

Agenda

- Welcome
- Brief (!) Business Meeting
 - > Adoption of Minutes
 - > Adoption of Treasurer's Report
 - > Election of Directors & Officers
- The Main Event: Jane Cairns, 'The Witches of Foster's Pond'
- Updates on the Pond and the Dam
- Looking Ahead to 2017
- New Business



Welcome to the Annual Meeting of the Foster's Pond Corporation.

I'm Steve Cotton, President of the Corporation.

Whether you are a long-time member or a newcomer to the Foster's Pond Community, I am delighted to welcome you this evening.

I hope you got a chance to view the introductory slideshow that was looping through the projector before we started. I just want to stress that we depend on our volunteers, and on your financial support, to protect Foster's Pond and maintain our historic dam. If you have not filled out or taken a donation form, please do so, or go on-line to make your tax-deductible contribution at our web site, www.fosterspond.org. And if you're not on our e-mail list, please give us your e-mail address so that I can send you periodic updates on what's happening around the Pond. Your e-mail address will not be used for any other purpose.

We have a few organizational obligations to fulfill, but this will be a very short business meeting so that we can get right to our speaker tonight.

After the presentation, I'll bring you up to date on the dam and the Pond. And we'll also have our usual open forum for new businesses, particularly recent wildlife sightings around the Pond.

Approval of Minutes

- March 29, 2016 (Annual Meeting)
- August 20, 2016 (Summer Meeting)



We posted minutes of our last annual meeting and our summer picnic meeting on-line so that they would not have to be read. May I have motion to approve these minutes?

Treasurer's Report



Foster's Pond Corporation
www.fosterspond.org
% David Brown, Treasurer
31 Glenwood Road
Andover, Ma 01810-6250

TREASURER'S REPORT

For Fiscal Year ended December 31, 2015

<u>Assets</u>	
Checking Account balance 12/31/2015	\$2,111.35
Money Market Account balance 12/31/2015	41,382.84
Accounts receivable: NFG contributions	0.00
Undeposited Funds	0.00
Total Assets 12/31/2015	\$43,494.19
Total Assets 12/31/2014	\$69,099.91
Net change in Assets for year ending 12/31/2015	(\$25,605.72)
<u>Liabilities</u>	
Prepaid dues & contributions for 2016	\$0.00
Accounts Payable: Aquatic Control Technology	0.00
Net income for year ending 12/31/2015	(\$23,230.72)
<u>Income</u>	
Dues Income	\$3,065.00
5 Individual memberships	
31 Family memberships	
17 Sustaining memberships	
Contributions	\$11,810.00
54 Individuals & families	
Grants	
Boston Foundation (for dam & pond maintenance)	10,000.00
Interest Income	112.54
Total Income	\$24,987.54
<u>Expenses</u>	
Dam Maintenance	\$4,206.10
Pond Maintenance	43,192.45
General Administration	819.71
Total Expenses	\$48,218.26
Net Income	(\$23,230.72)

Respectfully Submitted,

David Brown
Treasurer
Report revised March 8, 2016



This report was also posted on-line, and, as promised, our Treasurer is not going to read it. But I will ask David whether you have an update on this year's contributions.

I am going to ask for a motion to accept the treasurer's report for 2016.

Election of Directors

- Nominated for re-election for two-year terms ending December 31, 2018:
 - ▶ David Adilman
 - ▶ Steve Ellis
 - ▶ Dorothy Tyler



Under the by-laws, there are five directors in addition to the four officers. The directors are elected for staggered terms of two years.

I want to thank all of our directors. These include two people whose terms are not expiring:

Amy Janovsky
Martha Russell

Nominated for re-election for two-year terms ending December 31, 2018 are

David Adilman
Steve Ellis
Dorothy Tyler

Are there any other nominations? May I have a motion to re-elect these directors?

Election of Officers

- Nominated for re-election for 2017:
 - ▶ President: Steve Cotton
 - ▶ Vice-President: Marty Rabinowitz
 - ▶ Treasurer: Dave Brown
 - ▶ Secretary: Janet Kenney



Under the by-laws, officers are elected for a term of one year.

The following officers have been nominated for re-election :

President: Steve Cotton
Vice-President: Marty Rabinowitz
Treasurer: Dave Brown
Secretary: Janet Kenney

Again, I want to thank my fellow officers for the work they do, without which the FPC could not function.

Are there any other nominations? If not, may I have a motion to re-elect these officers?

