Public Comments: Add-on Devices
2nd Draft Recommendations

Comment Period: June 9, 2009 through July 10, 2009

6-10-2009

First name: Lawrence
Last name: O'Leary
Job Title: Water Conservation Consultant
Organization: OGC Resources
Email: lawole@msn.com
Telephone: 6193901920
Fax: 6193901920

Comments:
I believe the SWAT Committee presented the Add-On device information well and is on the right track.

6-10-2009

First name: George
Last name: Alexanian
Job Title: President
Organization: Alex-Tronix Controls
Email: galexanianone@comcast.net
Telephone: 559-276-2888
Fax: 559-276-2890

Comments:
Under Background, end of second paragraph should say "The device interrupts or modifies the otherwise existing irrigation controller's program"
Under Proposal and Suggested Language, section 2 write as: The add-on will have the capability to be installed as an interrupt type device on the common and/or control wires or provide environmental, not limited to ET, data directly to a mated existing or conventional (non smart) controller.
Rewrite section 4 as follows: The add-on will have the ability to accommodate for different hydrozones with different watering requirements as defined by the SWAT protocol for smart controllers. (Not programmed for different hydrozones). The next section should start with "While the actions presented here will evaluate the ability of the add-on device to either interrupt the controller outputs or common or alter the controller programming directly,...
Under Approval and Posting, we should consider having preliminary test results posted (may want to call it "provisional SWAT test results for add ons" and then post the supplemental results. Testing a total of five controllers will cost a large amount for small manufacturers, they will also take up much bench testing space if several models at a time are being tested with four or five controllers each.

6-15-2009

First name: RAUL O.
Last name: MARQUEZ-HIGGS
Job Title: Irrig.Products Div. Mgr.
Organization: SUPERIOR-ANGRAN, INC.
Email: raulomarquezhiggs@supang.com
Telephone: (787) 774-1990
Fax: (787) 774-8548

Comments:
I remember when the first Rain Sensors came out to the industry. back then most irrigation controllers were not equiped to accept one of this RS. The first thing was done was to fit the RS to the controllers by placing one wire to the common gate and the other wire to the gate of valve #1. This fitting did not made the controller an adequate one but it help us.

In the same way today, most Controllers are now equiped to acept a RS. Now we want to add to these controllers new sensorial equipment. My thought in this respect is to define what we want to add to the controllers and then suggest the manufacturers to make an addition to their controllers. Which means that we ought to decide the best add-on device or equipment or feature that we want added to the controller. Perhaps if we decide what we want, then the manufactures will add to their controller's. Thank you.

6-28-2009

First name: Brian
Last name: Vinchesi
Job Title: Design Engineer
Organization: Irrigation Consulting, Inc.
Email: bvinchesi@irrigationconsulting.com
Telephone: 978-433-8972
Fax: 978-433-2788

Comments:
Under Issues - last sentence shoudl say .....of the toilet and tank qualify for WaterSense labeling as certified by teh EPA.

I would also agree with George's edits/clarifications.

7-2-2009

First name: Dave
Last name: Magner
Job Title: Marketing Manager
Organization: Rain Bird
Email: dmagner@rainbird.com
Telephone: 520-741-6118
Fax:

Comments:
The document makes reference to typical programming for non-smart irrigation controllers to be peak summer scheduling. Given the context of the reference it may be acceptable but please note that not all add-on smart devices promote that approach. The reference is not always ET. Soil moisture sensing add-on devices typically recommend programming the non-smart controller for frequent, short duration irrigation cycles to maximize plant health and water savings.

7-2-2009

First name: Steven
Last name: Moore
Job Title: President
Organization: Irrisoft, Inc.
Email: smoore@irrisoft.net
Telephone: 435-755-0400
Fax: 435-755-0415

Comments:
Thank you for improving the openness of the process. It is good to see the public responses and the task force comments.

Comment 1

There are numerous recommendations submitted suggesting that testing with multiple controllers be eliminated. The response from the Technical Working Group states; "The EPA and the Technical Working Group have determined that there needs to be evidence of successful compatibility with multiple manufactured controllers." I disagree with this conclusion and feel there needs to be a better explanation. I have worked with add-on devices for 7 years, never has the controller created a limitation that has limited our ability to automate water management. If the EPA has concerns, then the Technical Working Group can teach them that the controller is not the issue. If this requirement remains in place I feel this committee needs to better justify its position by describing a scenario that will cause differing results.

May I offer a suggestion that should simplify the process and dispel our concerns? Since "The Technical Working Group agrees that having the add-on device manufacturer attempt to list every controller their device works with may be impractical and we will work to develop this." (Response 5) May I suggest; 1) the specifications for a minimum "generic" controller be defined. 2) A controller is selected by the testing lab that meets the minimum specification. 3) That all add-on devices are tested with the same controller.

