

QUINEBAUG VALLEY ENGINEERS



The Zagray Quarterly

SEPTEMBER 2016

PRESIDENT'S NOTES – George Lehr

For those that have not attended monthly meetings or events at the farm and are not otherwise aware of recent events, I'm providing the following notification:

A lawsuit was filed in New London Superior Court on July 7, 2016. It was brought by the plaintiff - Colchester Historical Society (CHS), against defendants: Connecticut Attorney General George Jepsen, The QVEA and The Colchester Fish & Game Association (CF&G). In a nutshell, CHS seeks to transfer ownership of the Zagray Farm to the QVEA as a means of ensuring fulfillment of Harry Zagray's charitable intent; that the farm essentially becomes a museum. The efforts toward that end so far have been frustrated by ongoing disputes between the tenants (the QVEA and the CF&G), as to shared use of the farm. CHS lacks the authority to resolve the ongoing disputes and considers that the only feasible option is to transfer ownership of the farm to the QVEA, with restrictions and requirements necessary to fulfill Harry Zagray's charitable intent.

I applaud the action taken by CHS and anxiously await the outcome of the lawsuit. As owner, the QVEA will be better able to move forward with further development of the Zagray farm museum.

In other news, the Fairbanks Morse engine was moved to its foundation in the Stationary Engine Building on July 2, and building erection began the same day. Progress on the building completion since then has been remarkable.

We had a very successful July show, despite the hot weather. We also received some nice donations including an early 1900's S. A. Woods Machine Company planing and matching machine (a large machine) and a Fuller & Johnson 32 volt D.C. generator that was previously used for lighting in a chicken coop.

See you at the October show.

Note from the Editor: To the **165** members who still receive newsletters via U.S. Postal Service, you "**could**" see all of the pictures in **color** if you received it by email. It would have cost an additional \$115, to get this 10-page newsletter printed in color. So, please send me your email address!

FROM THE DESK OF THE TREASURER – Art Chester

Annual dues for 2017 will remain at \$20.00. Make your check payable to QVEA and mail it to 180 South Plumb Road, Middletown, CT 06457. There's no need to fill out a new membership form, but if you have changes to your address, phone number or email, please include the changes. A self-addressed, stamped envelope is also welcome. Any and all donations beyond the dues are tax deductible and very much needed and appreciated!

If you have an email address, please email Dianne Tewksbury at tewksbdk@outlook.com to change from snail mail! That will save our printing-sorting-folding-mailing crew some labor, and save your club a **lot** of money, as well as being environmentally 'green'.

For those of you who contribute to the United Way campaign, QVEA is now listed as a charitable organization allowing you to direct your donation to us for the support and expansion of the Zagray Farm Museum. The Pfizer Foundation also has a volunteer program that provides QVEA with substantial donations each year, based on the volunteer work of members who work or are retired from Pfizer.

Stan Barnes completed an internal audit of the club's books from 2012 to present and found no discrepancies. I have added bank statements to the monthly financial packets given to the club's officers and available to anyone on request.

Stationary Engine Building

The building is now at a point referred to in the industry as "substantially complete" needing doors, collar ties, cupola completion, front soffit, Fairbanks air intake and a few punch list items. We expect to complete most of them before the Fall show, and perhaps pour the three remaining concrete pads in front of the doors. The building looks AWESOME!! We had a great team for the entire project, thanks go to all who helped out. Special thanks to the "lunch crew" Dianne, Kathryn, and Joan for the burgers and dogs, and to Bob Chester for donating many trips to Subway. The weather, however, simply refused to co-operate and gave us hot and humid conditions all summer. I believe there is a little space in this building for members' stationary power, so if you have an operating engine and wish to display it let us know. A word to the wise, I don't think the space will last long.

Power Project

All the paperwork has been filed to the satisfaction of Eversource and our pole is being scheduled. It took 11 months and probably \$6,000 to secure the easements, but it's done. We will have power to the engine building this fall!

We plan to have Comcast install to the building as well, as there is a substantial discount program at the moment that we don't want to miss, and at some point we will want to install IP cameras for security. We have contracted with a local electrician to install the panel and connect to the meter. 400 amp single phase power should handle all of our needs for the foreseeable future.

Atlas Imperial project

The fuel system parts sent out to Seattle have returned completed, the cylinders are honed and loaded with the pistons, and the heads are done as well. Dan has given us a 15-page 'engine build' document. Instructions on scrapping and lapping babbitt bearings, how to set the rod boxes, how to set the intermediate housing, what to look for on the cam profiles, how to set the cylinders and on to starting. Very helpful, and that along with our collective engine knowledge will make the project happen. The plan is to clean the base before cold weather, and then work on it weekends. It should be back at the farm in the spring.

Happening at the Farm!

