

**Massachusetts Water Resources Authority (MWRA)**

**GEOLOGIC SAMPLE AND CORE REPOSITORY**

**EXECUTIVE SUMMARY**

The MWRA geologic sample and core repository consists of a collection of core rock samples, thin sections and associated records that have been acquired over an 80-year period during the planning and design of statewide water and sewer related construction projects in Massachusetts. The collection is a well-organized and well-catalogued resource that provides an unparalleled record of earth history in Massachusetts. This collection is a unique archive in New England and is of value even after the projects for which the core was taken are complete. It can and has been used as a data reference for existing MWRA tunnels and other structures, as an aid in preliminary engineering studies for new facilities, geologic mapping, academic research, environmental studies and public education. Some of the core represents the only readily available source of primary information concerning the bedrock in extensive areas lacking ledge exposure. The benefits of this valuable resource have reached and continue to reach individual stakeholders on a daily basis. The archive must be maintained so that it can continue to serve the public.

Some highlights about the collection include:

- Contains 70,000 linear feet of core and over 500 thin sections
- Used by 6 federal and state agencies, 2 NGOs and 9 major consulting practices
- Resulted in over 70 scientific articles, maps, abstracts and presentations leading to a better understanding of Massachusetts geology
- Educational outreach of the core extends beyond the geoscience community
- Paper logs are an inadequate substitute for the physical samples
- Used by more than 17 geoscience faculty and students representing 10 educational institutions
- Accessible via an electronic database
- Replacement value is estimated to range from \$13 to \$20 million
- Public cost to store the core is 0.5% to 0.05% of the cost to acquire it
- Retention of the core makes it available for modern scientific analysis now and in the future

The collection must be permanently moved from its current location in Building 4 at the Fore River Shipyard in Quincy, Massachusetts to allow for resale and reassignment of that space. A core repository advisory committee has been formed to assist with finding a new location for the core. The committee is making a survey of available space in a suitable state-owned building to which to relocate the core; estimated cost of moving the collection ranges from \$150,000 to \$250,000.