

Certified Agriculture Water Manager (CAWM) Bulletin of Information, Application/Registration



Irrigation Association certification as a certified agriculture water manager indicates the successful manager has:

- A minimum of three years of verifiable irrigation-related experience
- Passed a written examination covering general irrigation subjects and specialty areas.
- Agreed to follow the IA Code of Ethics established by the IA Certification Board.

IA agriculture water managers are irrigation professionals who evaluate, operate, manage and improve irrigation systems to achieve the highest level of water conservation possible. They are involved in decisions regarding irrigation scheduling and maintenance to economically maximize their use of water and energy and optimize crop production.

CAWM Responsibilities

Certified agriculture water managers assess the specific crop water requirements, water availability and quality, manage and maintain the irrigation system, and schedule irrigation events. In addition, a CAWM should have a thorough knowledge of all irrigation equipment including its selection, use, limitations and installation methods.

A CAWM should have working knowledge of general irrigation theory, including hydraulics, soil-plant-water relationships, plant water requirements, system uniformity and efficiency. They are able to evaluate existing irrigation systems and make repairs and operational improvements to increase water and energy conservation. They have an understanding of related elements including grading and drainage and chemigation.

Eligibility and Application

Certification as a CAWM is a two-step process.

Step 1 Program Application and Exam Registration

- To apply to the IA Certified Agriculture Water Manager program, you must meet the requirement of at least three years of verifiable work experience in an irrigation-related field.
- To apply to the program and register for the exam, complete the certified agriculture water manager application and registration. Forms and payment must be received by the IA at least 30 days prior to the exam date.
- After your application has been received and verified, you will receive a letter informing you of your status in the program.
- If you have less than the required experience, you will be notified of the date when you will be eligible to take the examination. You will not have to reapply.

Step 2 Examination

- To become certified, you must pass the CAWM examination administered by the IA and agree to operate by the IA Code of Ethics.

Exam Description

The examination is a 4-hour, closed book exam with 125 equally-weighted, multiple choice questions. The content areas with approximate percentages are:

Irrigation Scheduling (42%)

- Understand soil-water-plant relationships
- Understand Precipitation Rates/Concepts and Relationships
- Calculate Precipitation Rates

Site & System Evaluation (22%)

- Perform Site Analysis
- Conduct System Evaluation
- Understand Drainage
- Perform Maintenance and Repair
- Analyze Systems for Water/Energy Conservation

Irrigation Systems (15%)

- Understand System Applications/ Operations
- Understand Ancillary Components
- Understand Special System Uses (cooling, frost protection, wastewater)
- Perform Maintenance and Repairs

Water Quality and Management (7%)

- Recognize Water Quality Problems
- Understand Water Quality Lab Reports
- Understand Effects/Consequences of water Quality
- Make Water Quality Adjustments
- Management

Chemigation (7%)

- Understand Application of Chemicals and Fertilizers
- Understand System Components
- Calculate/Calibrate
- Understand and Use Safe Chemigation Practices

Economics (7%)

- Identify Water/Energy Savings (by system or crop)

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References and Exam Schedule

References for the CAWM exam are available online (see certification and references). CAWM references include exam equations and the IA *Glossary of Irrigation Terms*, plus the following:

- *Irrigation, 6th Edition*
- *Principles of Irrigation, 2nd Edition*
- CAWM Equations (free online)
- CAWM Specifications (free online)

You may order exam references on the exam registration form or purchase books online at the IA Bookstore.

The exam schedule is continually updated on the IA web site.

Optional Courses

The CAWM program is a self-study program. IA offers optional educational review courses that may be beneficial in preparing for the exam. These courses include:

- Principles of Irrigation
- Center Pivot Design
- Chemigation/Fertigation
- Understanding Pumps, Controls and Wells
- Agricultural Drip/Micro Irrigation

Courses are not a substitute for studying reference materials. Classes are designed to educate the student, not to review specific exam content.

Important: Education courses are optional and require separate registration and fees.

Exam Retake/Reschedule/Cancel

No retake examination may be scheduled by anyone in the examination process until the candidate has been officially notified of the results of his/her previously taken exam.

No candidate will be allowed to retake an examination until 90 days have passed.