The Main Event: Jane Cairns, 'The Witches of Foster's Pond'



Many of you know Jane Cairns, who has done so much for the Andover Historical Society. A former chair of the Society's board, she continues to serve as a board member.

Jane gave a fascinating presentation at our annual meeting in 2013, about the colonial-era Fosters of Andover, starting with Andrew.

And then last fall she gave a very popular talk, at the Goldsmith Woodlands, on the Witches of Andover.

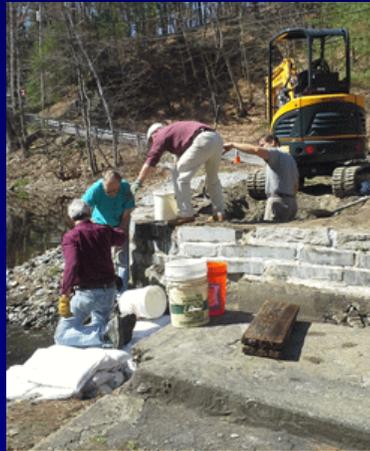
I am so happy that Jane agreed to expand that talk, focusing on Foster's Pond, for this year's annual FPC meeting.

So without further ado, I give you Jane Cairns.

March, 2010: Why Maintaining the Dam Matters



I included these pictures to remind everyone why maintaining the dam is so important, and just how much stress it can come under. The last significant flooding event was in 2010. Torrential rains raised the water level a couple of feet in just 24 hours. Those are a pair of 42-inch culverts under Rattlesnake Hill Road, and they were barely able to handle the outflow



April 20 & May 3, 2015



We've had a recurrent, small leak in the westerly side of the dam, resulting in sinkholes which have opened up early each spring over a number of years now. In 2015, volunteers used a special clay to seal the channel, and that mostly worked, though we had another small sinkhole to fill in 2016.

Dam Passes Its Safety Inspection December 6, 2016

-- FOSTER'S POND DAM --
PHASE I
INSPECTION / EVALUATION REPORT



Dam Name: Foster's Pond Dam
NID ID#: MA00153
Owner: Foster's Pond Corporation
Town: Andover
Consultant: GEI Consultants, Inc.
Date of Inspection: December 6, 2016



Under state law, the FPC is required to have a civil engineer conduct a comprehensive safety inspection of our dam every five years.

2016 was one of those years, and we brought back the world-class firm that we have used for a decade now, since we first started serious work to repair and maintain the dam.

The result of that inspection was a safety rating of "satisfactory." That may sound a little unremarkable, but that's the second-highest mark a dam can earn and, truly, the highest we could hope to get for a structure that was designed and built in the 1850's.

The engineer found no major deficiencies. He concluded that the seepage and occasional development of a sinkhole on the westerly side of the dam constitute a minor deficiency. And his key recommendation was basically to keep up our "conscientious" monitoring and maintenance of the dam.

So this is a really great result, and a badge of accomplishment for all of the volunteers who have pitched in to keep the dam in good condition.

2015:

Whole-Lake Treatment to Control Fanwort



**Prior treatments in 2005
and 2011 kept this
invader from killing the
Pond.**



In 2015, for the first time since 2011, we treated the entire Pond, including Dug Pond, for fanwort. Before we started managing the Pond, fanwort had become the dominant plant, covering more than half the open water.

2015 'Sonar' Treatment

- Foster's Pond has responded well to Sonar treatment
 - ▶ Most ponds need whole-lake treatments every 2-3 years to control fanwort; we've treated whole Pond in 2005, 2011, and 2015, 18 acres in 2007
 - ▶ We've had no adverse effects to fish or wildlife, and native plant diversity has increased
- Fanwort remained well-controlled in 2016, covering just 0.2% of the Pond



