

Baseline Solutions for Irrigating from a Pond or Cistern

When water from a pond or a cistern is available for irrigation, a Baseline controller can be used to automate many of the potentially complex functions required to operate this type of water supply. To ensure that this water source works the way you expect it to, consider the questions in this high-level document, and then review the references to find out how to manage your specific situation with Baseline irrigation controllers and accessories.

Using the Pond or Cistern as a Water Source

- ◇ Does the pond or a cistern have a limited supply of water or is it fed continuously?
- ◇ Is the pond or cistern the only water supply for your irrigation system?
- ◇ If you have additional water supplies (also known as points of connection or POCs), do you want to prioritize the use of these POCs?
- ◇ When the water level in the pond or cistern gets low, do you want the controller to switch to a different water source?

Solution

With Baseline's BaseStation 3200 irrigation controller, you can assign 8 POCs and then configure priorities that tell the controller which water source to use first. Refer to the following documents:

[Understanding Points of Connection](#)

[Dealing with Water Restrictions](#)

[Setting Up POC Priorities in the BaseStation 3200 Irrigation Controller](#)

Shutting Down Irrigation Based on Water Level in the Pond or Cistern

- ◇ If the water supply is limited, will there always be enough water to run all associated programs, or does the pond or a cistern need to be monitored so that irrigation is shut down when the quantity gets too low?

Solution

You can use a Baseline biSensor to monitor the water level in the pond or cistern and then configure a Stop Condition to shut down a program when the water reaches the specified level. Refer to the following documents:

[BaseStation 3200 – Shutting Down Irrigation Due to Low Water in a Pond or a Cistern](#)

[BaseStation 1000 – Shutting Down Irrigation Due to Low Water in a Pond or a Cistern](#)

- ◇ Is the pond or cistern configured as a specific POC?

Solution

If you have configured the pond or cistern as a specific point of connection (POC) in the BaseStation 3200 controller, you can configure a POC empty condition to stop watering when the water reaches the specified level. The following document describes how to use either a float switch and an event biCoder or a biSensor moisture sensor as the monitoring device.

[BaseStation 3200 – Shutting Down Watering Based on a POC Empty Condition](#)

Other Variables to Consider

- ◇ Which device are you going use to monitor the water level in the pond or cistern: a float switch or a moisture sensor?

Solution

If you want to monitor the water level with a float switch, you can use any float that is capable of opening or closing contacts in conjunction with a BL-5402 event biCoder. However, consider that a moisture sensor has no moving parts and is often easier to mount and conceal from sight and does not require an additional biCoder.

- ◇ Is the monitoring device connected with conventional wire or with two-wire?

Solution

You can connect a moisture sensor through the conventional valve wires using a BL-5200 powered biCoder. While this solution can sometimes save some effort during installation, it's important to understand that a powered biCoder reports data every 3-6 minutes. This time factor affects how quickly the controller will shut down watering after a condition is detected.

On the other hand, a moisture sensor connected with two-wire is read every minute, which means that the controller can usually respond within 2 minutes. This timing allows the controller to respond more quickly than it would over conventional wire.

- ◇ Do you have a flow device and/or a master valve?

Solution

If you are using a flow meter to run multiple zones based on zone GPM and total available system GPM, the same flow meter will also manage flow when water is being used from the pond or cistern. Depending on the amount of flow available, the system might need to shut down irrigation to accommodate a fill process.

If your system has a master valve, you can program the controller to open the correct fill valve/pump start and open the proper master valve to allow access to the water supply.