

SCOPE OF WORK (SOW)

FOR THE DEVELOPMENT OF AN ADMINISTRATIVE FRAMEWORK FOR COLORADO'S 2015 PUBLIC WATER SYSTEM TRAINING STRATEGY

BACKGROUND

Because safe drinking water doesn't happen without a well-trained workforce, the Capacity Building Unit (CBU) of the Safe Drinking Water Program has focused on ensuring that the best training is made available to professionals in the drinking water industry across Colorado. The *Colorado 2015 Public Water System Training Strategy* [the 2015 Strategy] is a culmination of 12 months of work to establish a direction for training services over the next five years. This plan was built on a foundation of data analysis and stakeholder input, with a particular emphasis on focusing limited resources on services in the areas of greatest need and potential impact to strengthen the ability of all Colorado public systems to provide safe drinking water to the public.

Vision:

In 2015, public water system training supported by the Colorado Safe Drinking Water Program is consistently high quality, relevant, and well-coordinated statewide.

The Rocky Mountain Section of the American Water Works Association (RMSWWA) is proposing to assist CDPHE in developing the Administrative Framework for the 2015 Strategy. The Framework will define the processes, guidelines and expected outcomes for training activities supported by the CBU. The Framework is intended to assist in the decision making regarding the allocation of funds and resources for public water system training services in the future.

APPROACH

RMSAWWA will facilitate the effort to design and develop an administrative framework that the CBU will use to evaluate funding eligibility of programs. Representatives from the existing stakeholder organizations (and others) who contributed to the 2015 Strategy will be invited to apply to serve as members of the Administrative Framework Task Force (AFTF). The CBU will support and collaborate with the RMSAWWA Project Team to review the applicants and appoint the members as well as the chair of the AFTF. The AFTF will have a defined set of tasks, outcomes and timelines related to the design and development of the preferred administrative framework. RMSAWWA will be responsible for assigning, coordinating, tracking, and reporting on the completion of AFTF task assignments. During this effort, RMSAWWA will use all means available to:

- Foster a collaborative approach through which stakeholders, partners and customers are invited to participate and whose opinions are recognized.
- Create understanding and clarity of the 2015 Strategy among stakeholders and partners.
- Establish and communicate the roles and responsibilities of all current and future stakeholders and partners.
- Communicate with CBU on a regular basis regarding tasks and deliverables.

Development of Deliverables

RMSAWWA will prepare the AFTF application form for distribution, manage and facilitate AFTF meetings; work with the CBU to define and manage expectations for each deliverable; and, forward final recommendations from the AFTF to the CBU for consideration, revisions or approval.

Prior to starting work on each deliverable, RMSAWWA will coordinate with the CBU (through meetings or conference calls) to discuss related expectations, issues and inputs. For each deliverable, RMSAWWA will follow a seven-step process:

1. Conduct background research and develop key discussion points,
2. Present research and discussion points to the AFTF and record the views of the AFTF,
3. Develop the draft deliverable,
4. Provide the draft deliverable to the AFTF for review, revision and approval,
5. Provide the deliverable as a recommendation to the CBU,
6. The CBU will provide feedback and guidance on recommended changes to each deliverable, and
7. RMSAWWA will edit the deliverable based on input from the CBU and provided the final version to the CBU and AFTF.

TASKS AND DELIVERABLES

RMSAWWA will design and create, through a facilitated approach, seven deliverables that will make up the Administrative Framework. The final Administrative Framework will be a compilation of the seven deliverables organized in an accessible, easy to implement format.

A detailed description of project tasks, deliverables, and schedule required under this SOW is provided in Appendix A. The major tasks for this project are summarized as follows:

Task1: Need-to-Know Criteria

Background: The Association of Boards of Certification (ABC) develops and maintains Need-to-Know Criteria (NTKC) for the water and wastewater industry. As part of the development of its certification exams and exam questions, ABC conducts job analyses of water and wastewater operators to identify the essential job tasks performed and the capabilities required to competently perform these job tasks. The results of these job analyses provide ABC with the foundation for the development of valid operator certification exams and exam questions. Currently, the State of Colorado utilizes ABC exams and therefore the ABC NTKC are an important guide for the development of operator training.

