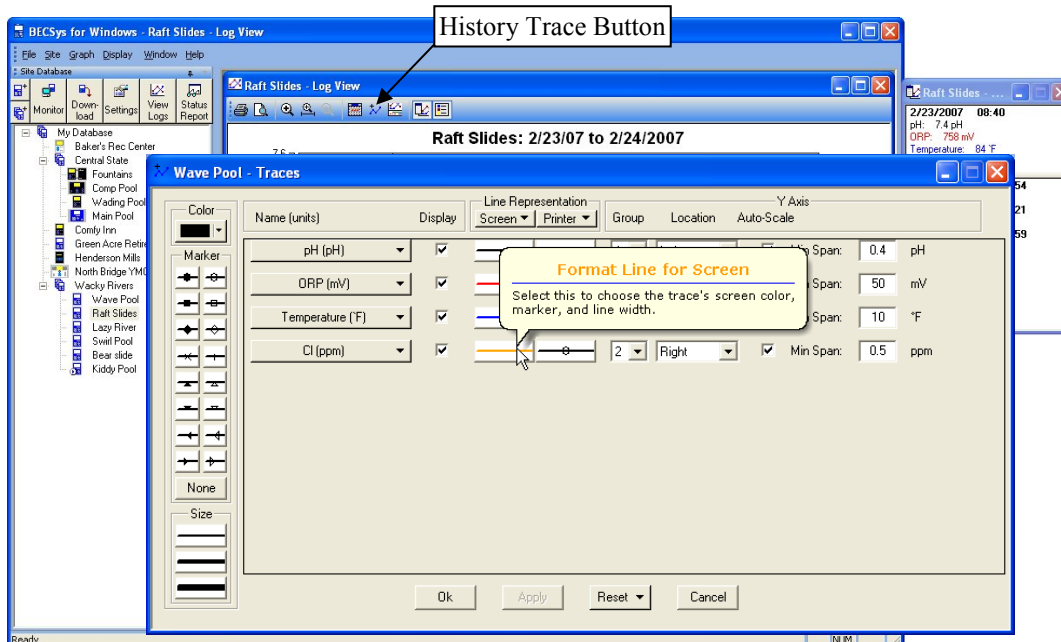
E - 3.2: Viewing logs:

Select the site you wish to view the logs on and click on the View Logs button at the top of the screen. A graph will appear with the values displayed on it.

If no logs have been downloaded for the selected site, the view logs button will be disabled.
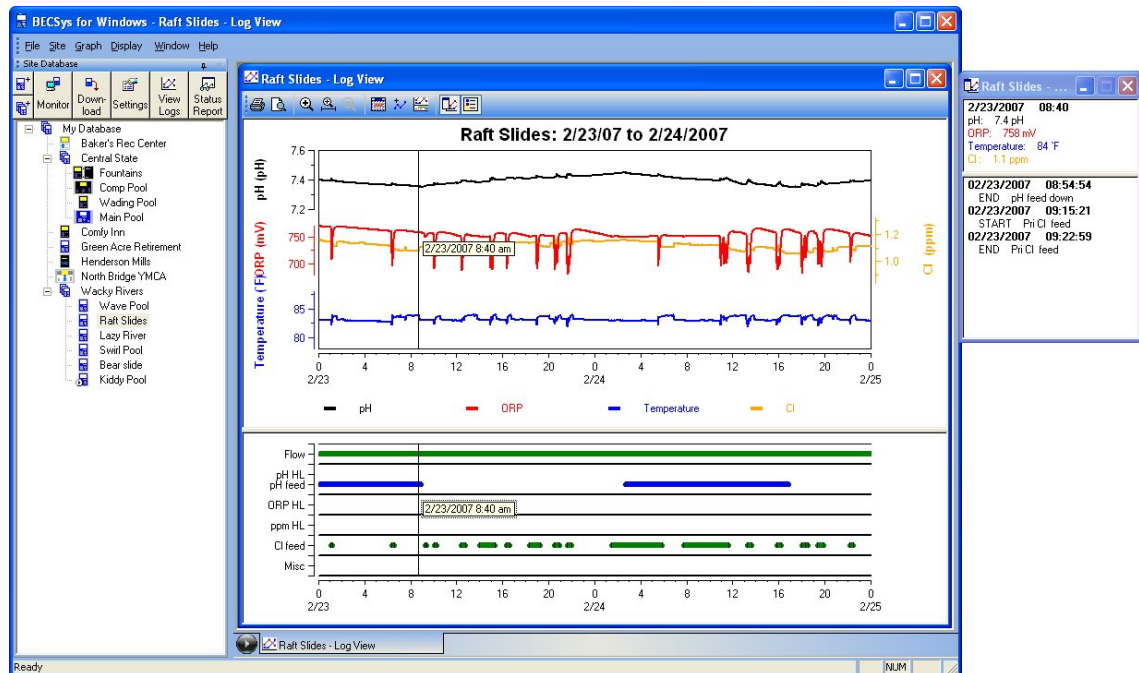
You can choose what to display and configure each line using the ⟋ History Trace button.