This will level the playing field, reduce cost and save time.

Comment 2

If comment 1 is ignored requirement 3 and 4 are redundant. Why complete the test required in paragraph 3 and then test again as required in paragraph 4?

Comment 3

Line 1 B represents the controller must have at least 2 programs. Controllers have one common. At the very least an add-on device will either enable or interrupt the common. An add-on device has no idea what program is running since it is only point of connection to the controller is the common. Two programs, while helpful are not essential to meet the requirements of the SWAT test protocol.

Comment 4

There was a recommendation that a controller must have at least 4 start times. There are many controllers with only 3 start times. A controller with three start times can meet the watering requirements of the virtual landscape of the SWAT protocol. By placing this restriction many controllers could unnecessarily be eliminated from local programs.

7-7-2009

First name: Dana
Last name: Lonn
Job Title: Managing Director, Center for Advanced Turf Technology
Organization: The Toro Company
Email: dana.lonn@toro.com
Telephone: 952-887-8204
Fax: 952-887-8695

Comments:
SWAT Add-On Type Smart Irrigation Control Devices Public Comments

Comments from:

The Toro Company
8111 Lyndale Avenue South
Bloomington, MN 55420
Contact: Dana Lonn, PE (dana.lonn@toro.com)

. This document is written in complex language that is difficult to understand. Consideration should be given to a rewrite that simplifies the language and makes it straight forward to read.
. In paragraph 2 "accomplished efficiently" should be replace by "adequate". The device is programmed to the summer schedule because the add-on device can only reduce irrigation and if the timer is not set for a summer schedule, the turf will not receive sufficient irrigation.
. In the second bullet point on page 2 the word "certain" should be removed.
. The "specified features" that references the controllers for capability needs to be very detailed and we need to be certain that they encompass the controllers used for testing.
. What does "typical 24VAC" controller mean? What is typical? Not a very descriptive word choice.
. In 1.B why is it important that the controller has the ability to have two programs? That does not seem to be necessary.
. Why is it critical if the controller communicates with the valves wirelessly? The controller only needs to provide a mechanism to control valves via a control line or a pseudo "common" line.
. Not sure what point 2 is trying to say. Should be covered by the performance characteristics.
. Which initial SWAT test is supposed to be performed? The specific test demanded should be specified.
. In point 4. There needs to be two tests specified. One test should be to verify that the add-on device functions. (This is likely one of the previously specified SWAT tests.) Because these tests are very involved and take many months to complete, it is not reasonable to expect a specific add-on device to complete the full test with four controllers. There needs to be a test developed to evaluate compatibility simply and easily without needing to complete the entire protocol.
. Who is responsible for claims of compatibility? Is the system self policing? Is it the intent of SWAT to list devices that are determined to not being compatible?

7-7-2009

First name: Michael
Last name: Bailey
Job Title: Board Member
Organization: Casa Loma Condominuims Homeowner Association Board of Directors
Email: michaelebailey@cox.net
Telephone: 949-716-8626
Fax:

Comments:
I think the use of add-ons by more than one manufacturer is very good to incorporate in the water monitoring process. We are interested in putting in a recycled water system and if the monitors can use add ons from different manufactureers that would be a great benefit to us as we work with our local water district to bring the recycled water system vision into reality. Saving as much water as we can in the irrigation process is very important to both conserve water in the 3ed year of a drought and reduce costs of irrigation. Thank you. Michael E. Bailey.

7-9-2009

First name: Brian
Last name: Lennon
Job Title: Sales Director
Organization: IRROMETER Co.
Email: brianl@irrometer.com
Telephone: 951 689 1701
Fax: 951 689 3706

Comments:
IRROMETER Co.
Po Box 2424
Riverside CA 92516
951 689 1701
Brian Lennon

Comments on the SWAT initiative regarding "Add-on" Type Smart Irrigation Control Devices

We support the Irrigation Association's efforts to define terms and develop requirements for add-on devices used in irrigation systems. Devices in this category include but are not limited to; soil moisture based management systems, climate based management systems, and other technologies yet to be discovered. All these products are designed to limit or prevent irrigation system operation based upon on-site environmental conditions. We would appreciate your consideration of the factors below as you make your decision regarding these standards:

Most irrigation controllers have features that allow their performance to be enhanced by add-on devices. We support the effort to identify these features but caution that SWAT provides enough flexibility in its requirements and testing process to encourage innovative and emerging technologies. To test every model of the devices with every possible iteration of irrigation controller is impractical, will require constant revision, and adds unnecessary cost to the manufacturer and ultimately the consumer. Two very important elements of add-on devices are that they work with many different models and brands of new and existing controllers and they have a very affordable price point. This provides for easy installation and immediate improvement in landscape water conservation.

