

Draft Supplemental Guidance for WaterSense® Certification and Labeling of Weather-Based Irrigation Controllers

1.0 INTRODUCTION

EPA requires *all* products bearing the WaterSense label to be independently certified to conform to the relevant WaterSense specification. To guide this certification process, EPA has developed the WaterSense product certification system (product certification system), available on the WaterSense website at <http://www.epa.gov/watersense/partners/certification.html>. The product certification system describes the application, production process inspection, product testing, and ongoing surveillance requirements to ensure products conform and continue to conform to WaterSense specifications.

As this certification and labeling process is new and unfamiliar to some weather-based irrigation controller (controller) manufacturers, EPA has developed the following guidance to provide clarification and specific direction as to how the process works and will apply to the certification and labeling of such controllers. This guidance is supplemental to the WaterSense specification for weather-based irrigation controllers (once final). In addition, the following documents are indispensable in the application of the WaterSense certification and labeling process for controllers:

- WaterSense product certification system
- WaterSense manufacturer partnership agreement
- WaterSense *Program Guidelines*
- WaterSense *Label Use Guidelines*.

Manufacturers should read each of these documents to have a complete understanding as to how product certification and labeling works under the WaterSense program.

The following documents will also be helpful in fully understanding the testing and certification of products to earn the WaterSense label.

- WaterSense Performance Test Protocol Program for Weather-Based Irrigation Controllers
- Smart Water Application Technologies™ test protocol for climatologically based controllers.
- ISO/IEC Guide 65, *General requirements for bodies operating product certification systems*.
- ISO/IEC 17025, *General requirements for the competence of calibration and testing laboratories*.

2.0 BACKGROUND

WaterSense developed its product certification system as a mechanism to protect and maintain the integrity of the WaterSense label. Certification provides a means of evaluating product conformity with WaterSense specifications, not only when the product is initially tested, but on an ongoing basis after the product is being sold to consumers. Certification is a process demanded by stakeholders such as utilities looking to help

consumers identify high-efficiency, high-performance products. It also brings value to the WaterSense label and is an accepted and established practice in other industries.

EPA released its product certification system for public comment in May 2007 and received public comments, including many from irrigation controller manufacturers. After carefully considering the comments, EPA made appropriate revisions and in March 2009 released and began implementing the final product certification system. More than 3,000 products spanning four product categories have been successfully certified and labeled under this process. Comments and EPA comment responses on the product certification system can be viewed on the WaterSense website at <http://www.epa.gov/watersense/partners/certification.html>.

To further facilitate industry readiness to embrace this certification and labeling process, in September 2008 WaterSense hosted a meeting with irrigation controller manufacturers and potential licensed certifying bodies. During this meeting, EPA reviewed the benefits of third-party certification, discussed the balance between accessibility of the process and rigor of the requirements, listened to industry concerns, and initiated dialogue between irrigation controller manufacturers and potential licensed certifying bodies. A summary of this certification and labeling meeting can be found on the WaterSense website at <http://www.epa.gov/watersense/partners/controltech.html>.

The goal of this guidance is to further build upon open dialogue with industry and create a transparent process for manufacturers to understand and obtain product certification and authorization to use the WaterSense label in a timely, cost-effective manner after the final specification for controllers is released.

It should be noted that this guidance is written in accordance with the requirements contained in the *Revised Draft Specification for Weather-Based Irrigation Controllers* [<http://www.epa.gov/WaterSense/partners/controltech.html>] (specification). If changes are made to the specification that affect the certification and labeling process, this guidance will be updated accordingly to reflect such changes.

3.0 PRODUCT CERTIFICATION

EPA is providing specific guidance for the certification and labeling of controllers based on the specification and general requirements outlined in the product certification system, including:

- Application to a licensed certifying body
- Initial production inspection and product testing
- Product evaluation
- Product certification listing
- Authorization to use the WaterSense label
- Ongoing surveillance
- Label use suspension or withdrawal

In addition, EPA is providing specific guidance on private labeling, notifying EPA of certified products, and properly advertising products with the WaterSense label.

3.1 Application to a Licensed Certifying Body

3.1.1 WaterSense Partnership

Manufacturers seeking certification and the WaterSense label for their controllers must first apply for WaterSense partnership with EPA, <http://www.epa.gov/watersense/partners/manufacturer.html>. This partnership is free.

EPA will notify manufacturers, retailers, and distributors when they are able to apply for partnership. Manufacturers of components, such as weather stations, additional sensors, or weather services, are not eligible for partnership on this basis alone.

3.1.2 Application

The second step is to apply directly to an EPA licensed certifying body that has been approved to certify controllers. This list of approved licensed certifying bodies will be posted on the WaterSense website upon the release of the final specification for weather-based irrigation controllers. The licensed certifying body will provide an application for certification. The manufacturer must pay the licensed certifying body for its certification services.