Hovering over an item on this screen will pop up a help balloon with a description of what it does.

Once you have made the changes to these settings, select the "OK" button. The graph will update with the changes you made.

When you are done viewing the graph, you may close the window using the "X" on the graph window

E - 4: Viewing Status Report:

When the logs were downloaded, the computer also generated a status report that shows all of the controller's settings at the time you downloaded the logs. To view the Status Report, click the "Status Report" button at the top of the screen. BECSys for Windows will open the latest Status Report in Wordpad.
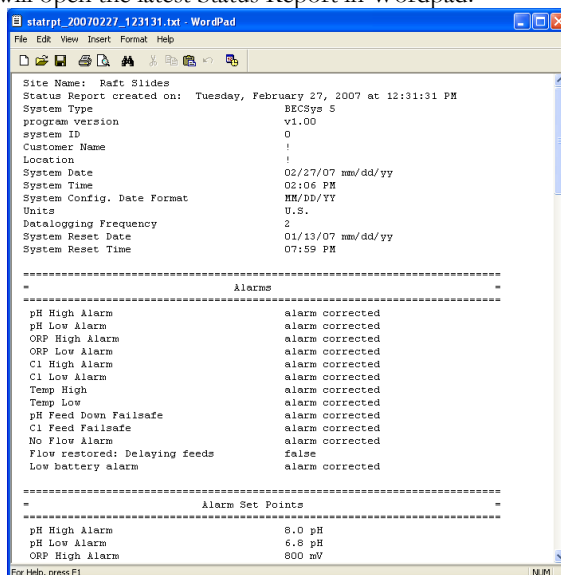
If you wish to print this document, first set the left and right page margins to 1".

## E - 5: Auto-Monitor, Auto-Connect, and reconnect:

Auto-Monitor can be enabled on any site to automatically monitor when the program starts up. To view or change this option for a site, select the site on the site database, click the Options button, then click on the Auto Connect tab.

A site configured for Auto-Monitor will display a small arrow in a circle on its icon as shown: 🔲 Auto-Monitor is handled by the Auto-Connect timer.

Auto-Connect is a timer that starts running twenty seconds after the program starts. It scans the Site Database starting from the top looking for any sites that have either been queued to reconnect from a lost or timed out connection, or are configured for Auto-Monitor. When a site is found, Auto-Connect will trigger a monitor session and then wait twenty seconds before continuing down the list. Once it reaches the end of the list, it waits another minute before starting at the top of the list again.

Sites whose monitor sessions were closed on purpose by the user are ignored by Auto-Connect until the user manually reconnects or the program is restarted.

Reconnecting sites that succeed in connecting will be given 20 seconds to enter their access code. If by the end of the 20 seconds no access code was entered, the user will automatically be given **view only** permissions. Auto-Monitored sites always logon with **view only** permissions.
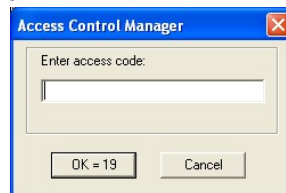
When logged on as view only, the user will be prompted for an access code when attempting to change a value. If the access code is valid, the user will be elevated to that access level, and then return to view only five minutes after the user finishes changing values. You can view the current access level on the site database balloon popup.
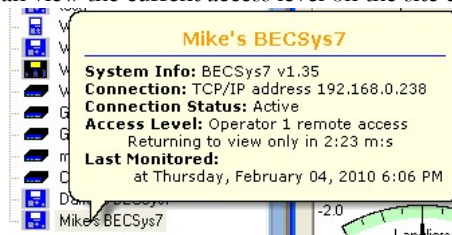
If a site is queued for reconnect or Auto-Monitor, the site database balloon popup for that site will indicate this.
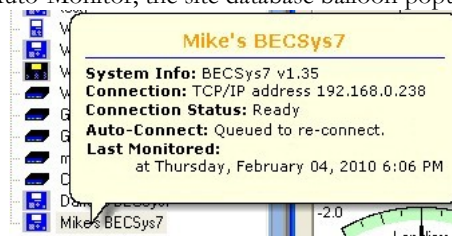
The Auto-Connect timer can be stopped or restarted via the Auto-Connect menu.

E - 6: Operator Console Auto Cycle:

Operator Console Auto Cycle cycles through all chemistry and mechanical operator console tabs on all controllers being monitored. The options in **bold** are set in the Global Settings & Preferences under the File menu.

