



**WATER SUPPLY CITIZENS
ADVISORY COMMITTEE**
to the Mass. Water Resources Authority

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April 8, 2008

Secretary Ian A. Bowles
Executive Office of Energy and Environmental Affairs
100 Cambridge Street, Suite 900
Boston, MA 02114

Attention: Anne Canaday: EEA #14197, Birch Road Wellfield Redevelopment and
Water Treatment Plant

Question 1: Is the project exempt from Interbasin Transfer Act?

As discussed below, we believe the project is not exempt from the Interbasin Transfer Act. Based on the application, the proponent states that the prior well capacity and wastewater flows are "grandfathered." We believe the wells have not been used for potable supply after the effective date of the Interbasin Transfer Act (the Act, or ITA). Moreover, there is no assurance that the Birch wells would not be used to supplement the water system, also increasing volume of sewer flows and invoking the Act.

The ENF says that "...due to poor water quality and no treatment, the wellfield's operation was changed from active service [to] emergency service in 1984." WSCAC's office retains reports on prior investigations of the Framingham service system. Two of these differ from those cited by the consultant. These reports indicate that the Framingham wells were fully used until 1966, partially used until 1979 and only placed on standby activation in 1984. The 1984 actions cited by the proponent were not in fact "use" of the wells.

In 1984, MWRA needed to make repairs to the Hultman Aqueduct which serves Framingham in four locations. All system storage was filled to capacity at MWRA's request, and the Framingham wells had to be ready to take over service if an emergency occurred. The MWRA made a successful repair in less than a few hours, and to our knowledge, the Framingham wells never fed into their distribution system and to consumers. The "15-day" 1984 "use" period may instead be a period when Framingham kept its well in the ready while working on some local modifications or repairs. MWRA can clarify this information, we are sure.

The Interbasin Transfer Act did not retroactively require water systems with out of basin transfers to reapply. The regulations clearly explicated the intent of the law: if your system was fully functional then you have some grandfathered status, but not without limitation. The ITA Regulations state that the,

"Present Rate.....means the hydraulic capacity of an Interbasin transfer system which was authorized, constructed and *useable* for water supply purposes *without additional installation of facilities or changes in any authority or operating rule prior to the effective date of the act....*" (emphasis added)

FYI

X
EEA #14197 -

"Saxonville wells"

- Framingham

We believe the reactivation project is subject to the Act as documented by early consulting reports and the 2006 letters to DEP requesting the Birch Road pump tests which state that the wells were unusable as they were in the late 1970-80's because of levels of iron and manganese, which could not be successfully sequestered. The wells were not in effect usable when the ITA became effective. The Act was signed on December 8, 1983 and the effective date was January 1, 1984.

It appears that the reactivation proposal could be additive to current MWRA water takings MWRA and therefore also increase the out-of-basin transfer of wastewater, an increase that is jurisdictional under the Act. All Framingham wastewater is discharged out of basin. The Water Resources Commission has held that the Act is applicable unless the well activation is clearly a substitution.

For your information, the Framingham sewer interceptor has been problematic over the years and receives inflow from another upstream community (Ashland) contributes to the problems. There have been odor problems and other difficulties that regularly appear as reporting items on the MWRA's Board of Directors monthly meetings. Possible increased sewer flows should receive detailed scrutiny.

Question 2: What are the water resources impacts of using these wells?

Page 51 of Source Final Report states that most of Birch road well recharge is from Lake Cochituate, with very little impact on the Sudbury River, and no recharge from the Dudley Pond and no anticipated impact on the recharge of the Wayland wells. No mention is made, that we could find, of impacts on river flows in this reach if other wells upstream in Ashland and Hopkinton are built, or of the impacts if hundreds of housing units are built in the gravel pit area. The ENF acknowledges wetlands and vernal pools nearby. The ENF mentions a USGS/SEA discrepancy on aquifer boundary conditions – Is this information from the recent USGS studies of the Sudbury River and watershed (Gene Parker). Is the USGS Report consistent with the proponent's estimates of Birch Street wells reactivation impacts on other features in the watershed?