As part of the specification development process, WaterSense has been working with its existing licensed certifying bodies to provide training on how to conduct the testing in accordance with the first draft specification. EPA will continue to work with licensed certification bodies to help them understand any changes that will be made to the final version of the specification. Participation in this training will be a condition of the initial approval for any licensed certifying body wanting to certify controllers. In addition, WaterSense continues to encourage manufacturers to reach out to potential licensed certifying bodies to fully evaluate their certification process and the associated costs. For a list of existing licensed certifying bodies, please visit http://www.epa.gov/watersense/about_us/cert_bodies.html.

3.1.3 Private Labeling

At the time of application, if a manufacturer intends to have its products privately labeled or rebranded under a separate organization/brand name, it must inform the licensed certifying body and provide information including the brand name, model names, and model numbers that the private labeler will use to identify and sell the WaterSense labeled products. Private labelers must also sign a WaterSense partnership agreement if they sell the WaterSense labeled product under their own brand name. Often, these arrangements are made after the initial certification of products. Manufacturers should notify the licensed certifying body and update their records accordingly after any private labeling arrangements are made for WaterSense labeled products. Private labelers may open their own certification files, but the licensed certifying body must keep track of the private labeler's relationship to the original manufacturer and be able to provide WaterSense with this information.

3.2 Initial Production Inspection and Product Testing

3.2.1 Initial Production Inspection

An initial production inspection is an optional requirement under the product certification system. It is an assessment of the production process and quality management system of the manufacturing facility. Its purpose is to help the licensed certifying body determine if the manufacturer has the capability to mass produce products that will consistently meet the requirements of the specification. For controllers, EPA does anticipate that most licensed certifying bodies will include this production inspection in their initial evaluation, because they do not have a prior relationship with manufacturers or a thorough understanding of their capability to produce products that continue to conform to the specification requirements. The licensed certifying bodies have facilities capable of completing this inspection anywhere in the world where the products may be manufactured.

3.2.2 Initial Product Testing

3.2.2.1. General Testing Requirements

The licensed certifying body will select sample products for testing in accordance with the sampling requirements of the most recent version of the Smart Water Application Technologies™ test protocol for climatologically based controllers. The sample products must be representative of the models to be certified and made using the components, subassemblies, and production tools and equipment identical to those used in production.

The licensed certifying body also determines how it will conduct the testing. Any test facilities must be able to demonstrate compliance with ISO/IEC 17025, *General requirements for the competence of calibration and testing laboratories*. EPA allows the licensed certifying body to perform testing in one of three ways:

- Test products in the licensed certifying body's own facilities;
- Subcontract the testing to another independent or third party (not including the product manufacturer); or
- Conduct the testing at the manufacturer's facility, provided the licensed certifying body witnesses the testing.

It is important to note that EPA does not require every individual model to be tested. Instead, EPA requires a base model to be tested that then may be representative of other models that have the same performance, but that may have other attributes that do not affect performance, such as station count. The licensed certifying body has discretion as to what constitutes products covered by a base model and whether a specific model must be tested. The certification decision will apply to the base model and any other models that the base model represents.

3.2.2.2. General Controller Testing Configuration

The specification applies to stand-alone controllers, add-on devices, and plug-in devices. EPA provides specific direction in Appendix A of the specification as to how each of

these products must be configured for testing. Specifically, all controllers—stand-alone, add-on, and plug-in devices—must be tested with all weather stations, sensors, or services that the manufacturer deems necessary to meet the requirements of the specification. Manufacturers must have no interaction with the device during testing, and the licensed certifying body is allowed only to use the instructions a consumer would see in order to properly set up the device for testing. Therefore, the manufacturer must supply a list of settings in the product's instruction manual that the licensed certifying body will follow to program the controller for testing. The intent in specifying these configuration requirements is to make it clear to the licensed certifying body which components the controller must be tested with and which settings shall be used for the testing.

3.2.2.3. Add-on and Plug-in Device Testing Configuration

WaterSense evaluates whether a product can deliver both water efficiency and expected performance. If a retrofit or component product that is designed to modify or control the water use of a base product cannot ensure the expected level of performance of the base product, it is not a candidate for the WaterSense label. All labeled products must be able to deliver all the efficiency and performance criteria established in the WaterSense specification. Therefore, add-on and plug-in devices must be tested with each base controller with which the manufacturer intends it to be connected. The base controller and the add-on or plug-in device as a unit must meet all of the requirements contained in the specification in order for the add-on or plug-in device to be certified.

