



CERTIFIED AGRICULTURE IRRIGATION SPECIALIST EXAM DEVELOPMENT

Job Analysis Summary

In January 2018, the Irrigation Association (IA) contracted with ACS Ventures, Inc (ACS) to conduct a job task analysis study for their Certified Agriculture Irrigation Specialist (CAIS) program. The purpose of this job analysis study was to define and organize the knowledge, skills, and abilities associated with this certification to provide a foundation for a new examination blueprint for the CAIS program.

The process of developing the content specifications for a certification examination has implications for the defensibility of the final test scores. Therefore, this study was conducted to describe and prioritize expectations for professional practice in the field of agriculture irrigation specialists. The results of the study provide empirical evidence to inform the final blueprint design, including the weighting of domain and tasks on the CAIS examination form(s).

The study was designed to be conducted in three phases. In the first phase, the IA convened panels of subject matter experts (SMEs) who helped define the KSAs in an organizational framework. In the second phase, ACS and IA collaborated to construct and administer a survey to the professionals working in the field to gain feedback on the draft KSA lists. In the third phase, the responses from the survey were analyzed to determine the relative importance of each KSA. An invitation to complete the survey was sent via email to a total of 6,184 members of the candidate population of irrigation specialists. Of these, 148 individuals opted out and 52 were undeliverable. A total of 373 of the remaining 5,984 individuals completed a sufficient number of questions to be included in the analysis, which is a response rate of 6.23%. These measures of relative importance were then used to construct a recommended examination blueprint that is linked to the content defined by the phase 1 SME panel and the judgments made by the full set of survey respondents.

The study found that the final blueprint should be based on the domains and tasks developed by the SMEs. The results of the survey revealed that a majority of survey respondents rated the tasks as being performed at least sometimes, if not often. Similarly, a majority of respondents indicated that the task statements were critical for success in their profession.

Based on the initial results of the survey, each domain was assigned a weight based on the relative frequency and criticality of the associated task statements for professionals entering the field as a Certified Agriculture Irrigation Specialist. ACS provided this recommendation to IA to review the findings. The Irrigation Association Certification Board (IACB) reviewed the study and decided the recommended final set of content specifications would be represented in the content outlined by the JTA committee and would reflect the emphasis (frequency and criticality) recommended by the survey sample.