A cancellation fee will be assessed to the candidate who fails to cancel a scheduled exam at least five business days before the exam date. Cancellations must be made in writing and sent to the attention of IA certification by U.S. mail, fax: 703.536.7019 or e-mail: certification@irrigation.org. If a candidate fails to appear on day of exam, the candidate will forfeit all application and exam fees and will not be eligible for a refund.

A candidate may take an exam no more than three times. If unsuccessful on the third attempt, the candidate must wait one year from the date of the last examination to retake that examination. Fees applicable at that time must be paid. If the certification candidate does not take an exam for three consecutive years, the candidate must restart the certification process.

Fees and Registration

Apply and register for the CAWM program and exam directly through the IA. Exam registration and payment must be received by the IA at least 30 days prior to the exam date. On-site registration is not allowed.

Application and Exam Fees (application fee is non-refundable)

• IA member	\$ 50 application	\$200 exam
• Nonmember	\$175 application	\$325 exam
• IA member retake		\$200
• Nonmember retake		\$325
• IA member cancellation/rescheduling*		\$100
• Nonmember cancellation/rescheduling*		\$150

*Cancellation/rescheduling fees apply if cancelling within five business days of exam date.

If a candidate fails to appear on day of exam, the candidate will forfeit all application and exam fees and will not be eligible for a refund.

Company check, personal check, money order and credit cards (Visa, MasterCard, American Express) are accepted. Remit by check in US dollars drawn on a US bank, payable to the Irrigation Association.

Certification Renewal and CEUs

A CAWM is required to obtain CEUs to maintain an active status and remit a nominal annual renewal fee.



Certified Agriculture Water Manager (CAWM) Application

Please keep a copy for your records.



- Exam application and registration is required at least 30 days prior to the exam date. On-site registration is not allowed.
- IA reserves the right to cancel, postpone or reschedule any or all exams as necessary.
- To apply to the CAWM program and be eligible to take the CAWM exam, a candidate must have three years of verifiable irrigation-related experience.

Candidate Information (PRINT legibly in black ink)

Dr. Mr. Mrs. Ms.

Last Name		First Name	Middle Initial
Home Address (No PO Box)			
City	State/Province		Zip/Postal Code
Home Telephone		Cell Telephone	
E-mail (required)			
What address would you like your references mailed to?		<input type="checkbox"/> Home	<input type="checkbox"/> Business (commercial)
What address would you like your exam results mailed to?		<input type="checkbox"/> Home	<input type="checkbox"/> Business (commercial)

Experience REQUIRED

If you have less than three years of verifiable irrigation-related experience with your current employer, include former employer information and/or to substitute one year of irrigation-related education for up to one year of experience, see reverse.

Employment Information	Qualifying Irrigation-Related Experience
<p>Current employer _____</p> <p>Position/title _____</p> <p>Employed from _____ / _____ to _____ / _____</p> <p>Years _____ Months _____ of experience</p> <p>Supervisor/contact _____</p> <p>Business Address (No PO Box) _____</p> <p>City _____ State _____ Zip _____</p> <p>Tel (_____) _____</p> <p>Fax (_____) _____</p> <p>E-mail _____</p>	<p>Describe qualifying irrigation-related experience for water manager certification.</p> <p>Resume attached: <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>
<p>Previous employer _____</p> <p>Position/title _____</p> <p>Employed from _____ / _____ to _____ / _____</p> <p>Years _____ Months _____ of experience</p> <p>Supervisor/contact _____</p> <p>Business Address (No PO Box) _____</p> <p>City _____ State _____ Zip _____</p> <p>Tel (_____) _____</p> <p>Fax (_____) _____</p> <p>E-mail _____</p>	<p>Describe qualifying irrigation-related experience for water manager certification.</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>

► Continue experience and education on reverse.

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Experience (Continued)

Employment Information	Qualifying Irrigation-Related Experience
Previous employer _____ Position/title _____ Employed from _____ / _____ to _____ / _____ Years _____ Months _____ of experience Supervisor/contact _____ Business Address (No PO Box) _____ City _____ State _____ Zip _____ Tel (_____) _____ Fax (_____) _____ E-mail _____	Describe qualifying irrigation-related experience for water manager certification. _____ _____ _____ _____ _____ _____ _____ _____

Education

To request substitution of education for up to one year of experience, complete this section and attach official transcripts showing irrigation coursework, or copies of certificates of completion for any specialized irrigation training that you have completed.

