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The application of risk-informed decision making (RIDM) methods is increasing to assist in managing dam safety risks. These methods were first developed by government agencies and international organizations for risk prioritization of a portfolio of dams. Dam safety risk assessment tools have been developed by federal agencies and are taught as “Best Practices” for dam safety. These methods and tools can be used by any dam owner to understand the relative risks of their structures related to water delivery reliability, life safety, environmental, and third party impacts. Recently, RIDM guidance has been released by FERC and FEMA for use on non-government-owned structures. State dam safety programs have traditionally used a standards-based approach for regulation of non-federally owned dams. This paper will discuss the value of using the RIDM method for communicating dam safety risks within the context of dams regulated using standards based approaches.

This paper will discuss how processes developed for large scale federal dam projects and systems can be scaled down to basic principles for smaller organizations and systems in a cost-effective manner. In addition, we will discuss how RIDM can be implemented in a phased approach, allowing an organization to adjust management approaches over time to work within the new framework. The paper will include an example of a simplified RIDM approach for dams owned by the City of Greensboro, North Carolina. This example illustrates the value of RIDM in communicating the level of risks to dam owners, and provides a basis for further site investigations, performance monitoring, and risk mitigation to improve dam safety. These methods can be integrated into current asset management programs already being used by water suppliers. Regardless of organization size, many dam owners can realize benefits from using Best Practices and RIDM methods by focusing resources to meet risk reduction goals. In this way, owners can more clearly justify dam safety risk expenditures through increased understanding of the various types and levels of risks imposed by their system of structures.