

BAMI-I'S CERTIFICATION OF TRAINING IN ASSET MANAGEMENT PROGRAM REPORT

By Wei Liao & Ming Chen

In 2006, BAMI-I was selected for a U.S. EPA Cooperative Agreement (CP 83 282901-1). Its role involved surveying utilities of various sizes across the nation to identify genuine requirements. The primary objective was to educate these utilities comprehensively about asset management, covering everything from plan and project development to implementation and reaping benefits. To fulfill this mission, BAMI-I assembled a team of researchers from Virginia Tech, the Trenchless Technology Center at Louisiana Tech, and the University of Texas at Arlington. Notably, they engaged the Georgia Rural Water Association to oversee their efforts, ensuring a utility-focused approach. By 2008, the project had been successfully completed, and the report was presented that same year. This accomplishment paved the way for them to explore the creation of an online training program.

In 2010, BAMI-I introduced the current Certification of Training in Asset Management course (CTAM-100). This course offers a comprehensive introduction to asset management principles and concepts, with particular emphasis on their application to underground assets related to water and sewer systems. The success of CTAM has highlighted the necessity to expand its initial scope and offer more intricate training across a broader spectrum of utility system concerns. To address this challenge, three additional training courses are in the works for release at six-month intervals starting in 2013. These courses are named as below:

CTAM-200: Developing Buried Asset Management Programs

focuses upon a utility's buried assets such as pipes, manholes and valves that are "out-of-sight and out-of-mind." The course introduces the internationally accepted "Total Asset Management Plan" concept and terminology and then focuses on modifications to address current North American priorities, such as developing a basic Buried Asset Management Program for water and wastewater infrastructure. In this effort, the course provides guidance for program design and implementation; long-range planning; selecting data collection methods; data storage and access; database management; and asset condition assessment.

CTAM-200 provides in-depth examination of asset "Condition Assessment" and introduces sub-topics to review available assessment methodologies and their application in the effort to define "The Current State of My Assets."

CTAM-300: Implementing Buried Asset Management Programs

This course sequentially follows CTAM-200 and provides in-depth review of pertinent government regulations, customer expectations and performance measurements associated with Buried Asset Management Programs. The course goal is to clarify regulations that are currently implemented as part of compliancy in asset management requirements and measuring performance. Registrants will also gain an understanding of the

risk assessment process, prioritization methods, evaluation technologies, asset life estimation methods and different depreciation models. All of these will lead to answering the question of performance sustainability. The module concludes with information on capital improvement planning (CIP) methods, operations and maintenance (O&M) estimation, government regulations (i.e., CMOM and GASB 34), and repair-renewal technologies that are currently promoted and practiced in the water and wastewater industry.

CTAM-400: Financing Buried Asset Management Programs

Funding is one of the most critical issues that require attention in the effort to successfully implement a Buried Asset Management Program. This course will delve into topics such as economic analysis; planning concepts for project screening; planning for uncertainty and risk; financial analysis with respect to time value of money concepts; economic analysis applications of environmental and social impact assessment; public environment, legal and institutional aspects; and, last but not least, different funding methods currently available (e.g., bonds, partnerships, taxation, utility rates, etc.).

By completing these three courses, participants should acquire a working knowledge of how to initiate the Buried Asset Management Program development process and launch the program with long-term views and commitment.

In response to industry demands, BAM-I established a certification committee and developed two certification levels: Associate Water Asset Manager and Professional Water Asset Manager.

Around 1600 People from 16 different countries have participated in the

online courses. Notably, organizations like the Environmental Organization in North Carolina Division of Water Infrastructure recognized the growing need for assistance in enhancing utility plans within their state. In response, they awarded BAM-I a contract with BAM-I in 2015 to conduct four-day

courses, each spanning one day, with the aim of training their personnel and other interested individuals simultaneously. Table 1 shows the CTAM workshop series which was conducted by BAM-I in the past few years:

Table 1 CTAM workshop series

No.	COURSE SERIES	Organizer	Location	Date	Attendees
1	CTAM 100-400	North Carolina Division of Water Infrastructure	Raleigh, NC	August 17 — 20, 2015	24
2	CTAM 100-400	Rural Community Association Partnership (RCAP)	Columbus, OH	May 16 — 19, 2017	34
3	CTAM 100-400	UCTA-North Texas	Lewisville, TX	Nov 5 — 8, 2018	47
4	CTAM 100	NJWEA Annual Conference	Atlantic City, NJ	May 6, 2019	43
5	CTAM 100-400	City of Atlanta (COA) DWM	Atlanta, GA	September 9-12, 2019	33
6	CTAM 200	NJWEA Annual Conference	Atlantic City, NJ	May 8, 2023	20



CTAM Workshop #: Raleigh, NC August 17 — 20, 2015



CTAM Workshop #2: Columbus, OH, May 16 — 19, 2017



CTAM Workshop #3: UCTA-North Texas - Lewisville, Nov 5 — 8, 2018.



