TOWN OF HINGHAM
MASSACHUSETTS

Water Supply Committee

HINGHAM WATER SUPPLY COMMITTEE

Interim Report *(**amended**) August 27, 2003

Committee Members

Peter Puciloski, Chair
Kirk Shilts, Secretary
Daniel Coughlin, Member
Jeffrie Bettinger, Member
Terrence Geoghegan, Member
William Schrader, Member
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CONTENTS

(1): Hingham Water Supply Committee:

The Hingham Water Supply Committee (HWSC) was created by vote of Town Meeting and charged with all matters relative to an adequate water supply for the inhabitants of the town, the rates now being charged for water service, and to investigate the feasibility, probable cost and methods of financing the acquisition of the Hingham Water Co., (Water Co.) and any other means of improving water service to the town. The HWSC has no regulatory or supervisory powers.

(2) Hingham Water Company:

Since 1879, the essential public service of supplying the town of Hingham with potable water and fire protection has been delegated to private enterprise. Hingham is one of only about five of the 351 cities and towns in the Commonwealth to have its water provided by a private, for profit, utility company. As discussed below, the town maintains a statutory right to purchase the property and rights from the Water Co. franchise at actual cost and at any time contingent on a town meeting vote.

Privatization of an essential municipal service has both pluses and minuses. Advantages would likely include more experienced management, a mindset that favors innovation, an emphasis on customer service and maximization of available resources. On the other hand, the adversities may encompass the lack of public oversight and accountability, absence of municipal control, a lower emphasis on environmental protection and a business perspective that includes a provision for shareholder profit.

A unique parallel, which involved these same issues of privatization, occurred almost twenty years ago in the towns of Dedham and Westwood. Faced with a private water company that was perceived as not responsive to their communities' concerns, Dedham-Westwood sought and gained municipal control, and eventually purchased their water system. The HWSC notes that the sole statutory obligation of the Water Co. is "for the purpose of furnishing the **inhabitants of Hingham** with pure water…"(emphasis added). It is therefore believed that public safeguards could be established to protect the inhabitants of Hingham from instances where actions of the Water Co. appear contrary to this statutory purpose.

(3) Water Source Supply:

Although the HWSC is not specifically charged with addressing the environmental impacts of water service, the availability of a sustainable source of supply places a clear limit on the amount of water that is available to our town's residents and industry.

Currently, the only comprehensive study of the Weir River Watershed is the 2002 GeoEnviromental Inc. (GZA) study commissioned by the Department of Massachusetts Environmental Management. The GZA study evaluated the available water quantity within our watershed, developing models of supply and demand to predict the impact on the watershed's ecology based on current withdrawals. Two distinct models were studied, the Aquatic Habitat Safe Yield and Instantaneous Minimum Stream Flow Analysis. The aquatic habitat safe yield data, which is a measurement of the habitat for flora and fauna within our watershed, demonstrated that a safe yield was adversely exceeded by 214% annually. More revealing, during the critical summer months of July and August when water demand is highest and our local ecology most stressed, the habitat safe yield was exceeded by more than 730%. The minimum stream flow analysis established baseline flow rates that could be used as a method to monitor future watershed stream flows. Current watershed flow level data suggests that the ability of flora and fauna to evolve and survive periodic adversities without major population changes is at least stable. What it is not clear is what potential ecological harm further stream flow reductions would cause resulting from additional watershed withdrawals. Experts retained by the Water Co. dispute both the methodology and the conclusions of the GZA study.

Although these environmental indicators do not correlate to an ability to pump water from the Weir river watershed, it does indicate a significant and immediate stress to the ecology of the watershed and subsequent impacts on the physical environs of our town.

About four years ago, the Water Co. agreed to establish a "Town Joint Environmental Monitoring Program" subsequent to the directives of the Hingham Conservation Commission. This broad program is attempting to monitor the physical quantities of water within our local watershed. The cost of this ongoing project currently appears to rest on the Water Co. ratepayer. Whereas the Water Co. is actively engaged in the process of state permitting of a new and additional water withdrawal from this very watershed, the HWSC would like to review the results of this monitoring up to now, as important assessments could be drawn relative to water quantity concerns and then a determination made as to the cost-effectiveness of continuing this program.

(4) Water Needs Planning:

A December 2000 draft water needs report by the Water Co. looked at a 20-year anticipated growth within our water service area. Their projections, using the high estimate scenario, were for a total of 12,608 total customers by the year 2020. According to their April 2003 figures, there are currently 12,042 customers reliant on the system. In just 3-years, and merely 15% into this 20-year period, the Water Co. has realized an actual growth proportional to 65% of the total projected customer increase. More revealing is that this high estimate scenario included the additional customers relative to the planned Hingham Shipyard as well as the Erickson housing development. In light of this apparently unanticipated and underestimated actual customer rate of growth, coupled with the eventual explosive growth (estimated at close to 20% of Hingham's current residential base) resulting from these and other planned developments, the HWSC is concerned that the Water Co. will be unable to sustain the needs of the future inhabitants of Hingham. The Water Co. has admitted that even with the maximal additional supply of potential water from the Free St. #4 source, they still will not be able to service the needs of our Hingham residents after full build-out of the previously mentioned developments. The HWSC notes that the Water Co. was to furnish the Massachusetts Dept. of Environmental Protection with an updated Water needs report on June 12th of this year. Presently, the HWSC is still waiting to receive a copy of this revised report as we requested a number of months ago.

