

MWRA ADVISORY BOARD

WATER SUPPLY UPDATE

MAY 1988

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A monthly report of news and information about water management and conservation in the MWRA area. Provided as a service to cities and towns by the Advisory Board.

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MWRA LEAK DETECTION PROGRAM SWINGS INTO ACTION THIS MONTH

With the hiring of four leak detection firms, the MWRA is now prepared to offer complete leak detection services to all communities supplied regularly with MWRA water. Program manager Dave Liston recommends sonic listening surveys for communities with less than 10% unaccounted-for water, and more comprehensive "water audits" for communities with higher levels of unaccounted-for water. He will be contacting local water departments beginning this month to schedule dates, and to find out which type of survey is desired by each community.

Sonic listening surveys, usually conducted at night when background noise is at a minimum, involve the use of sound intensifying equipment to listen for leaks at hydrants, valve stems, service lines, and mains. These surveys can be supplemented with the use of a correlator truck, which uses a computer to pinpoint the precise locations of hard-to-find leaks. When conducting a listening survey in a community, technicians will need updated maps of the distribution system and a helper from the local water department.

Communities with high unaccounted-for water can benefit from a more comprehensive water audit, which combines flow measurements and listening surveys to identify all possible sources of unaccounted-for water, including: leaks, meter inaccuracies, unauthorized uses, unmetered public uses, or abandoned service connections. Water audits divide the community into districts, and flow into each district is measured to determine which districts have higher potentials for leakage or lost water. Those districts with high potential are then more closely analyzed for leaks, industrial meter under-registration, or other unmetered uses.

A water audit requires some additional effort on the part of the community. The community must first install gauging points along some mains so that district flow measurements can be made. This may require excavation in some locations. In addition, at the time of the consultants' field work, a crew and a truck from the community are needed for night-time work operating valves.

According to Mr. Liston, many communities that should have water audits conducted have not yet installed the necessary gauging points. He encourages communities to do so quickly, because the economic savings that can be immediately achieved from a water audit far exceed the minor costs associated with the installation of gauging points.

FIFTEEN UNUSED LOCAL SOURCES RECOMMENDED FOR FEASIBILITY STUDIES

MWRA Water Engineering staff have prepared a preliminary list of 15 unused local sources of water that may be studied as part of a program to increase available water supplies through the development and reactivation of local sources not currently in use. The recommended sources are located in a number of communities throughout the service area, and have estimated supply yields ranging from 0.4 mgd to 8.0 mgd.

Sources selected will require further engineering investigations, or "feasibility studies," prior to their possible use as drinking water supplies either by the local community or by the MWRA system. Feasibility studies will examine raw water quality, potential contamination issues, and the costs of filtration or treatment. Program Manager Patricia Corcoran anticipates that such studies will take approximately two years to complete, at a cost to the MWRA of about \$500,000.

The staff recommendation proposes that the 15 sources be grouped so that six feasibility studies will be conducted by consultants. Three studies are planned for sources in the Charles River Basin, and one study each in the Nashua, Neponset, and North Coastal Basins. The recommended local source list, as presented to the MWRA Board of Directors, is reprinted below:

LOCAL SOURCES RECOMMENDATIONS FOR FEASIBILITY STUDY*			
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<u>BASIN/Water User</u>	<u>Water Source/ Location</u>	<u>Estimated Yield (MGD)</u>	<u>Capital Costs** (Million \$)</u>
CHARLES BASIN			
1. Combined Study			
Cutler Park Sources			
Brookline	Southwest Cutler Park/ Dedham	1.7	2.8
Newton	Newton Water Works/ Needham	8.0	6.2
Newton	Cutler Park East of Charles River/Newton	2.0	0.8
2. Combined Study			
Newton	East Side of Charles River/Newton	0.6	1.0
Waltham	Charles River Well Supply/Waltham	3.0	3.3
3. Combined Study			
Needham	Dedham Avenue Supply/ Needham	0.4	1.3
Needham	Charles River Well/ Needham	1.0	N/A
NASHUA BASIN			
4. Clinton	Wekepeke Brook Supply/ Sterling	0.6	4.6
NEPONSET BASIN			
5. Combined Study			
Canton	South Arm of Neponset Aquifer/Canton	1.5	3.0
Canton	South Reservoir Pond Supply/Canton	1.0	2.1
Canton	Reservoir Pond/Canton	N/A	N/A
Canton	Springdale Supply/Canton & Stoughton	0.7	N/A
Norwood	Ellis Station Supply/ Norwood	2.0	3.6
Norwood	Buckmaster Pond/Westwood	1.5	2.1
NORTH COASTAL BASIN			
6. Marblehead	Legg's Hill/Salem (Loring Ave. Well)	0.6	N/A

N/A = Not Available

* = Consensus of staff meeting of 2/24/88

** = 1987 Dollars. Preliminary estimates based on 1982 data.

WATER SUPPLY LEGISLATION ON STATE HOUSE AGENDA

Eight bills relating to water supply resources are on the legislative agenda for 1988. Each is briefly described:

H 5153 AN ACT TO PROTECT THE METROPOLITAN DRINKING WATER SUPPLY

This would prohibit certain uses of land in areas adjacent to the tributary streams which feed into the water supply reservoirs serving the MWRA. While the MDC controls most of the Quabbin watershed, much of the Ware River and Wachusett watersheds are privately owned and locally controlled. This bill would establish a standard set of guidelines to provide consistency in land management.