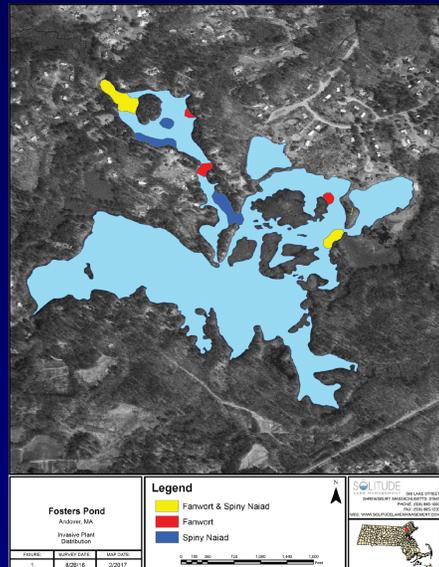
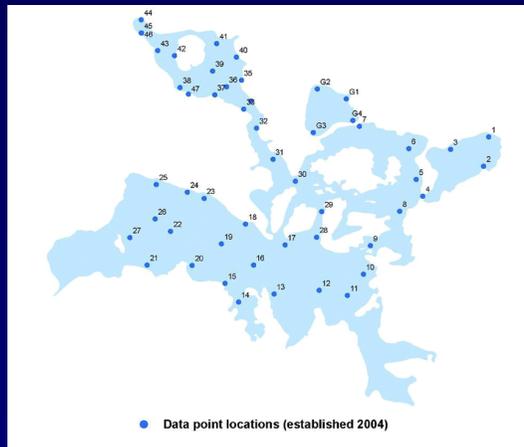
We've had very favorable results with Sonar, which is good since there really is no alternative. Sonar is the brand name of a slow-acting herbicide approved by the State for use in drinking water reservoirs and other water bodies.

The results have been confirmed by our thorough vegetation surveys, which we conduct every year or two. Last year's survey found almost no fanwort - just a few sprigs here and there.

We have been fortunate in keeping the fanwort at bay even though we treat less frequently than other ponds that have this infestation. And we have had good results using lower concentrations than regulations allow.

So this year, which will be the third year after our 2015 treatment, we will not be treating for fanwort.

2016 Vegetation Survey



As I mentioned, last year we conducted another systematic vegetation survey of the Pond. That was our ninth survey.

To conduct a survey, our biologist rakes up samples at 50 different locations around the Pond, recording species and densities. These data points were established in our first survey in 2004, and are logged in a GPS system, so we have a lot of comparative data over the last decade.

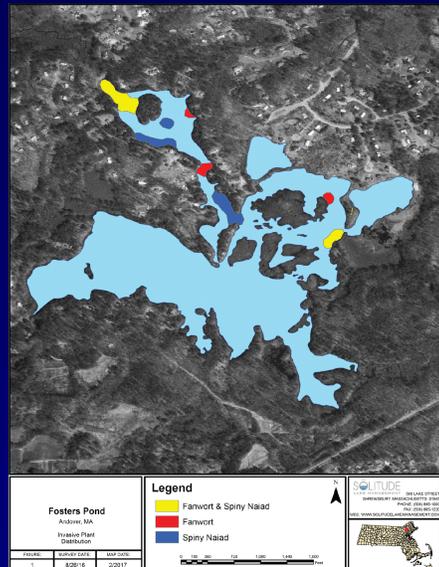
The surveys let us track the health of the Pond, see the effects of our treatments, and get a jump on any new problem we see developing.

Managing invasives is an on-going challenge. The 2016 survey detected the re-emergence of a different invasive, spiny naiad.

2016 Vegetation Survey



Spiny naiad



Spiny (or European) Naiad is a hardy weed with narrow 1-inch long lime-green leaves that are brittle and curved. Spiny naiad has the potential to grow densely in shallow areas and can create monoculture stands that outcompete native species. It spreads by dropping millions of seeds.

We first detected spiny naiad in Foster's Pond in 2009. It was growing in just two locations, and we treated both of those places in 2010. We didn't see it again until 2014. In 2015, our fanwort treatment had the secondary benefit of wiping out much of the spiny naiad, as well. Our post-treatment survey in 2015 found no spiny naiad.

But seeds sprouted in 2016, and last year's survey found enough of it to warrant a treatment recommendation. So that is something that we will address this year.

Algae



Blue-green algae can cause gastro-intestinal problems in kids, and can be fatal to pets.

>70,000 cells/ml is considered unhealthy.



This summer we will once again monitor for algae. Like a lot of other ponds in Massachusetts, we've been made aware of the problem of blue-green algae only in recent years. That ugly picture on the left is a bloom I photographed from my dock in the Main Pond in 2011. That's what can happen when we don't treat for algae. That's the worst I've seen in 42 years on the Pond.

We treated the pond in 2013 and 2015. And we treated the pond twice last year.

2016:

Two algae treatments (July & September)



**Blue-green
algae, Mill
Reservoir,
August 31**



Algae treatment #2, September 1



2016 was a bad year for algae. With on-going drought conditions - our area was the epicenter of what experts labelled a severe drought - the pond had no flushing action, and the algae flourished.

We carefully monitored the conditions, and we treated it on July 21 and September 1.

The photo on the left was taken through a microscope at the Andover Water Treatment plant, where we brought some of the samples for examination. There are two strains of blue-green algae in that sample. We treated the Pond the following day, September 1.