(5) Water Conservation Efforts:

In both 1998 and 2001 the Water Co. exceeded their yearly withdrawal limit mandated by the Massachusetts Water Management Act (MA-WMA). Since 1999, the Water Co. has operated under a restrictive consent order that requires them to manage the growth on their system and lower the amount of unaccounted for water. Only after the Water Co. has been able to meet imposed reasonable safeguards over 3-consecutive years, would this consent order be withdrawn.

Other neighboring municipal water systems (example: Stoughton, Hanson) have also faced issues of overdrawing water from their watersheds. It should be noted that the Town of Hanson, who's water shortfall is frequently chronicled in our local papers, has yet to actually exceed its yearly permitted limit and trigger a MA-WMA sanction as what happened to our Water Co. Nevertheless, the standard safeguard self-imposed by both of these municipal water systems was to declare a moratorium on additional service hook-ups from larger developments, those requiring more than 100,000gal/year. Our Water Co. did not follow this practice but instead implemented a Water Balance Program, which attempted to offset additional hook-ups with intra-system water savings measures. Water balance plans are fairly common conservation tools where typically 2:1 savings programs are used in systems where the wastewater remains within the watershed and 4:1 programs in systems where wastewater is transferred out of the watershed. The Water Co. has currently exhausted all of the water savings available under their 2:1 (leak detection program). Presently, the Water Co. is utilizing a less stringent 1:1 water balance plan that involves the retrofitting of antiquated water fixtures. It appears that the retrofitting plan is also approaching the practical limits of its application.

The lack of municipal control over the water supply means that the Water Co. has the exclusive responsibility of determining the availability of potable water (required by the state for an initial building permit) **and** for final occupancy (fulfillment of any water balance plan). It appears that the town would benefit from the creation of a public entity, as in a municipal water district commission or other public official, accountable for determining the true availability of potable water for new construction.

(6) Additional Water Resources:

A current Water Co. plan is to obtain a new and separate MA-WMA permit for the existing Free St. well #4. While the utilization of this well may increase the ability to meet peak demand, it should not be considered a new source of water since it is merely an additional withdrawal from the same well field. Findings based on the GZA study suggest the impact of any additional taxing of our current water resources could be of detriment to the ecological health of our local watershed. Leaving aside for a moment the primary issue of whether there is an ample supply from this single source, the HWSC also looked at this proposal from the perspective of the ratepayer. We note that this plan was the most cost-effective of all of the alternatives that have been proposed in order to obtain additional quantities of water. We note that the Water Co.'s current MA-WMA permit for its present infrastructure is not up for review until 2008. The HWSC is in initial support of activating well #4 contingent on the results of proper testing and a thorough review process which would address the environmental viability of this proposal.

(7) Special Concerns:

- Linden Pond Development:

The Erickson retirement development was approved by the Hingham Planning Board contingent on a provision that it was to be supplied water which originates from outside the Weir river watershed. The HWSC supports the continuance of this requirement for any and all of the 'phased' developments that will eventually be built. The developer is currently negotiating for water to be supplied by the Town of Cohasset. The proposed contracts that cover an interbasin acquisition from the Town of Cohasset for this purpose not only expire after 20-years, but also allow for the termination of this supply arrangement by Cohasset; either of these contingencies would place an immediate burden of additional water supply needs upon the Water Co. Therefore, the HWSC would expect that certain yet-to-be-defined safeguards must be built into any such arrangement, as we realize the potential peril that would occur to all of our citizens if this outside supply were to be interrupted by any reason and the full load of this significant additional water consumption place on our own Weir river watershed resource.

- So. Weymouth Naval Air Redevelopment:

The HWSC believes that the special act by which the Hingham Water Co. was incorporated appears not to allow the Water Co. to supply water to any other community or inhabitants other than the four that are set forth in the act.

(8) Cost Issues:

- General Perspective:

Hingham along with our neighboring communities supplied by the Water Co. are levied the highest rates for water in all of Massachusetts. A 2001 Boston Globe analyses also indicated that this is equally true for the entire contiguous United States. This distinction is most unnerving. Components of this high cost certainly stem from the building of the Water Co. treatment plan in South Hingham. When this project was undertaken some 12-years ago, new Federal Environmental Protection Agency (EPA) standards for filtration along with numerous town mandates added significantly to the initial cost.

The HWSC believes that any action relative to the Water Co. be viewed from the perspective of the resident, the rate payer, and that the most affordable impact should be considered first.

