



## **Navigating the Shift to a Dam Safety Culture at the NYS Canal System**

**Thomas McDonald, PE, New York Power Authority**

The NYS Canal System was originally constructed in 1825, and has undergone several enlargements and expansions over time, culminating with the Barge Canal in the 1910's. The Canal Corporation currently owns and manages over 3,000 civil infrastructure assets, including over 1,000 water impounding structures such as dams, spillways, embankments, culverts, gates and other water control and conveyance infrastructure. Most of these structures were built over 100 years ago before modern dam safety standards. Dam Safety regulations were promulgated in NYS in 2012, and the Canal Corporation (Canals) was transferred from the NYS Thruway Authority to NYS Power Authority (NYPA) in 2017. NYPA and Canals were challenged with how to develop a dam safety program and instill a dam safety focused culture in a historic canal navigation organization. Focus on a graduated plan to identify and understand imminent risks, push forward with meeting compliance with NYS Dam Safety regulations, while establishing best practices, dam and public safety training, incorporating risk analysis and risk informed decision making. While establishing the program, offer technical support to juggle day to day emergent and urgent issues, as the organization continues growing and evolving to meet the challenge of maintaining a safe and navigable Canal system. Partnering with regulators, expert Consultants and the community to provide a diversity of voices supporting Canals while embracing a dam and public safety mindset. Teamwork and relationship management are critically important to foster organizational change. As the dam safety engineer, your approach must necessarily evolve over time as the organization embraces the principles of dam and public safety. As training, guidance and experience take effect, it is important to provide the space and support needed for personnel to own and grow into fully embracing dam safety as a way of thinking and practicing their work. Listening, maintaining flexibility where possible and providing sound advice and judgment is essential to developing trust, which is foundational to good communication. The Canal Corporation has embraced a dam and public safety aware culture, with a focus on risk management, utilizing information derived from engineering and risk analyses to inform prioritization of maintenance, repair and rehabilitation work, and has brought focus to issues like public safety at dams, emergency action planning exercises, and risk informed decision making and prioritization. This work continues across the Canal system to ensure all Canal users are invited to recreate safely on the Canal and live safely near the Canal.