Description of Work: The AFTF will request an update from the Colorado Water and Wastewater Facility Operators Certification Board (CWWFOCB) regarding the current and future status of Colorado operator exams and NTKC. This request will include a question related to how often the NTKC will be updated in the future and by whom. The AFTF will review the information provided by the CWWFOCB and the current published documentation from ABC and the State of Colorado. The AFTF will assess how and when the existing or new ABC NTKC and/or Colorado NTKC should be used in the development and implementation of the 2015

Strategy. The Project Manager will brief CBU support staff for the CWWFOCB regarding integration of NTKC with the 2015 Strategy.

Deliverable: Need-to-Know Criteria Usage Guidelines

Task 2: Core Curriculum

Background: In the past the CBU has primarily relied on performance partners to decide if NTKC should be incorporated into sponsored training. While this approach has resulted in some excellent training content that meets the needs of the public water system community, it has not done so consistently. “Based on recent research, there are many areas where public water systems are failing, yet training services are not provided on all relevant subjects.”¹ By 2015, the CBU would like to have a defined core curriculum of training courses covering focused and relevant material for public water system professionals. Core curriculum can be defined as a uniform body of knowledge that all students at a defined level should know.

Description of Work: The AFTF will review and consider adoption of the terminology used in the Water Sector Competency Model (2009)², in combination with the NTKC and other factors to define a set series of courses to be offered on a routine basis. The AFTF will develop Tiers 6, 7 and 8 (occupation-specific competencies) for Colorado Water Treatment Plant System Operators (O*Net Code 51.8031.00) and Water Distribution System Operators (no O*Net Code) based on Colorado NTKC and O*Net competency profiles.³ (This could be called the Colorado Water Competency Model.) Specifically, the AFTF will form a recommendation for the future development of core training, with the subjects/levels prioritized.

Additional items to be included in the plan are:

- Suggestions regarding the frequency of course curriculum updates, and
- Curriculum usage guidelines for performance partners.

Deliverable: Core Curriculum Management Plan

Task 3: Career Pathways Roadmap

Background: The CBU would like to establish a strong web presence to communicate about training opportunities and their relationship to the Water Sector Competency Model and a career roadmap. A Career Pathways Roadmap is a visual tool for students, parents, advisers, counselors and educators to learn about the jobs, skills, education requirements and certification processes for a specific career. As additional education and training is completed, the progression of jobs and wages in a career is provided along with the courses, competencies and the skills, courses, certificates and degrees needed to be successful in the career. Using web links to navigate to labor market information and college registration, course, and financial aid, a web-based tool can help “connect the dots” to help users see the “big picture” for career planning.

¹ CDPHE 2015 Strategy

² American Water Works Association

³ <http://www.onetonline.org/link/details/51-8031.00>

Description of Work: The AFTF will utilize the existing Career Map from the Get Into Water! Project and enhance it to include more detailed information about the CBU core curriculum, water careers, existing/future training, labor market information and other tools. The Water Industry Careers Pathway Roadmap will be designed to ensure it can be converted to a web-based format with clickable links (this functionality will be defined in Task 6). Hard copy materials will be developed for distribution at various events and venues. RMSAWWA will explore the use of an online tool to create the roadmap and connect it to the Colorado Water Competency Model or the AWWA Water Competency Model.⁴ The Water Research Foundations' *Competency Model Development and Application to Meet Water Utility Workforce Needs* project will also be reviewed including the new web tool that has resulted from the project.⁵

Deliverable: Water Industry Career Pathways Roadmap

Task 4: Train-the-Trainer Program

Background: The CBU does not currently require any of its performance partners to utilize “certified” trainers but would like to establish a new program of train-the-trainer support services, including training on instructional design for adult learners. Based on attendee feedback, the CBU estimates that while most trainers are effective, there is still significant room for improvement in training delivery. In combination with delivering excellent, relevant curriculum, the CBU would like to ensure that all content is delivered by superior trainers. Train-the-trainer programs help to develop the capacity of knowledgeable professionals to deliver better training.

