

Draft Criteria for the Qualification of Certification Programs for Irrigation System Designers under EPA's Water Efficiency Program

1.0 Scope and Objective

This specification establishes criteria for the qualification of certification programs for irrigation designers under EPA's Water Efficiency Program. It applies to irrigation professionals who develop the design of new irrigation systems and/or modifications to existing irrigation systems. The purpose of the qualification is to identify programs that certify irrigation designers with demonstrated ability to apply water efficiency concepts in their practice. An irrigation designer who holds an EPA Water Efficiency Program qualified certification should be capable of designing irrigation systems with water efficiency being a fundamental component of their practice.

2.0 Qualification Criteria

To be qualified under EPA's Water Efficiency Program, the certification program must meet the following criteria:

2.1 Independent Oversight Committee

The certification process provided by an organization must be supervised by an independent oversight committee. The oversight committee must be established by the organization and be composed of at least three professionals who are recognized for their expertise in the irrigation field. Full time employees of the organization must hold less than half of the oversight committee positions. The committee must be able to exercise independent judgment and oversight to assure the integrity of the certification process.

2.2 Experiential Requirement

The certification must require that the applicant have a minimum of at least three years of demonstrated experience in the field of irrigation design. The oversight committee must have established the standard of proof for the experiential requirement.

2.3 Exam Requirement

The certification must include a requirement for the successful completion of an exam or series of exams. Testing procedures must be established or approved by the oversight committee.

2.3.1 Exam Content

The exam process should be structured so that passing practitioners must have demonstrated proficient applied knowledge in the following subject areas:

- Design, operation, and scheduling for water efficiency
- Preparation of site design reflecting site requirements
- Site appropriate irrigation scheduling
- Soil/water/plant relationships
- Grading and drainage
- Equipment selection and specification
- Hydraulics and pumps
- Plumbing and electrical codes
- Cost estimating
- Maintenance
- Recent innovations and technology developments

Specific exam questions should be established or approved by the oversight committee.

2.3.2 Exam Passing Score

The oversight committee should establish the passing score. The passing score on an exam must provide an objective level of assurance that the concepts listed above are understood and can be applied by the practitioner.

2.3.3 Quality Assurance/Quality Control

The examination process must include the following QA/QC elements:

- The technical content of exam questions should be established or approved by, and periodically reviewed by the oversight committee to ensure that the exam meets the requirements specified in Section 2.3.1. In addition, an independent academic institute or professional testing organization must review the exam questions to ensure that they accurately test the subject material. The exam question review process should be conducted at least once every two years, or more frequently as determined by the oversight committee.
- Exams must be administered by an independent academic institute, a professional testing organization, or an irrigation professional certified in the subject matter.
- Exams must be graded by an independent academic institute, professional testing organization, or a certified irrigation professional not involved in the training or proctoring of the practitioner being examined.
- The security and integrity of the test questions and test processes must be protected at all times.

2.4 Renewal Process

The certification must have a renewal process with a set periodicity.

2.4.1 Expiration

A certification must be renewed at least once every two years, or more frequently as established by the oversight committee.

2.4.2 Maintained Proficiency

One aspect of renewal the process must require the submission of documentation that the practitioner has maintained proficiency in the subject matter (e.g. continuing education units). The oversight committee should establish valid documentation requirements of maintained proficiency.

3.0 Application for Qualification

The organization seeking to qualify must submit an application to EPA's Water Efficiency Program for review. Qualification will be granted upon the approval of an organization's application by EPA's Water Efficiency Program staff. The application should document that the organization's certification process meets the criteria listed in Section 2.0. The application must include the following materials:

3.1 Letter of Intent

The letter of intent serves to introduce the organization's certification program and should include a background section that describes their certification and reason for seeking qualification under EPA's Water Efficiency Program. The letter should include a statement attesting to the validity of information submitted, and be signed by the chairman of the oversight committee responsible for the certification program and an officer of the organization.

3.2 Identifying Information

Provide the following identifying information for this application: a) Title of certification, b) Name and address of certifying organization, and c) Name, address, phone number, and email address of point of contact with certifying organization.

3.3 Documentation of Independent Oversight Committee Responsibility

For the oversight committee identified in Section 2.1, provide a description of the role, responsibility, and function of the oversight committee within the organization. The description should address the following topics: 1) How committee members are selected

or appointed, and 2) Committee member terms of service, such as duration of appointment or nature of compensation, if any. If available, a copy of the organization's by-laws pertaining to the oversight committee may be submitted as documentation.

3.4 Documentation of Independent Oversight Committee Composition

For the current oversight committee, provide each committee member's name, committee position, professional affiliation, and a brief synopsis of irrigation expertise.

3.5 Documentation of the Certification Process

This portion of the application consists of documentation for both the experiential and exam requirements.

3.5.1 Experiential Requirement

The organization must submit a description of the process they use to ensure the experiential requirement listed in Section 2.2 is met as part of the certification process.

3.5.2 Exam Content

The organization must submit a sample certification exam that has been administered no more than 6 months prior to the application date. The sample exam should be annotated to indicate how each subject, listed in Section 2.3.1, is tested in a sufficient manner. This documentation should link exam questions with the subject areas and demonstrate how each subject area was tested. The exam may be claimed as confidential business information and if so, will be safeguarded as such.

3.5.3 Exam Administration

Describe the process used to administer and grade the exam. Indicate what a passing grade is.

3.5.4 Documentation for the Exam Material Review Process

Provide the name and address of the independent academic institution or professional testing organization used to review exam material, and describe the process used by that organization for the review.

3.6 Documentation of the Certification Renewal Process

The organization must submit a description of the certification renewal process, including the documentation required for renewal.