

# BaseStation 3200 Irrigation Controller Shutting Down Irrigation Based on a Water Source Empty Condition

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With Baseline's BaseStation 3200 irrigation controller, you can use water from multiple sources to run your irrigation programs. If one of the water sources has a limited supply, it's important to monitor the quantity of water in order to avoid pumping the source dry.

**Note:** While this document explains how to shut down one water source on an irrigation system that uses multiple water sources, you can also apply this procedure to a system with a single water source.

If you have configured this reservoir as a specific water source, you can install an event biCoder with a float switch or a biSensor to monitor the water level and stop using that water source when the water drops below a specified level.

Perform the following steps to use a water source empty condition to shut down watering when water drops below a specified level in a reservoir:

Step 1 – Install the monitoring device in the reservoir and wire it to the controller.

Step 2 – Program the controller to recognize the reservoir as a water source.

Step 3 – Program the controller to shut down the water source at a specified moisture reading.

## Step 1 – Installing the Monitoring Device in the Reservoir

You can install an event biCoder with a float switch or a biSensor to monitor the water level.

### Using an Event biCoder and Float Switch as a Monitoring Device

Purchase a BL-5402 event biCoder from Baseline and any normally closed or normally open irrigation float switch. Connect the red and black wires from the event biCoder to the two-wire path and connect the other wires to the float switch. Install the float switch in the reservoir.

Be sure to use 3M™ DBR/Y-6 or equivalent moisture-resistant connectors.

Take note of the serial number of the event biCoder. You will need this number when you program the controller.

## Using a biSensor as a Monitoring Device

Take note of the serial number of the biSensor that you are installing in the reservoir. You will need this number when you program the controller.

For best results, position the biSensor vertically in the reservoir. It doesn't matter which end is up, but mount the sensor so the wires can be routed out of the reservoir. Make sure that some portion of the sensor blade is below the water at the low water level.

**IMPORTANT!** When mounting the biSensor, do not drill or nail through any part of the biSensor. A perforation in any part of the biSensor will prevent it from working and will void the biSensor warranty. A suggested method for mounting the biSensor is to install a pole in the reservoir and attach the biSensor to the pole with zip ties.

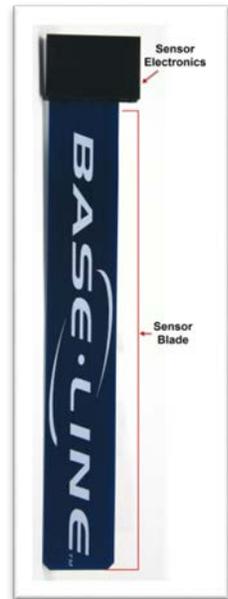
YES

Mount the biSensor securely so it does not move. Variations in the position of the biSensor will result in incorrect readings.

Follow the wiring instructions in the biSensor installation guide to connect the biSensor to the two-wire path or to the biSensor ports on the controller.

Make sure that you maintain polarity on the wire connections.

Fasten the wiring with wire nuts, and then test communication with the controller before you complete the installation with waterproof connectors.



## Step 2 – Program the Controller to Recognize the Reservoir as a Water Source

The BaseStation 3200 supports 8 water sources.

If you have a flow device on the output from your reservoir, you can assign the flow device to a control point and then set up flow limits the control point. For more information, refer to Setting Up a Control Point in the BaseStation 3200 User Manual.

1. Turn the dial to the **Water Sources** position.
2. If the **Water Sources Setup** option is not highlighted, press the **Next** or **Previous** button to select it.
3. Press the **Enter** button. The WS Settings screen displays.
4. In the **Water Source** field, press the + or – button to designate a number for the water source that you want to set up.
5. Press the **Next** button to move to the **Use this WS** field. Press the + or – button to toggle the setting between **YES** and **NO** as needed.

WS Settings	Water Sources
Water Source {Well}	WS1
Use this WS	YES
Priority (1=High)	1
Monthly Budget GAL	100.0
Daily Water Rationing	NO
	Shut Down YES
[WS1] --> [CP1] --> [ML1]	
Help	

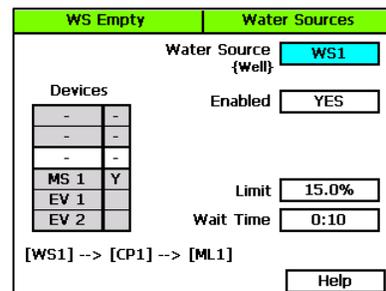
6. Press the **Next** button to move to the **Priority** field. Press the + or – button to change the value in the field to a number between 1 and 10 where 1 is the highest priority. When an irrigation system has more than one water source with different priorities, water from the source with the highest priority is used first until the monthly budget limit is reached. Then the system switches to the water source with the next highest priority.
7. Press the **Next** button to move to the **Monthly Budget GAL** field. Press the + or – button to change the value in the field to show the number of gallons that can be used from this water source during a month. The value increases in increments of 250 gallons.

**Note:** When the value in the Monthly Budget field is greater than zero, the system monitors the total water used during a single month. If the monthly water used exceeds this number, an alert is generated. If you set the Shut Down field to YES, then the water is stopped until the first of the next month.

8. Press the **Next** button to move to the **Shut Down** field. Press the + or – button to toggle the value in the field between **YES** and **NO**. This setting indicates whether the water source will shut down when the monthly budget amount has been exceeded.
9. Press the **Next** button to move to the **Daily Water Rationing** field. Press the + or – button to toggle the value in the field between **YES** and **NO**. When you enable water rationing, the system determines the daily water ration by dividing the number of gallons in the Monthly Budget field by the number of days in the month. The system will use only the ration amount for daily watering. If a day is skipped, that water ration is available the next day.

### Step 3 – Program the Controller to Shut Down the Water Source at a Specified Moisture Reading

1. Turn the dial to the **Water Sources** position.
2. Press the **Next** or **Previous** button to select the **Water Source Conditions** option, and then press the **Enter** button. The WS Conditions submenu displays and the Empty Conditions option is highlighted.
3. Press the **Enter** button. The WS Empty screen displays.
4. In the **Water Source** field, press the + or – button to select the water source that you want to create an empty condition for.
5. Press the **Next** button to move to the Devices column on the left.
6. Press the + or – button to select the moisture sensor that you want to assign to this empty condition.
7. Press the **Enter** button. The column beside the device shows a Y to indicate that it is selected.
8. Press the **Next** button to move to the **Enabled** field. If you want the condition to be active, make sure to set the **Enabled** field to **YES**.
9. Press the **Next** button to move to the **Limit** field. Press the + or – button to set a percentage (moisture reading) for the empty condition.



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10. In the **Wait Time** field, press the + or – button to set the minimum duration for the empty condition. When this time is up, the controller evaluates the water source to determine whether water is available again. If so, the empty condition is cleared. If not, the wait time starts over again.
11. When you have finished making changes, turn the dial to the **RUN** position.

### **Additional Points to Consider**

The BaseStation 3200 supports 8 separate water sources. From the factory, the controller has water source 1 (WS1) enabled and connected to control point 1 (CP1). CP1 is enabled and connected to mainline 1 (ML1). No other water sources are connected or enabled.

Depending on how many water sources you have enabled, your system might continue to water after one water source is shut down.