The Executive Summary says it is "apparent" that there will be no impact on Wayland wells, but no picture or text supports this statement. The Wayland well recharge area, while mostly upstream, is not clearly isolated from the full aquifer, and may be impacted in dry years in particular by the reactivation. The Wayland wells are known to have a zone of influence which transects the Sudbury River itself. (See earlier Sudbury Reservoir activation studies) The Pump test application says Wayland wells must be included in pump test - is this reported somewhere in the pump test? It should be reported and reviewed in the text.

The ENF also states that there will not be an impact on the Sudbury River. The flows of Sudbury River have a complex geology and the flows are very slow, with small river stage changes having notable effects on the recharge in its floodplain. For example, in earlier studies it showed that a river drop of a few inches was sufficient to prevent recharge of many acres of floodplain near the Great Meadows Sanctuary (Sudbury Reservoir system reactivation study 1979-80 - MDC)

Page vi states that the Dudley Pond is not contributing substantial recharge to the well site. The possible contribution to the wells is an interesting question. During the construction of the MetroWest Tunnel, MWRA found that Pond elevation was dropping somewhat comparable to estimated water inflow into the tunnel. This may have resulted from a change in pressure against the bottom of the Pond resulting from the tunneling nearby, but was not the result of an actual breach of the Pond's bottom. The connection of the Pond to the full recharge area of the wells should be investigated further.

The present condition of wetlands on the site could be a function of stopping the use of the wells so many years ago. The ENF states that a 500 sf increase in impact for what is called "limited project" will occur, although the ENF also says, no increase to wetlands impacts. No local Conservation Commission permit has been sought, but the ENF indicates that a state wetlands permit will be needed. It is not clear why.

For all of the above reasons, the ENF raises serious concerns about the proponent's request for 4.3 MGD and statements which imply that 4.5 was the historical capacity of the well field in Framingham. The reports we have seen over the years show no yield or use from these wells higher than 2.1 MGD. Framingham used wells other than the subject Birch Road wells. The estimates of much higher yield seem based on hydrologic "estimates" of aquifer characteristics. The MWRA's local sources study report of May-June 1991 list the Birch wells as providing 2.1 MGD.

Question 3: What are the known and potential threats of contamination of the wells?

The treatment requirements for the wells are much lower than levels one would have anticipated from historical data. There appear to be many fewer organics, less iron and manganese and treatable perchlorate, although it too appears at much lower levels in the pump test. We wonder if the lack of use of these wells for so many years has contributed to such low readings and if the consumers could for the long-run be assured of so few potential health threats. If Lake Cochituate is the primary recharge area, how will its water quality over-time affect the wells and be affected by them?

The water quality of Lake Cochituate is not good at this time. It was once slightly better when inadvertent blow-offs from the MDC/MWRA system occurred on a fairly frequent basis; but the blow-offs were repaired more than 15 years ago and water quality has declined, we understand. Cochituate is part of a very heavily used state park. The use could be negatively impacted by the proposed reactivation, especially at the proposed 4.3 MGD use. The interaction between the Lake and the wells needs full investigation.

Additional questions of interest are: Will all of the water be mixed with MWRA water supply? Framingham's system once operated in two very separate zones – has that been changed through system modifications? The extent of mixing and water quality differences of the two sources should be explored. Sources with relatively high iron and manganese, even after treatment, may not mix well with MWRA's water (the Stoughton experience). USGS and SEA see discrepancies in boundary conditions of the aquifer. What does that imply about the certainty of estimates of draw-down over an extended area?

Question 4: Are Framingham and watershed communities ready?

The watersheds in Framingham are highly developed. The Town of Framingham has a DEP-approved aquifer bylaw and Water Conservation Plan although zoning issues around the Zone I and IIs of the watershed are referenced as needing improvement in the 2006 DEP pump test approval letter. The majority of the Zone II recharge is in the Town of Wayland. Are arrangements with Wayland in hand – what else might be needed?

In conclusion: WSCAC advises MWRA on water policy and program. We support the retention and development of local water sources in MWRA user communities and the MWRA's enabling legislation reflects this philosophy. However, the state also has an obligation to help restore rivers, streams and wetlands resources that have been damaged over the decades in which more enlightened resource management policies have not been in place. Therefore, a very careful assessment should be made of the proposal to reactivate wells in the reach of the Town of Framingham's former wells, especially because the proposal contains conflicting information with the historical withdrawals from this site before Framingham became a full user of the MWRA water sources.

Sincerely yours,



Eileen Simonson
Co-Executive Directors



and Alexandra Dawson