Education Information	Course Work Description
Course _____ Provider _____ Address _____ _____ City _____ State _____ Zip _____ Length/date of course _____	Describe qualifying course or seminar. Transcript/certificate attached: <input type="checkbox"/> Yes <input type="checkbox"/> No _____ _____ _____ _____
Course _____ Provider _____ Address _____ _____ City _____ State _____ Zip _____ Length/date of course _____	Describe qualifying course or seminar. Transcript/certificate attached: <input type="checkbox"/> Yes <input type="checkbox"/> No _____ _____ _____ _____
Course _____ Provider _____ Address _____ _____ City _____ State _____ Zip _____ Length/date of course _____	Describe qualifying course or seminar. Transcript/certificate attached: <input type="checkbox"/> Yes <input type="checkbox"/> No _____ _____ _____ _____

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Candidate Information (PRINT legibly in black ink)

Dr. Mr. Mrs. Ms.

Last Name First Name Middle Initial

Code of Ethics

I subscribe to the following code of ethics:

- Uphold the integrity of the irrigation industry.
- Protect public health and safety.
- Comply with all local, state, national laws and regulations.
- Adhere to the concepts of free enterprise.
- Follow fair and honest business practices including legitimate representation of my personal capabilities, experience, certifications and licenses.
- Apply ethical business practices to all contractual and warranty obligations.
- Use responsible procedures in the design, installation, maintenance and management of irrigation systems.
- Promote best management practices for water, soil, and energy through efficient and cost-effective irrigation systems design, installation, maintenance and management.
- Work to gain respect and recognition for the irrigation industry at the local, regional, national and international level.

Declaration

- I understand and agree to all policies outlined in this document.
- I declare that the information contained in this application is true and accurate.
- I understand falsification is grounds for revocation of certification.
- I understand that failure to adhere to the IA Code of Ethics may result in disciplinary action up to and including revocation and/or exclusion from the certification program.
- I have read and agree to follow the IA Code of Ethics.

X _____
Signature Date

Exam

Computer-based Testing

Application and Exam Fees (Required)

The application fee is a non-refundable, one-time fee.

IA member	<input type="checkbox"/> \$ 50 application	<input type="checkbox"/> \$200 exam
Nonmember	<input type="checkbox"/> \$175 application	<input type="checkbox"/> \$325 exam
IA member exam retake		<input type="checkbox"/> \$200
Nonmember exam retake		<input type="checkbox"/> \$325
IA member cancellation/rescheduling*		<input type="checkbox"/> \$100
Nonmember cancellation/rescheduling*		<input type="checkbox"/> \$150

*Cancellation/rescheduling fees apply if cancelling within five business days of exam date.

Exam References and Shipping

Member Nonmember

\$139 \$179 *Irrigation, 6th Edition*

\$60 \$80 *Principles of Irrigation, 2nd Edition*

Free exam specification and equation sheets are sent with the confirmation letter or can be downloaded at www.irrigation.org.

\$10.00, ship one book, UPS ground U.S.

\$14.50, ship two books, UPS ground U.S.

\$12.00 to ship *Irrigation, 6th Edition*.

Exam references and shipping fees are subject to change. International shipping is additional. Please contact IA for a quote.

Cancellation Policy

Exam cancellations must be made in writing at least five business days prior to the exam date. Cancellations made after this date will be assessed a cancellation fee.

If a candidate fails to appear on day of exam, the candidate will forfeit all application and exam fees and will not be eligible for a refund.

Payment

\$ _____ **US Total enclosed or authorized**

Check here for receipt

Check: # _____

Remit in US \$ drawn on a US bank, payable to the Irrigation Association.

Charge: VISA MasterCard American Express

Card Number

_____/_____
Expiration (month/year)

Name on Card

X _____
Signature

Mail the application and registration forms with payment to:

Irrigation Association
6540 Arlington Blvd.
Falls Church, VA 22042-6638

Or fax with credit payment to:

Attn: Certification: 703.536.7019