3.2.3 Product Documentation

To ensure product efficiency and performance and to provide guidance for testing, the specification outlines specific product documentation requirements with which manufacturers must comply. The licensed certifying body will evaluate each of these requirements as part of the product certification process.

The specification currently requires:

- The product to be packaged with all of the components or attributes it was tested with to meet the requirements of the specification. This includes weather stations, sensors, and for signal based-controllers, instructions on acquiring the proper weather signal.
- The product to be packaged with an instruction manual that lists the settings and specific parts used during the performance test. The licensed certifying body will use this information to guide the programming and testing of the controller.
- The product must not be packaged or marked in any way that encourages operation in standard mode. Any instructions for maintenance must direct the user on how to return the controller to smart mode.

In addition, as a requirement for any product that bears the WaterSense label, and as indicated in Appendix B of the specification, the licensed certifying body will verify that product documentation for add-on and plug-in devices lists the base controller models with which the devices were tested and certified. The documentation must contain a

statement to the effect that the device is only WaterSense labeled when used in combination with a base controller on the provided list. The intent of this requirement is to ensure that the consumer is able to identify the combination(s) of base controller and add-on or plug-in device that will deliver the efficiency and performance required by the specification.

3.3 Product Evaluation

In addition to the production inspection and the product testing, the licensed certifying body will also complete a comprehensive review of the quality management documentation, product literature, and schematics to determine if the product can be manufactured in accordance with the specification.

In summary, the evaluation and ultimate certification decision will be based on a review of the following components, *all* of which must be met to the satisfaction of the licensed certifying body:

- Signed partnership agreement with EPA (for the original manufacturer and any private labelers who rebrand and sell the products)
- Initial production inspection
- Initial product testing
- Product documentation review
- Quality management, product literature, and schematic review

The licensed certifying body may work with the manufacturer to correct minor deficiencies before issuing the final certification decision. As part of the evaluation, the licensed certifying body may also require the manufacturer to submit a sample or describe how it intends to use the WaterSense label on the product and/or product packaging.

3.4 Product Certification Listing

The licensed certifying body is required to maintain a certification listing for each manufacturer that includes the manufacturer name and contact information and the brand name, model name, and model number for each certified product. For add-on and plug-in devices, the certification listing must also identify each base controller model with which the devices were tested and certified. Each base controller model included on the listing must be identified in product documentation for the corresponding add-on or plug-in device.

This certification listing will not include specific test data or results. It is simply a public record to indicate that the listed products met the minimum requirements contained in the specification. WaterSense uses this listing to verify information submitted by manufacturers before it will include those products on its product registry.

Manufacturers are responsible for ensuring that the certification listing is accurate and complete. This is an important step because the licensed certifying body may charge a fee for any changes to the certification listing. To help facilitate the listing process and avoid delays or extra charges, EPA is providing the tips in the following subsections.

3.4.1. Naming Conventions

It is critical to ensure that the brand name, model name, and model number for each product included on the certification listing matches how the product is packaged and advertised to the consumer. WaterSense must be able to trace and verify each product's certification, so EPA might review the manufacturer's website or request sample product packaging to ensure the information matches.

3.4.2 Additional Models Covered by a Base Model

In some cases, models may come with various attributes or options that do not affect product performance. In these instances, the licensed certifying body may certify a base model, covering the additional models with these various attributes, as described in Section 3.2.2.1. This base model may be identified on the certification listing with prefix or suffix characters to indicate the additional models covered, so that each model does not have to be individually listed. Manufacturers should clearly indicate, with a legend or key on the certification listing, if and where these additional attributes will be added to the base model number, so that consumers and other purchasers can easily identify labeled products.

3.4.3 Private Labeled Products

For products that are private labeled, the certification listing must list the private labeler and the brand names, model names, and model numbers that the private labeler will use to sell the WaterSense labeled products. The private labeler may request a separate listing from the manufacturer, provided the licensed certifying body keeps a record of the linkage between the two listings, so EPA, if necessary, can track a product's certification back to the original manufacturer.

3.5 Authorization to Use the WaterSense Label

Once a product has been certified to meet the WaterSense specification, **the licensed certifying body, not EPA**, will provide the manufacturer with authorization to use the WaterSense label and with the label graphic artwork. The label will be provided in color and black and white and in various file types to suit different advertising media. It will also contain the words "Certified by [Name of Licensed Certifying Body]" underneath. It is important that the manufacturer does not alter the label artwork provided. Specifically, do not remove the "Certified by [Name of Licensed Certifying Body]", change the label color or fonts, or skew the image. The manufacturer must use this label in accordance with the WaterSense Label Use Guidelines, http://www.epa.gov/watersense/docs/guidelines_label508.pdf. The licensed certifying body, as part of its surveillance, will evaluate and ensure the label's proper use.