CTAM Workshop #4: Atlantic City - May 6, 2019



CTAM Workshop #5: City of Atlanta (COA) Department of Watershed Management (DWM). September 9-12, 2019



CTAM workshop #6: CTAM 200 - Atlantic City — May 8, 2023

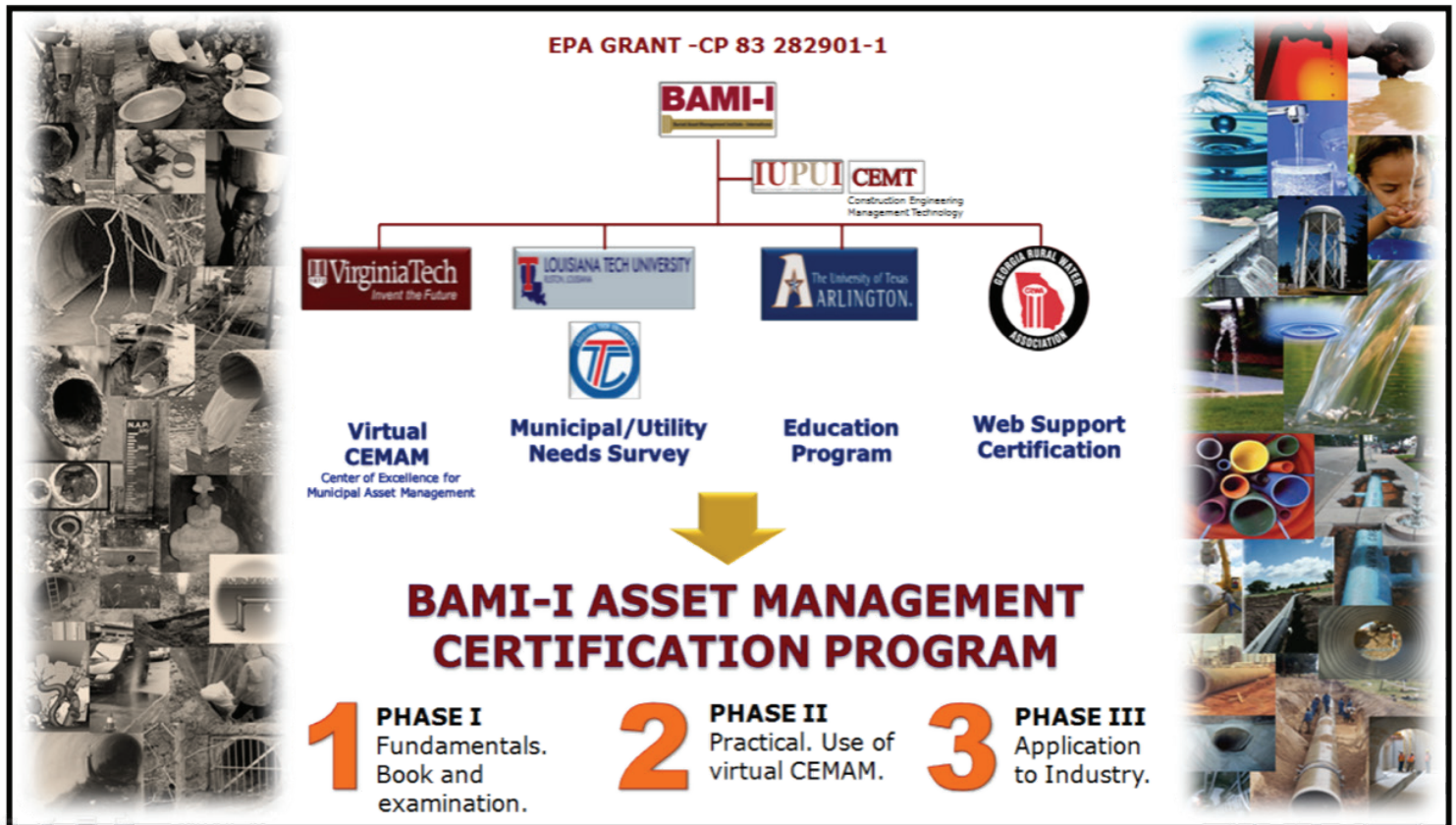
In 2023, BAM-I, Back Municipal Consulting and MSD of greater Cincinnati are offering The CTAM workshop. This workshop will take place in Metropolitan Sewer District of Greater Cincinnati (MSDGC) Room 106, 1600 Gest St. Cincinnati, OH 45204.

The CTAM series currently serves as the primary instructional material at Purdue University's Asset Management of Underground Infrastructure (AMUI) course. The AMUI course is conducted in a traditional classroom format for on-campus students and are also offered through PEO (Purdue Engineering Online) for remote learners seeking university credit or professional development credits. CTAM has already accumulated over a decade of experience and has achieved considerable success. However, BAM-I is not content with its current achievements. In order to stay abreast of the evolving times and technological advancements, BAM-I team is in the process of undertaking a comprehensive upgrade and modernization of the CTAM series, with the aim of achieving even greater success in the future.

Online Asset Management Training for Water Utility Professionals

Exclusive Four-Part Series in Asset Management Certification

- 1 **CTAM-100** – Overview of Asset Management
- 2 **CTAM-200** – Developing an Asset Management Program
- 3 **CTAM-300** – Managing an Asset Management Program
- 4 **CTAM-400** – Financing an Asset Management Program



The CTAM program was developed by BAMI-I (Buried Asset Management Institute International) in conjunction with the Trenchless Technology Center at Louisiana Tech and Indiana University-Pur-

due University at Indianapolis, in partnership with UIM: Water Utility Infrastructure Management, and is hosted by the Construction Engineering and Management Department at Purdue University.

Visit Website: www.bami-i.com for more information, contact:

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