In light of our commitment to provide simple, affordable and effective methods of improved irrigation efficiency we offer the following suggestions to the 2nd draft for Add-on devices:

Under *"Proposal and Suggested Language"*

1.A "Is a typical 24VAC irrigation controller-"
Comment: Using the word "typical" is subject to interpretation and limiting the definition to "24VAC" would exclude battery powered controllers and some two wire systems. We recommend the following wording:
1.A is a device designed to operate the irrigation system by inputting a time based schedule programmable by the operator.

1.B "Has at least two programs and can be set to a peak summer schedule"
Comment: Specifying the number of programs or the nature of the schedule is prescriptive and could potentially limit the inclusion of some controller manufacturers. Let's leave it up to the add-on manufacturers to specify these details when calling out their declared compatibility list. We recommend the following wording:
1.B should be capable of initiating multiple irrigation events. This can be accomplished via any combination of start time, program and/or cycle & soak events.

1.C "Has one or more common wires…"

Comment: Not all add-on technologies use the common wire to enhance controller efficiency. We recommend the following wording:
1.C should be capable of accepting one or more sensor based signal interruptions to limit programmed irrigation events. The add-on device connection should not be excusive to the controller manufacturer.

1.D " The controller does not communicate with the valves wirelessly"
Comment: Again this limits some technologies. We recommend this be eliminated altogether**.**

1.F "The controller is not a "smart" controller."
Comment: Why not make them even "smarter"? We often see improved efficiency when combining soil moisture add-on device management with other "smart" technologies. We recommend this be eliminated altogether**.**

2. "The add-on will have the capability, at a minimum, to be installed as an interrupt type device on the common and/or control wires for the controller."
Comment: Again this limits some technologies. We recommend the following wording:
2. The add-on will have the capability, at a minimum, to be installed as a signal or interrupt type device to limit programmed irrigation events.

4. *"The add-on will be capable of providing quality operation with the irrigation controllers a manufacturer declares are compatible with the add-on as evidenced by SWAT testing with a minimum of four common irrigation controllers in addition to the original test. The selection of controllers from the declared compatibility list will be designed to provide for market representation…"*
Comment: We suggest it should be better defined whether a manufacturer's compatibility list can consist of either a specific make/model listing or a described feature set from which any make/model can be selected by the testing facility, or the consumer. Using a compatibly list that describes a minimum feature set required by the add-on manufacturer to enable their device to perform at high efficiency is not unlike the current method for add-on programs and peripheral devices used with home computers. The add-on manufacturer simply states the required minimum capabilities of the host computer in order for the add-on to operate efficiently. This provides an alternate to proprietary type products and encourages new technologies. Also in this section, the requirement of four repetitions of the test with different makes/models of controllers seems overly repetitive, but we understand the desire to validate that add-on devices are universal in their usefulness. Perhaps for future cyclical testing, fewer repetitions would be necessary to validate that the devices have not changed and still operate as originally intended and tested. We recommend the following wording:
4. The add-on will be capable of providing quality operation with the irrigation controllers a manufacturer declares are compatible, whether by specific make/model listing or by specification of a defined minimum feature set. This will be evidenced by SWAT testing with a minimum of four common irrigation controllers in addition to the original test. The selection of controllers will be designed to provide for market representation and diversity of controller manufacturers (at a minimum, two different manufacturers are required). Selection of these will be by the lab conducting the test. The test employed will otherwise match the SWAT testing protocol currently in use. For cyclical validation tests, if required by an efficiency specification agency, only one random sample of compatible controller would be required and should be different from models previously utilized to test the same add-on device if possible.

Paragraph following #4.
Comment: This is unnecessary and prescribes methods of operation that the add-on device may or may not have. We recommend eliminating this paragraph altogether.

Approval and Posting

"Approval of a completed test and posting of results will be accomplished in a manner similar as to that for existing SWAT qualified control technologies. The IA will, however, clarify which types of devices are add-ons and which have completed the above supplemental testing. Neither the lab or SWAT will be responsible…"

Comment: This is a deviation from the previous testing disclosure culture. If the intent of SWAT is to be consistent with prior methods of sharing test information then the testing activities and results should only be released at the discretion of the manufacturer paying for the testing. We recommend the following wording:

Approval of a completed test and posting of results will be accomplished in a manner similar as to that for existing SWAT qualified control technologies. The IA will, however, clarify which types of devices are considered "add-on". Neither the lab nor SWAT will be responsible…

We appreciate your consideration on these matters and offer our fifty-eight years of experience in optimizing irrigation efficiency and maximizing water conservation to you. Let us know if we can help in any way.