Private labelers may be authorized to use the WaterSense label, provided they are WaterSense partners and are included on a certification listing. The label use authorization and graphic artwork may be obtained either from the licensed certifying body or from the original manufacturer, as dictated by the licensed certifying body's

policies. The original manufacturer is responsible for ensuring that its private labelers use the WaterSense label properly.

3.6 Ongoing Surveillance

3.6.1 Production Inspection

The licensed certifying body will audit the production process and quality management system each year to ensure that the manufacturer continues to have the capability to produce products that conform to the specification. As issues are identified, the licensed certifying body may work with the manufacturer to ensure that appropriate actions are taken to correct deficiencies.

3.6.2. Product Retesting

Every year, the licensed certifying body will retest a subset of products from each manufacturer to ensure that they continue to meet specification requirements. The subset will include, *at a minimum*, one unit of one model of each certified product. For example, if the manufacturer has two model standard controllers, one model add-on device and one model plug-in device, the licensed certifying body may select just the model add-on device for retesting. In this instance, the licensed certifying body will select at random *one* of the model base controllers with which the add-on device was originally tested and certified for retesting with the add-on device. It is important to note that this retesting requirement is a minimum; the licensed certifying body may choose to evaluate additional products on an annual basis to ensure that the products continue to conform to the specification.

For retesting, an inspector appointed by the licensed certifying body will select sample products from the manufacturer's warehouse, an irrigation project site, or retail outlet where the product is being used or sold. The manufacturer must pay for the product if it must be purchased by the inspector. This is to ensure that the product retested is representative of what is being sold to consumers.

Every fifth year, the licensed certifying body will retest each model of each product it has certified. However, products tested as part of the annual random testing do not need to be retested again at the end of the five-year period, as their retesting requirement has been satisfied. In order to meet this requirement without having to retest the majority of the products all at the same time at the end of the five-year period, the licensed certifying body may increase the number of samples retested annually. That way, all labeled products will have been retested at some point during the five-year period.

In addition, retesting requirements apply only to base models that are representative of other models that have the same performance but that have other varying characteristics that do not affect performance. Only a base model or one of the models the base model represents must be retested.

3.6.3. Label Use Surveillance

The licensed certifying body will annually conduct surveillance to determine how the label is being used in the marketplace. Specifically, they will randomly review a sample of labeled products from the manufacturer's warehouse, irrigation project site, or retail outlet where products are being used or sold, and will determine whether the manufacturer is using the label on product packaging or in advertising materials in accordance with the label use guidelines. As issues are identified, the licensed certifying body may work with the manufacturer to ensure that appropriate action is taken to correct deficiencies.

3.7 Label Suspension or Withdrawal

Based upon its surveillance activities, the licensed certifying body can suspend or withdraw use of the WaterSense label if the manufacturer's products do not continue to conform to the specification or for improper label use. In most cases, the licensed certifying body will work with the manufacturer to correct minor deficiencies, which would not result in a suspension or withdrawal of the WaterSense label or reporting to EPA. The results of the licensed certifying body's assessments are not required to be made public.

3.8 Notifying WaterSense of Certified Products

Upon certification, manufacturers must notify WaterSense in order for the products to be included on the WaterSense labeled product registry, http://www.epa.gov/watersense/product_search.html. This registry is an important tool that consumers and utilities offering rebate programs use to identify WaterSense labeled products.

To facilitate the listing process, upon the release of the final specification, EPA will provide a new certified product notification form for weather-based irrigation controllers. Forms for currently labeled product categories are available online and can be viewed at http://www.epa.gov/watersense/partners/manufacturer.html#product_labeled to see what type of information EPA will collect. Manufacturers must complete and submit this form to the WaterSense Helpline, including information for each certified product. EPA will then verify the product's certification information and ensure that it matches how the product is advertised to the consumer, based on the licensed certifying body's certification listing, web searches, or packaging/advertising samples. It may take several weeks for this information to verify and process this information and for the WaterSense product registry to be updated. To facilitate the notification process and avoid delays in processing, manufacturers should follow these tips:

- The information on the notification form must match what is provided on the certification listing and how the product is advertised to the consumer. This includes brand name, model name, and model numbers.
- Brand names may include the manufacturer's name, the manufacturer's brand, or a private labeler's brand.
- If the product has a model name, include it on the notification form and the certification listing.
- It is not necessary to report all individual models covered by a base model if the base model and the models it represents share a portion of the same model

number. In this instance, only include on the notification form the base model number with placeholders such as * or X. These placeholders will indicate that additional characters might be added to the base model number to indicate other similar models with different non-performance related features. It is important that the certification file include a key or legend that lists and describes the possible non-performance related prefixes and suffixes that could appear where the placeholders are indicated. See Section 3.4.2 for additional details.