S 918 AN ACT PROVIDING FOR THE PROTECTION OF DRINKING WATER

Similar to H 5153, except that it applies to all reservoirs and watersheds in the state.

H 3501 AN ACT PROVIDING FOR THE CONTINUED INVESTIGATION OF THE WATER RESOURCES OF THE COMMONWEALTH

This bill would allocate \$3.5 million to continue an ongoing joint study being conducted by the State Division of Water Resources and the United States Geological Survey. The study is to accurately determine the yields of river basins.

S 919 AN ACT AUTHORIZING DEQE TO RETAIN CERTAIN FEES

This would allow the DEQE to redistribute back to municipalities the fees that it collects from the Water Management Act permitting process.

H 3502 AN ACT PROVIDING FOR THE ADMINISTRATION OF EXISTING FINANCIAL PROGRAMS TO MUNICIPALITIES

This would improve DEQE's ability to expeditiously process applications and reimbursements for grants to cities and towns, by giving the agency additional resources for administrative purposes.

H 3499 AN ACT RELATIVE TO THE PROTECTION AND DELIVERY OF PURE DRINKING WATER

This would authorize over \$100 million in expenditures and grants to assist cities and towns in planning and protecting water supplies. This bill was introduced last year but was not voted on.

S 915 AN ACT PROHIBITING THE SALE OF SEPTIC TANK CLEANERS CONTAINING CERTAIN CHEMICALS

This would prohibit the sale of septic tank cleaners containing chemicals which can pollute groundwater.

S 917 AN ACT RELATIVE TO THE PROTECTION OF WATER SUPPLIES FROM SODIUM CHLORIDE AND OTHER DEICING CHEMICALS

This would allow DEQE to regulate the use of deicing materials in areas linked to drinking water supplies.

MWRA HOPES TO ACHIEVE WATER SAVINGS OF 36 MGD

At a news conference at Massachusetts General Hospital last week, Paul Levy announced a water conservation goal of 36 million gallons per day (mgd)--an amount that would bring water use within the safe yield limit of the system. He said such a goal could be achieved "if we make a few changes in our daily water-use habits." Mr. Levy asked for cooperation from homeowners, businesses, and community leaders, adding that, "adopting efficient water-use habits would assure a dependable supply of clean, safe water, and would also prove to be a good money-management practice."

Administrators at Mass. General were also praised for launching a successful water conservation program at the hospital. Mr. Levy suggested that other organizations and individuals involved in effective water conservation efforts will also be publicly recognized and awarded membership into the MWRA's Quabbin Club.

BOSTON WATER AND SEWER GIVES LARGER DISCOUNT TO ELDERLY

According to an article in The Tab (April 26), the Boston Water and Sewer Commission has given elderly and disabled residents a larger discount on their water and sewer bills. Previously, qualifying residents were allowed to deduct 15% off of their bills. But on April 1st, when new higher rates went into effect, the deduction was increased to 25%.

Boston City Councilor Robert Travaglini was quoted as saying: "Boston is the only community that has enacted legislation that offers a reduced rate to those people who would be most victimized as a result of an increase of water and sewer rates as mandated by the Boston Harbor Cleanup Program. We are asking for all surrounding towns and communities to follow suit. They can all do the same thing, I'm sure."

ADVISORY BOARD RECOMMENDS CUTS IN MWRA OPERATING BUDGET

In budget comments approved at the April meeting in Dedham, the Advisory Board recommended that the MWRA cut its proposed FY89 operating budget by at least \$8.2 million. According to Chairman Norman Jacques, the Advisory Board reviewed just over half of the MWRA's programs and found opportunities to trim \$8.2 million from the budget. "Our staff didn't have the time or resources to investigate every program thoroughly. The results of our limited review suggest that the Authority could go even farther to find additional savings in many other program areas," said Mr. Jacques. If the MWRA agrees to the Advisory Board's recommendations, the proposed combined water and sewer rate increases of 46% could be reduced to around 38%.

ALGAE PROBLEM TREATED, TASTES AND ODORS SUBSIDE

The stubborn strain of algae that had added a foul taste and smell to MWRA water during the winter months has disappeared from the Wachusett reservoir, according to Guy Foss of the MWRA. "Samples taken since the second week in April show that the algae's gone completely," said Mr. Foss. He believes that the problem was brought under control in late March when he and his staff used a different method to disperse copper sulfate deeper into the reservoir, and across a larger area. He's optimistic that future algae blooms will be controlled more effectively by sampling for algae earlier in the season, and treating algae as soon as it is detected.