Description of Work: The AFTF will review outstanding train-the-trainer programs both within and outside the water industry, including standards published by the American Society of Training and Development (ASTD). Key elements and content of a successful train-the-trainer program for the CBU will be identified. Specifically, the AFTF will identify the competencies required of CBU trainers and how those competencies will be evaluated. The AFTF will also consider policies related to the implementation of the CBU train-the-trainer program. The AFTF will utilize the above information to create a Train-the-Trainer Program Design but not develop the actual content or curriculum for the program.

Deliverable: Train-the-Trainer Program Design

Task 5: Training Assessment

Background: The CBU would like to establish and implement a routine system of evaluating the training it delivers and sponsors. This would include revisiting the relevance of training material based on analysis of public water system failure data and stakeholder input, and potentially other data sources such as operator certification exam pass rates. The CBU will require all performance partners providing training services to report on pre- and post-training results and trainee feedback.

⁴ <http://www.careeronestop.org/competencymodel/CareerPathway/CPWCIIInstructions.aspx>

⁵ <http://www.waterrf.org/Search/Detail.aspx?Type=1&PID=4244&OID=0>

Description of Work: The AFTF will design an outcomes-based training assessment system that the CBU and its partners will use to evaluate the effectiveness of content and delivery methods. Established training assessment standards from ASTD will be reviewed and discussed. Based on solid education industry standard and the needs of the CBU, the AFTF will develop a Training Assessment Plan that outlines how learning outcomes will be measured:

The work will include the development of the assessment instrument(s) and a training needs assessment information system.

Deliverable: Training Assessment Plan

Task 6: Web Portal

Background: The CBU currently uses a sub-site of the CDPHE website to post documents and information. The implementation of the 2015 Strategy is going to require a more robust, coordinated and customer-friendly website. The CBU envisions a common web portal, linked from the CBU website, with information and tools for both customers and performance partners. For customers, there would be a training catalog, the Industry Career Pathways Roadmap, the NTKC, links to certification information and other tools. The performance partners would have (secure) access to the Core Curriculum, Train-the-Trainer Program, Training Assessment tools and other resources.

Description of Work: The AFTF will survey stakeholders and users for what information would be beneficial and what systems they currently use; produce a functional requirements document; establish a project schedule and budget; and recommend a process for controlling content and the long-term management of web portal (collaboration between all stakeholders). This will result in the development of a statement of work that can be issued.

Deliverable: Web Portal Statement of Work

Task 7: Final Administrative Framework

Description of Work: The CBU will provide RMSAWWA with document standards and the format for this deliverable. After Tasks 1-6 are completed and approved by the CBU, they will be combined into a policy guidance document. This document will serve as a guidebook for the CBU and all performance partners and therefore be consistent with the *Colorado 2015 Public Water System Training Strategy* document.

Deliverable: Final Administrative Framework

Task 8: Meetings and Administration

Description of Work: RMSAWWA has formed a Project Team to help guide this project. That team will meet on a regular basis to review deliverables and guide the development process. The AFTF will meet monthly to review research, identify issues, develop the draft deliverables for each task and to form the final recommendation associated with each task. The AFTF may include representatives from stakeholder organizations including, but not limited to, the CBU, RMSAWWA, Rocky Mountain Water Environment Association (RMWEA), Colorado Rural Water Association (CRWA), Rural Community Assistance Corporation, Colorado Community

College System, U.S. Environmental Protection Agency (EPA) Region 8, Operators Certification Program Office (OCPO), CWWFOCB U.S. Department of Agriculture, drinking water utilities and consultants.

Deliverable: AFTF meeting agendas and minutes

Task 9: Final Report

Description of Work: RMSAWWA will prepare a report to include a summary of the project, a list and description of future tasks important to the successful implementation of the 2015 Strategy and a recommended timeline.

Deliverable: Final Project Report

SCHEDULE OF ACTIVITIES

The proposed schedule below assumes the following:

- The application process for the AFTF is completed by January 31, 2012.
- CDPHE’s review and comment on recommendations are made in a timely manner.

The overall schedule will updated monthly, based on the completion of each task and overall progress made.



