



## Dear Colleagues,

The Association of Boards of Certification (ABC) is pleased to announce we are halfway through the [pilot testing phase](#) in the development of our new standardized exams for water treatment, wastewater treatment, collection, and distribution operator certification that will be released later this fall. By administering the new test forms in real-life exam situations, pilot testing allows us to gather data to double check answer keys and review the initial impacts of the recommended exam cut scores. Pilot testing, which will continue through June, only affects those certification authorities that volunteered to participate and does not affect any other jurisdictions or their exams. Later this fall, certification authorities will have the opportunity to determine whether or not their program will adopt the new standardized exams.

While ABC has been developing certification exams for more than three decades, exam development best practices have continually evolved. Our latest development effort has been in conformity with the certification industry's latest psychometric standards for exam development. ABC has partnered with our long-time computer-based test delivery partner, Applied Measurement Professionals (AMP), which has since been acquired by PSI Services LLC, to provide our volunteer committees of qualified water industry professionals — or subject matter experts (SMEs) — with the guidance and psychometric expertise needed to ensure our exams are valid, reliable, and legally defensible.

Development of the new exams began with new job analyses conducted in 2014-2015 — a process through which thousands of industry stakeholders provided input on the significance of approximately 730 job tasks. SME committees of varying backgrounds and geographical representation utilized the resulting data to identify broadly significant job tasks for inclusion on the exam content outlines we call [Need-to-Know Criteria](#). Additional SMEs guided updates to the format of the *Need-to-Know Criteria* to improve clarity for the candidates, certifiers, and trainers who reference the documents. Overall, when compared to prior editions of the *Need-to-Know Criteria*, you can expect the outlines to have:

- More clearly stated and streamlined job task statements;
- A fixed and clearly communicated number of calculation items per exam form;
- New information detailing the number of recall, application, and analysis level items included in each content area; and
- New information indicating the basic, intermediate, or advanced level for each statement of supporting knowledge

## Standardized Exams

The development of a truly standardized exam that can be utilized by ABC members throughout North America and around the world was the primary objective of the new 2017 standardized exams. ABC standardized exams

are utilized by more than 60 North American authorities, and regulations on single subjects sometimes differ between jurisdictions and/or levels of governance — federal limits may be less stringent than state/provincial limits, which may be less stringent than local or intra-utility limits. Given these issues, our experts' determination was that regulations-based content was inappropriate for a standardized exam administered across so many jurisdictions.

To be clear, ABC strongly believes regulations are important for operators to know and follow; however, those regulations are subject to regular/arbitrary change whereas the fundamental physical, chemical, biological, and mechanical concepts that underlie operations are not. Testing an operator's ability to recall specifics from regulations is an exercise in memory, whereas testing an operator's understanding of concepts is an exercise in competence and effectiveness to operate their facilities/system within any constraints including those set by regulations. By eliminating diverging local, state/provincial, and federal regulations items and focusing on core concepts, the exams can be used by a wider audience and provide additional evaluation of an operator's knowledge of fundamentals. This will promote and improve reciprocity between all certification entities in addition to giving a more accurate measurement of a candidate's competency.

The certification process, which generally relies on a combination of education, experience, and examination, offers a number of opportunities for certifying authorities to emphasize the importance of locally-applicable regulations. Mandatory training prior to examination, acknowledgement of responsibilities at the time of application, and tailored continuing education requirements for recertification are all tools commonly implemented for this purpose. Certifying authorities that are required to test operators on state/provincial or federal statutes are also welcome to utilize ABC's [program-specific module \(PSM\)](#) service. The PSM allows authorities to create, for administration alongside the standardized exam, a separate assessment of up to 20 questions that can focus on regulations or any other subject(s) of their preference. Though administered as one, scores for the standardized exam and PSM are reported separately to maintain the validity of the standardized exam. This also provides the certifying authority with the flexibility to utilize a PSM for either informational purposes or as a scored component of certification. Both the development and implementation of a PSM are currently offered at no additional cost.

### Passing Score

In keeping with our adherence to the certification industry's increasingly rigorous psychometric standards, it is necessary to set a statistically-supported passing score for each exam — the pass/fail point dividing the qualified from the unqualified. ABC will employ a Modified-Angoff methodology to set these pass/fail points, which relies on SMEs to examine the content of each item and then estimate the proportion of minimally-qualified candidates that would answer the item correctly. Committee determinations will be employed to establish recommended passing scores that differentiate between certification candidates who are competent and deserving of certification and those who are not.

As this process utilizes statistical data to set a precise passing score for each exam individually, it is possible that the recommended passing score for each exam may differ, and may not align to the customary 70 often implemented in our industry. ABC strongly recommends implementation of the recommended passing score for each standardized exam, but recognizes that Testing Service clients may have regulatory or institutional limitations requiring the implementation of an alternate passing score (i.e., 70). ABC will announce the recommended cut score for each exam form at the conclusion of the pilot testing phase. Certifying authorities will be afforded the discretion to either adopt the recommended passing score or determine their own during the exam implementation process.

## Future Steps

In September 2017, we will conduct an informational webinar on the new standardized exams for ABC members, non-members, and regulatory agencies. The webinar will be an open forum to answer your questions about the standardized exam development process, PSMs, recommended and alternate passing score options, along with 2017 exam roll-out specifics. Again, keeping in mind that certification authorities control whether or not to utilize the new standardized exams.

ABC is dedicated to partnering with certification authorities here and around the world to create a professional workforce and believes competent operators are essential to the stewardship of our water and wastewater resources and systems. We look forward to working with you to expand reciprocity of operator licensure across state/provincial lines and view these new exams as an important tool in realizing that vision.

Sincerely,

A handwritten signature in black ink, appearing to read 'Paul D. Bishop', written in a cursive style.

Paul D. Bishop, CAE  
President and CEO

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