Each tab will be made the active tab for the set **Cycle Time** before cycling to the next tab or controller. **Start cycling on connect** automatically starts the cycling whenever a monitor session successfully connects. **Pause on user tab change** controls what happens when the user clicks on a different tab while the cycling is running. The cycling will pause if this option is enabled, otherwise it will stop until the user presses the play button ▶ at the bottom of the screen. When paused, cycling will automatically resume once the cursor has stopped moving for the **Pause Delay**.

While running or paused, the cycle button will be split in half to allow the user to stop the cycling or either pause ⊕ or restart ⊕ the cycling again.

E - 7: Download Reports:

A report on the downloads of all sites with the Include in Download Report option enabled can be generated by selecting Help➔Download Report.

- The report has a summary section at the top:
    o Lists the date, time and status of the last download of each site.
- A details section follows the summary section listing the following for each site:
    o Details of each download attempt.
    o Links to the status report for each download.
    o Any errors that occurred during the download.

When generating the report, the user is presented with a dialog box allowing them to select how far back in time and maximum the number of downloads per site to list in the details section.

The report is in html format and will open automatically in the default web browser once completed. If the report is already open in the default web browser when you generate it again, you may need to click the browser's refresh button for the latest version to load.

E - 8: Data-Limiting Option:

Normally the retrieval of readings, settings and alarm states while monitoring is done continuously and as quickly as the controller can handle. On newer systems this can mean getting more than one complete refresh per second. The amount of data can be quite large if monitoring over long periods and can eat up data allowances on a cellular connection.

An option to limit the frequency of full refreshes is available both in the Global Settings & Preferences under the File menu and under the Auto Connect tab of each site. All sites will use the global settings setting unless a site is configured otherwise by checking the Override Global setting check box in the Data limiting's Configure button's dialog box.
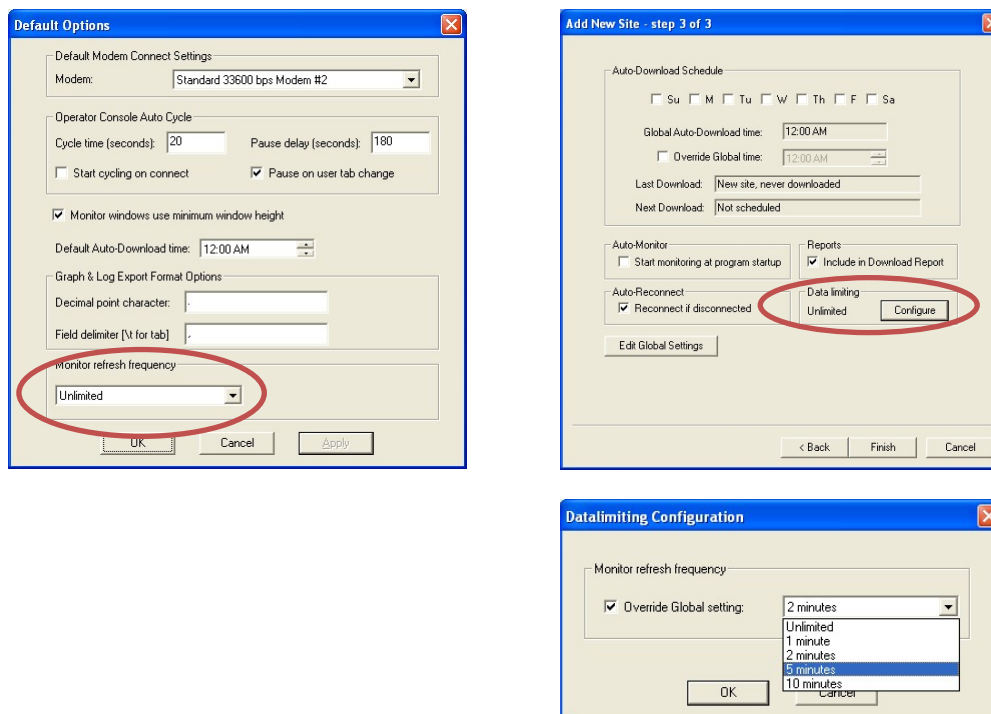
The available "Monitor refresh frequency" options are Unlimited, 1 minute, 2 minutes, 5 minutes and 10 minutes. When set to anything besides Unlimited, BECSys for Windows will only refresh readings and settings on the current operator console tab (menu tree, chemistry or mechanical) at the selected interval while alarm states will be refreshed once a minute.

If the user selects a different tab or a different menu in the menu tree (or the Operator Console Auto Cycle selects a different console tab), the selected tab/menu will be fully refreshed at that time. Disabling "Start cycling on connect" in the global settings is recommended if using the data-limiting functions.

BECS TECHNOLOGY has been designing and manufacturing the industry's most reliable water chemistry controller for over 25 years. Our 42,000 ft^2 facility in Saint Louis, Missouri is home to an exceptional design team, and all manufacturing is performed onsite at this facility where we can personally assure the quality of our products. The BECS commitment to excellence drives the most innovative new products and unparalleled customer service.