- Water Rates:

In 2000, the Water Co. filed for a 16% rate increase with the state Department of Telecommunications and Energy. A year later, they were subsequently granted a 10.5% increase over the 1996 level.

During our April 2003 meetings with the Water Co., two issues were apparent relative to prospective future water rates. First, the typical residential customer is currently provided a $97.08 credit from the Commonwealth relative to the cost of building the water treatment plant. This credit is scheduled to expire in 2008, thereby increasing the cost to the customer by the same amount. Secondly, the relationship between an expected sizeable increase in the Water Co.'s customer-base, resulting from the planned residential developments, in context to the customer rate-base was specifically queried. The Water Co. stated that it does not envision a rate reduction tied to an expanded rate-base.

- Water Co. Acquisition Discussion:

The HWSC has no experience or expertise in the process of evaluating the cost or market value of a public water company. In the past, the town has used the services of EYKL Co. for evaluating price paradigms based on rate-based multiples. Because of the added component of the water treatment plant in Hingham, a strict rate-based assessment of the current Water Co. would not be entirely appropriate. Prior to the building of the treatment plant, the town commissioned a 1988 study by the Arthur Young Co. titled: "Feasibility of Acquisition of the Hingham Water Co." They arrived at a (1.6x) multiple for a rate-based analysis acquisition cost. At that time, the HWSC was in favor of proceeding towards an eventual purchase of the Water Co. The prevailing political sentiment was nevertheless, otherwise.

The current Water Co. owner, Aquarion, which bought the rights and properly of what was the original Hingham Water Company is a division of the Kelda company based in England and is one of the 10 largest water companies in the world. Kelda purchased Aquarion in 2001 for $444 million dollars. Aquarion had in 2000 purchased most of the American Water Company's assets (including the Massachusetts-American Water Co.) for $233 million serving 64,000 customers in four New England states. Aquarion's current Hingham operations include a rate-base of $23 million dollars as well as a fixed cost capitol of 9.53%. Although we have included the 1988 rate-based acquisition multiple within this report, an estimate of a likely current multiple would be speculative.

As stated earlier, any current rate-based assessment would not entirely include the depreciated cost of the Hingham treatment plant. The original price of the George Johnstone Filtration Plant was estimated at $17 million dollars, and the cost at completion believed to have been somewhere shy of $40 million. A current cost-value of the treatment plant is presently unknown.

Recent market sales have made it possible to look at a market-based analysis acquisition cost of the Water Co. In 2001, the Salisbury Water Supply Co. (a subsidiary of the former MA-American Water Co.) was purchased by the Town of Salisbury for $11.5 million. The Salisbury system serviced 3,000 customers and had $1.9 million in annual revenue. In 2000, Aquarion purchased the Village Water Co. in Simsbury, CT for $6.5 million servicing 5,200 households. And there was the 2000 American Water Co. sale previously mentioned. Aquarion has about 17,000 Massachusetts customers where approximately 66% are located in Hingham. The HWSC believes that providing a specific acquisition cost estimate based on a per-customer market-based method within this report would be equally speculative.

The HWSC has not concluded that the town should hire an outside expert to accurately assess the physical capabilities and current value of the Water Co., its infrastructure, property, debt, and loss of business equity. Nevertheless, we believe it would be an extremely valuable undertaking. The

HWSC is looking forward to the town's guidance and additional instructions relative to this particular issue.

(9) Consideration of a proposed Municipal Water District:

An ongoing trend has been for municipalities to purchase their water delivery infrastructure but to farm out management duties to outside experienced entities (examples: Dedham-Westwood 1985, Salisbury 2001). Having mentioned this, the HWSC is not suggesting that this is our present recommendation. In Hingham, there is the potential for a different outcome that could support a private/public cooperative arrangement.

In 1985, the legislature created the Dedham-Westwood water district, which was under the direction of town-appointed commissioners, and set non-regulatory policy for water service within the district. Examples of these types of policy could include, interbasin transfer/sales, water emergency declarations and sanctions, defining non-mandatory water quality standards and the determination of adequate supply under MGL 780CMR 111.4. In the Dedham-Westwood case, the District was created in anticipation of the acquisition of the utility by the two towns, but it appears that the creation of such a district may give Hingham important control over the water resource even independent of any acquisition.

It needs to be emphasized that within any proposed Hingham water district, the Water Co. would retain its corporate autonomy to manage itself within its statutory responsibility, including upkeep and improvements to its infrastructure, asset allocations, and the recovery of a fair rate for its service. This local oversight through a municipal water district would also never supplant the appropriate state agencies that regulate water management, but merely help to address local issues and policy relative to our inhabitants. The HWSC believes that the feasibility of a private/public cooperative model has serious potential merit and benefit.

The HWSC is committed to serving the townspeople of Hingham. We hope that this interim report will assist the town in better understand the issues relative to our water service.

Respectfully submitted,

Hingham Water Supply Committee