

CAMBRIDGE WATER BOARD

**MEETING MINUTES**

January 14, 2015

This meeting was called to order at 5:07 p.m. at 250 Fresh Pond Parkway, in Cambridge, Massachusetts. Those in attendance were:

**Cambridge Water Board (CWB):** James Tanner, Ann Roosevelt and James Burruss

**Cambridge Water Department (CWD):** Sam Corda, Tim MacDonald, David Kaplan, Fred Centanni, Mark Gallagher and Linda Vierboom

**A. MINUTES OF DECEMBER 10, 2014 MEETING**

Mr. Tanner moved and Mr. Burruss seconded the motion to approve the December 10, 2014 minutes as amended. The vote was unanimous in favor of the motion.

**B. MANAGING DIRECTOR'S REPORT**

*Fresh Pond Advisory Board Meeting:* Mr. Corda said about 6 to 9 people, in addition to the Advisory Board members, attended the January 8, 2015 Fresh Pond Advisory Board Meeting. The purpose of the meeting was to discuss the location of the proposed DCR bike path segment. The City purchased the right of way with the intent to connect to the Minute Man Bike Path. The main area of concern was the path section between the Water Department entrance and Huron Avenue (Russell Bridge). There were concerns of whether the multi-use path would be lit or not. Other points of dissension were directed at whether alternative routes had been looked at. The proximity to the reservoir was also discussed. It was brought up that the advisory group should be adhering to the Master Plan Rules, more specifically "that general land use provision number one states that no development may occur in undeveloped natural areas" and "no vegetated area loss may occur." This property, formerly being a railroad bed, would exclude it from the Master Plan provisions. In addition, very little vegetation, if any, would need to be removed and as part of the pathway project, "landscaping" improvements could be done to ensure a gain versus any net loss. Most importantly, "capping" the railroad bed is imperative; according to DEP Regulation, paving the railroad bed is an acceptable means of "encapsulating" any potential soil hazards from migrating from the railroad bed. As an aside, the current poor drainage of this section of railroad bed would need to be improved as part of the multi-use path design. In summary, Mr. Corda stated that about (75%) of the attendees were in favor of the multi-use path idea. Ms. Roosevelt stated that it is the role of the Water Board to approve land use decisions relating to the Fresh Pond Reservation. A consultant is currently looking at the railroad bed running from the entrance to Concord Avenue, under the drainage and community garden project.

**C. OPERATIONS**

**Transmission and Distribution:**

Mr. Tanner asked Mr. Gallagher what the term "Exercise Valves" meant. Mr. Gallagher replied that it was when a valve was opened and closed. Ms. Roosevelt asked Mr. Gallagher about the Main Street structural lining project. Mr. Gallagher explained that linings are made of a composite material and cured inside the pipe. A "sock" is inserted inside the main and pressurized with hot water. Once it sets, it becomes a structural liner. The resin compounds have no BPA. Ms. Roosevelt said she read a study on leeching of resin compounds into water.

Mr. Tanner asked about the status of the lead service replacement program and the current locations where the replacements were occurring. Mr. Gallagher said these were occurring in West Cambridge and went

Key Topics: Review of Fresh Pond Advisory Board Meeting,  
Eco Counter Summary

on to say that, on average, 25-30% of the houses have lead-lined services. We have mandated that all lead lined services be removed during any roadway construction work and the Water Department sponsors the removal from the main to the property line. Often, homeowners replace the lead pipes from the property line to their house, taking advantage of the cost savings of the street already being opened.

Ms. Roosevelt asked if we charge anything when we monitor new water main projects. Mr. Gallagher said we charge fees for permits and inspections. We also work with developers to perform system improvements to meet their water needs and improve water quality with such items as removing “dead ends”.

