



**Town of Arlington, Massachusetts**  
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## Tri-Community Flooding Group Minutes 04/13/2010

### Tri-Community Meeting Minutes - 4/13/2010

Tonight's meeting of the Tri-community Working Group for Flooding Issues was held from 6:00 - 7:30 pm at Arlington town Hall.

#### Attending:

Jen Armstrong	Cori Beckwith
Jacob Benner	Peter Cantanino
Rich Clarey	James Decoulos
Ken Donnelly	Stanley Dzierzeski
Elsie Fiore	Bob Fitzpatrick
Cindy Friedman	Roger Frymire
Patrick Herron	Steve Kaiser
Ernest Kirwan	Marla Marcum
Alan Maltz	Susan Maltz
Carolyn Mieth	David Mussina
Owen O'Riordan	Gustavo Pardo
Mike Rademacher	Stephen Revilak
Clarissa Rowe	Michael Santoro
Conor Shaham	Maria Simoneau
Jennifer Wright	Catherine Daly Woodbury

#### Presentation of March Storm Data

Roger Frymire presented an analysis of river and rain gauge data from the March 2010 storms. The March 14th storm produced 9.5" of rain at the Muddy River rain gauge, and a peak water level of 7.25 feet at the Alewife Brook river gauge. The Amelia Earhart dam has two river gauges: one on the tidal side, and one on the river side. During the March 14th storm, these gauges showed near-identical water levels on both sides of the Amelia Earhart dam.

Prior to the March 14th storm, the pumps at the Amelia Earhart were used to drain water from the Mystic River. Dam operators need to be judicious when draining water from the river; if the water level is dropped too much, then one runs the risk of introducing air into the pumping system, or (in the worst case) damaging the pumps. During the storm, the pumps were able to keep up with the Mystic River flow. The limiting factor was not the capacity of the pumping system. Rather, it was the rate at which water flowed down the Mystic River to the Amelia Earhart dam.

Aberjona river flows were largely responsible for sustaining high water levels in Alewife Brook.

The Ipswich River gauge has been collecting data for ~75 years. Trends in this data indicate that the size of a 100-year storm is increasing. What used to be a 100-year storm has become more like a 25-year storm.

### **Presentation of Flood Photos**

Peter Castanino presented photos of flooding in Belmont, including Blair Pond, Clay Pit Pond, Winn Brook, and Beaver Brook. Belmont has separate storm water and sewer systems. The March 14th storm caused several SSO discharges, which effectively became CSOs as SSO discharge water flowed into the storm drain system.

Steve Kaiser presented the Tri-community group with a collection of flood photos dating from the 1950's to the present-day storm. Mr. Kaiser felt that the March 14th storm was approximately the size of the 1996 storm.

The Alewife Brook flooded at several points in East Arlington. In the Thorndike Street area, the Alewife overflowed onto Route 2, causing a temporary road closure.

Stephen Revilak presented photos of Alewife Brook flooding behind Sunnyside Ave. in Arlington.

### **Open Discussions**

The presentations were followed by an open discussion period.

- Flooding has caused significant erosion to the banks of Alewife Brook. In some areas, the March 14th flood removed over a foot of Alewife Brook shoreline.
- Overland flooding was not the only source of damage; groundwater was also a significant source of basement flooding. FEMA assistance is available to homeowners whose property was damaged by overland flooding – are there forms of assistance available to victims of groundwater flooding? In older homes, basement floors are not always bonded to basement walls, making it easy for water to seep in.
- In Cambridge, flood waters came across Alewife Brook Parkway and flooded neighboring streets. This led to the loss of electric power, the loss of gas service, and significant property damage for some Cambridge residents.
- There've been steady increases in rainfall and flooding over the last few 20-year periods. There seems to be a consensus that the March 14th storm was a 50-year event.
- There've been discussions of adding a fourth pump to the Amelia Earhart dam. During the March storms, the Amelia Earhart's three pumps were able to keep up with the Mystic River flow. The problem seems to be upstream river obstructions, rather than limited pumping capacity.
- A resident of Harrison Ave., Cambridge noted that her basement flooded with approximately one foot of water. Within a short period of time, this foot of water turned into three feet of water. There was a discussion as to whether pumping along Route 16 or heightened groundwater was responsible for this sudden increase in water level.
- In Arlington, the March 14th storm affected areas that are not usually associated with flooding. There was an SSO discharge along Massachusetts Ave., and there was significant damage to the Minuteman bike path in the Mill Brook area. Mill Brook overflowed its banks, and residents of Colonial Village had to be evacuated by boat.
- There was flooding all across the commonwealth. Some felt that it would be beneficial for cities and towns to

keep records of monetary damages, while others felt that photographs were the most compelling form of documentation.

- During the March 14th event, a 25-foot section of dock broke loose and blocked the Craddock dam. While this obstruction was in place, the water level on the upstream side of the Craddock was approximately three feet higher than the water level on the downstream side. This is only one example of river obstruction. Every bridge creates some amount of obstruction to river flows.
- Several attendees felt that it we should re-examine the FEIR for Winchester's Aberjona River Flood Mitigation project. The Aberjona project is designed to reduce flooding in Winchester, but it will have the adverse effect of raising water levels in Alewife Brook. Our flooding problems are not confined to a single town, so a more regional approach is warranted.
- The USGS gauges were a valuable asset during the March storms. The gauges provide useful insight into flow patterns. In addition, some residents use the USGS gauges as early warning devices (e.g., when the Alewife Brook gauge reaches 5.25 feet, then Sunnyside Avenue residents can count on seeing water in their basements.) We should find ways to secure funding for the continued operation of USGS river gauges.
- A Belmont resident described a flood mitigation system that was designed by the Army Corps of Engineers, for the Connecticut river valley. The March storms caused little or no flooding where this system was implemented. Perhaps our area could benefit from a similar undertaking – having the Army Corps of Engineers study the problem and propose a solution. For example, the Belmont highlands might be used for floodwater storage, and possibly for fresh rainwater storage. (However, there are technical issues that could make it difficult to use Belmont highlands for this purpose.)
- Senators Jehlen and Donnelly are trying to organize a meeting of town officials affected by the March floods. This represents another effort to address flooding at a wider, regional level.
- One attendee felt that we need to address three areas: groundwater flooding, CSO discharges, and overland flooding. In many cases, changes in land use can lead to changes in flood patterns. For example, if a lowland area is filled in, then floodwater that would normally collect in that lowland area simply flows elsewhere. Filling doesn't fix floodwater problems – it merely moves them somewhere else.
- Increased rainfall was the root cause behind most of flooding events of the last 15 years. This is really a watershed issue, and any good solution needs to involve all towns in the watershed.
- More communities need to implement storm water bylaws, with an emphasis on land-use patterns. Such bylaws could, for example, mandate the use of rain barrels.
- Communities could help residents by providing information about flooding. For example, a community might publish a guide telling residents how to reduce the risk of flood damage to their homes.
- Most EPA regulations deal with water quality, but not water quantity. It's difficult to meet EPA quality regulations while addressing the practical matter of water quantity during flood events.

### **FEMA and Flood Insurance Rate Maps**

FEMA's new flood maps will take effect on June 4, 2010. FEMA and local officials will hold an informational meeting at 6:30 pm on April 26, 2010, at the Matignon High School cafeteria, 1 Matignon Road, Cambridge. This meeting will focus on the new flood insurance rate maps, and flood insurance options.

Some residents have experienced difficulty when attempting to purchase flood insurance at grandfathered rates.

