DOVER OPEN SPACE COMMITTEE
MINUTES
OCTOBER 4, 2016

Members Present: Amey Moot (Chair), Boynton Glidden, Justine Kent-Uritam, Eric Krusell, Tara Nolan, Paul Wood and Tim Holiner. **Non-Voting Liaisons:** Candace McCann and Jerry Arnold were also present. **Absent:** Henry Faulkner, Eric Loeffler.

The meeting, attended by close to 30 people (listed on Attachment A), opened with a presentation by John Thompson an environmental consultant and LSP with a particular expertise in hydrology. Mr. Thompson serves on the Upper Charles Conservation Land Trust and was Chairman of the Medfield State Hospital Remediation Committee. The following is a brief summary of the comprehensive comments and information provided by Mr. Thompson. He plans to provide a copy of his presentation which will be posted on the Open Space Committee website and provide a more thorough summary.

Mr. Thompson began with a discussion of regional water systems in Massachusetts both waterways and the recharge areas that replenish those systems. Typically in New England it takes 1 – 3 years for ground water levels to recover from a drought, assuming that communities are not over-pumping from its aquifers. When aquifers are being over-pumped, recovery can decades or centuries. Of particular note, he pointed out that the regional recharge season is October through April and that forests, through uptake by the trees, loose as much water as an open lake through evaporation.

The chart below depicts population density and water usage for Dover and some surrounding towns, most of which are served by municipal water. While the Dover number is based on a very small data set, it suggests that the town does not have a strong focus on conservation of this limited resource.

	Dover*	Sherborn	Medfield	Westwood	Natick	Needham
Population/Sq Mile	370	260	835	1343	2207	2351
Use Per Capita/day (gal)	74	unknown	61	56	59	67

* NB – The Dover use number comes from a very limited data set of users not on private wells.

The surficial map of the area indicates that locally we do not have a lot of available ground water, except in the area of Elm Bank. Most of Dover/s water comes from bedrock fractures. These fractures are horizontal and caused from the weight of the glacial ice sheet, or x-shaped caused by compression strength. The type of fracture drives both well depth and recharge. Further the glacial till in Dover is "poorly sorted" and does not allow for significant or efficient recharge. Notably the area around Powisset Farm is a good recharge region. Gerry Clarke commented that there are some places in town where wells have nitrate levels over 5 ppm, this is presumed to have been from domesticated animals in the past.

Mr. Thompson spent considerable time reviewing the concept of safe yield and how various means of withdrawing water from a region can limit or prevent recharge by causing a cone of depression which can reverse the flow of that would otherwise replenish a river. It is imperative to monitor the impact of water withdrawal practices on the recharge of the overall water system. In addition, Mr/ Thompson noted that rooftops concentrate water and generally then send it someplace where it is no longer

available to recharge the system. He noted that when water is caught in detention basins near homes or developments, it simply breeds mosquitos and evaporates and the resource is largely lost to the recharge loop.

In Dover a private well would typically have to go 300 feet in order to go below the fractures and provide a "bucket" for water supply. The town has about 2,000 households over 1,300 of which rely on private wells and a water system that is insufficiently understood. He said it is "imperative" that someone is "minding the store" to ensure that private wells meet safe yield performance metrics. Specifically he recommended that Dover install monitoring wells in order to monitor withdrawals and in impact on the aquifer. The Town would greatly benefit from tracking basic statistics in a manageable database. These data should include: well depth, size and drill test results, as well as pumping volumes tracked at time of sale for any property. In addition, tracking where population density is, its withdrawal data and noting where that may lead to depleting an aquifer would also be vital information given the years it takes for a water supply to replenish.

There was discussion about the impact of watering lawns. Mr. Thompson noted that any time over two hours per week is of no benefit to the plants but typically households have systems set to water far longer than that. Also overuse of pesticides and herbicides have a deleterious effect on water. It was further noted that while Colonial Water has regulations about use but it does not enforce water bans.

After the presentation and discussion, the public left the meeting and attending OSC members addressed the following administrative items:

1. Upon a motion made and seconded, the Minutes of June 7, 2016 were approved by all members present.
2. The next OSC will be November 1st at 7:30 PM.
3. The next public walk will be lead by Amey through Powisset on October 8th

Amey adjourned the meeting at 9:04 PM.

Respectfully Submitted,
Tara L. Nolan

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ATTACHMENT A
OSC ATTENDANCE PUBLIC MEETING

VISITORS:
Philip Terrell
Kate Cannie
Tom Trainor
Betsy Ryan
Brian O'Connor
Richard White
Catherine White
Matthew Schmid
Carol Lisbon
Tom Johnson
Greg Kahoun
Gerry Clarke
Janit Greenwood
Barry Golden
Jim Repetti
Janet Comiskey-Giannini
Richard Eeels
James Stuart

OSC MEMBERS:
Tara Nolan
Amey Moot
Justine Kent-Uritam
Boynton Glidden
Eric Krusell
Paul Wood
Tim Holiner

LIAISONS:
Candace McCann – BOS
Jerry Arnold – LRP