We use copper sulfate, which is the most common algae treatment. We operate under strict rules approved by the Town and the State. And it works. Algae counts were way down, within healthful limits, after both treatments.

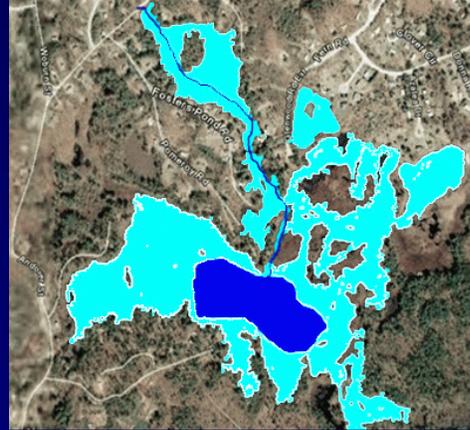
We plan to treat this year if there are high algae counts, and we hope to have volunteers back out to monitor the Pond supplementing the work of our consultant. As to whether we'll need to treat, that's anyone's guess. It all depends on heat and precipitation.

One thing to keep in mind, however, is that copper sulfate just kills the algae it comes in contact with. It does not prevent further blooms.

Algae and Phosphorous

Algae need phosphorous to grow

- Where's the phosphorous coming from?
- Should we just treat the algae, or try to reduce the phosphorous?



So one issue that we need to consider is whether we should just continue to treat the algae with copper sulfate on an as-needed basis, or try to reduce the phosphorous levels in the Pond.

Some phosphorous may come in from the drainage area which feeds into the Pond. That includes run-off from Frye's Brook, the major water source of the Pond, but also phosphates introduced onto lawns and gardens, or put into septic systems, in that 1.5 square mile area. So especially if you live close to the Pond, and are on a septic system, please remember to use phosphate-free products for your dishes and your laundry. There is information about specific products on our web site.

It's also possible that most of the phosphorous may be coming from the bottom sediment. This composite picture, which you saw in the introduction before the meeting, shows the approximate location of the original 50-acre Pond, in dark blue, and the 120-acre water body we have today. Today's sediments were yesterday's marshlands. The rich bottom layers of the expanded pond, stirred up by fish, animals, currents, and boaters - can provide nutrients - most particularly, phosphorous - for the growth of algae.

If we could reduce phosphorous in the water column, we could control algae. There are phosphorous-reduction alternatives available - for a price - but their effectiveness depends on a number of factors, including where the phosphorous is coming from. We're in the process of finalizing plans to secure better data on whether the phosphorous derives primarily from sediments or from run-off. Depending on what we find, we will begin to develop a management plan to reduce phosphorous in the Pond.

Please Volunteer

- Water quality observations
- Help with the 13th Annual Summer Picnic
 - ▶ Host the event
 - ▶ Assist with set-up

If you are in a position to volunteer with water quality observations, please make sure we have your name and e-mail address. A successful algae treatment depends on timing - seeing if the Pond is getting murkier and dispatching water samples to the lab for examination before a bloom gets out of hand. We rely on a combination of our consultant and local volunteers to canoe or kayak to specific locations, every week or so, as the weather warms. So let me know if you can do this.

We also have a pond-wide picnic each year, to which the public is invited. All but one of the last 12 picnics have been held at a different location around the pond, and it's a great chance to experience the Pond from a new perspective. We don't have a location for this year's picnic, so if you'd like to offer your property, please let me know. You'll get to pick a date that works for you. And if you are not hosting, please let me know if you can volunteer to help.

Weed and Algae Control

- Spot treatment for spiny naiad
 - ▶ Same contact herbicide (diquat) we used successfully in 2010
 - ▶ Applied only in specific areas where spiny naiad is observed
 - ▶ Water within 200 feet of those areas should not be used for irrigation or consumed by pets for 5 days.
- Algae
 - ▶ Treatment if a blue-green bloom appears imminent
 - ▶ Collect data on phosphorous sources



We plan to treat the spiny naiad, which was found in about 5 acres of the Pond. As you could see from the map, treatment likely would affect only people residing along the Channel and the Outlet cove. Those sections of the Pond would be closed for the treatment day for swimming and boating. After that, the only cautions pertain to irrigation and letting your pet drink from the pond in the vicinity of the treated areas..

On algae, will be prepared to treat the pond. And for the longer term, we are going to be developing much more information than we now have on where the phosphorous in the Pond is coming from. This will be an examination of the entire watershed, and seeing if we can develop a plan for trying to limit inputs that contribute to our algae problem.