**Water Operations:**

Ms. Roosevelt inquired about the second round of Cryptosporidium monitoring. Mr. MacDonald said filters prevent it from getting into the drinking water system. “When the treatment plant was designed, it was first thought ozone would be the barrier against it,” Mr. MacDonald explained. Research indicates it is the filters which protect against it. Mr. Corda said Ultraviolet Light (UV) works well to inactivate cryptosporidium. Coliform positives were also discussed. We collect 100 samples a month to test for coliforms; there were no coliform positives reported last year. If we get a coliform positive we would have to check for E. coli and sample upstream and downstream from the original test site.

**Watershed:**

David Kaplan made a presentation summarizing the results of the Fresh Pond Reservation Census Data Collection Program. The program was first discussed before the Board as it was getting off the ground three years ago. The purpose of this program is to quantify and differentiate users of Fresh Pond Reservation. Unattended Eco Counter sensors are placed three feet off the ground and are set up at six strategically placed locations within the reservation. They track the direction of all living things taller than three feet. Manned census takers, at each eco-counter location, quantify or calibrate the sensor data. Department staff and volunteers conduct surveys of pedestrians, on and off leash dogs, bikers, children and direction of travel. The Eco Counter technology is not able to count dogs and we rely on visual surveys to quantify this data. There are two “multi” sensors located on the bike path and in front of the water treatment plant. These sensors are able to distinguish bikes from pedestrians using infrared and electromagnetic sensors. As a bike rim approaches the sensor, it triggers the electromagnetic sensor and counts a bicycle versus a person.

Sensors are downloaded weekly and checked for signs of physical damage or environmental changes and data is screened for anomalies. The running average error between sensor and manual surveys is 17% overall. Grouped events (multiple users crossing at the same time) are a possible source of Eco Counter underestimation. There have been some issues with manufacturing defects and errors, however customer support has been great and there are no costs incurred for repair or replacement of defective devices.

Sensor usage summaries can show data by the minute, hour or year and will give us a better understanding of user patterns. The data will give an idea of user distribution and provide valuable information for planning infrastructure, events and avoiding potential conflict. The data will show how the new development in the area will impact the reservation; be informative for making staffing decisions and illustrate where focus on resources should be directed.

Mr. Burruss thinks that high Reservation use could correlate between incident rates and gave the example of a documented increase in dogs and the ability to see if they “fight” more at those times. Ms. Roosevelt asked if we could put up signs requesting that people report incidents to a provided phone number.

Mr. Corda said the Ranger writes incident reports and keeps track of incidents on the Reservation. Comparing incidents against the census data could be helpful, said Mr. Kaplan. This could help with manpower during peak incident hours, said Ms. Roosevelt. Ms Roosevelt thinks that if the sensor error rates could go down, it would be nice to write something up and send it to the Council.

*General Questions from the Board:* Mr. Tanner asked about the land acquisition possibility in Lincoln and what the usage rules were. Mr. Corda said it will be conservation restriction with no development. Mr. MacDonald said we may expand Lincoln trails.

**Business:**

No comments

**Engineering Division:**

No comments

**D. ACTION ITEMS**

*April and May Water Board Meeting Dates:*

Mr. Tanner moved and Ms. Roosevelt seconded the motion to approve the April and May Water Board meeting dates. The vote was unanimous in favor of the motion.

**E. MISCELLANEOUS CORRESPONDENCE AND ITEMS OF INTEREST**

None

**F. NEW BUSINESS**

None

Mr. Tanner moved and Ms. Roosevelt seconded the motion to adjourn the meeting at 6:37 p.m. The vote was unanimous in favor of the motion.

**G. NEXT MEETING DATES /TOPICS**

- February 11, 2015 – Approved/Fluoridation Panel Discussion, Ammonia System Improvements
- March 11, 2015 – Approved/ Climate Protection Vulnerability Assessment
- April 8, 2015- Approved/ Security Vulnerability Assessment
- May 13, 2015 – Approved/TBD

Minutes approved by vote of the Board.

Signed: \_\_\_\_\_  
Ann C. Roosevelt, President

Date: \_\_\_\_\_