The focus has been primarily on the Engine Building, a huge task nearing completion now. George moved the Fairbanks on July 2 while the building crew was putting up the walls. Ethan organized moving the alternator into position before the roof was completed and the crane also lifted four 48-foot beams onto the posts to form the frame of the structure. The cherry picker was in use constantly throughout the entire project. It has made nearly every task on this building much easier, and in many cases, possible. We would have needed to rent one, as the building is 19 feet to the peak. This building has let us refine what we need in terms of building materials so that when we construct the sister to the engine building we'll be even better prepared.

Work is ongoing on several pieces of equipment around the farm as well. The Dynahoe got a new steering cylinder that should end problems in that area, I saw work on a D4 I think out front, the repairs we made to the sawmill sawdust conveyer works perfectly and the garden is producing tomatoes.

We are starting to formulate plans for a pavilion and food concession, probably 36' by 48 feet, located where the Fairbanks sat, with construction next summer/fall. The ultimate goal here is to centrally locate the concessions, remove the food trailer from out front, and provide for a better designed QVEA food concession. Picnic tables under the roof will remove the need to erect tents for each show, tents that have reached end of life. This will be an easier project as we intend to clear span the structure with a truss roof. We will need the crane to set the beams and the trusses, so we need to keep that 80D for lifting.

Along with that, we will move our commercial vendors to the area between the play area and the Zagray tractor so that we can provide adequate power, particularly to the ice cream vendor which needs 50 amp power.

Even though we received a substantial number of logs, we are still on the lookout for more. The old adage of get while the getting is good comes to mind. 16'6" pine logs that are 20 inch diameter or more on the small end will make good rafters. 12'6" logs of similar size will be used for 2X4's and siding. We have received enough for this building, but having extra material in stock would be nice.

CHS – QVEA – CF&G

Most of you have probably heard, and President George will touch on this as well, but the CHS has decided that it does not wish to continue as landlord and caretaker of the charitable intent of the Zagray endowment. We have been in discussions with CHS for several months with the goal to transfer the property in its entirety along with the endowment (subject to

some restrictions) to QVEA. QVEA is positioned to receive the property, as we are a 501C3 and have been performing nearly 100 percent of the maintenance on the property since the commencement of our lease. CHS has been in contact with the attorney general's office and have their approval for the transfer. CHS has filed (in the form of a complaint) in Superior Court to make this transfer possible. We should see progress on this over the winter, but I hope it is an end to this dispute and we can find common ground with the CF&G to move forward without a lengthy court fight.

WANTED!!!

A rock crusher to complement our screening plant!!!

MODIFYING AN ANTIQUE MACHINE -- Dave McClary

The circa 1883 Boynton and Plummer traverse shaper in the machine shop that is operated by hand has had an ongoing problem with the stepper mechanism. This is the function that progressively moves the ram across a piece being machined held in a fixed vise. A reciprocating rod swings a lever back and forth as the hand wheel crank is turned. The lever is free to turn on the stepper shaft but mounts a pawl that turns a small gear-like piece with square teeth that is keyed to the stepper shaft. The original pawl could be flipped over a small angle to engage this "gear" and cause the stepper shaft to turn in either direction and thus the stepping action. The pawl was held in either of two positions or a neutral position by a 1/8th inch spring loaded bearing ball riding in small spherical indentations on the pawl. A combination of some wear on the pawl tips, "gear" teeth and indentations made for inconsistent or no stepping action. Adjustments to the indentations proved unsuccessful. Referring to a book titled "1800 Mechanical Movements, Devices and Appliances" by Gardner D, Hiscox provided inspiration to make a new pawl that would be held in position by very reliable gravity instead of a ball and detent. It would be flipped over to reverse stepping direction similar to the original and the spring loaded ball and a detent would be used to hold the pawl in a neutral position. The pawl is made of 3/8th inch thick steel and is heavy enough to hold it against the "gear". The difficulty in shaping the pawl was in creating a tip configuration that would engage the "gear teeth but permit it to ride over the teeth in the



opposite direction. The "gear" teeth are square in shape. During a trial run, the stepper shaft was too free to turn and kept turning back as the lever swung back. That may need some manual assistance but this new pawl seems to be the right solution. Also, not shown in the picture below is a hand crank that should bind on a tapered shaft. The combination of pieces on the stepper shaft does not permit tightening the hand crank sufficiently to bind it on the shaft. Some machining of parts seems to be in order.

SATURDAY, JULY 2, 2016
IT'S MOVING DAY!!



After much discussion...



...several club members watched as George Jarvis operated his 80D to lift and move the 24-ton Fairbanks Morse engine to its permanent home in the new Stationary Engine building.



The original plan was to lift the engine, swing it towards the new building and put it down again before moving the 80D closer to the building.



But, with George's many years of experience doing this type of work with his 80D, he could tell that he could "walk" the 80D forward while leaving the engine in the air. This made the job much easier.

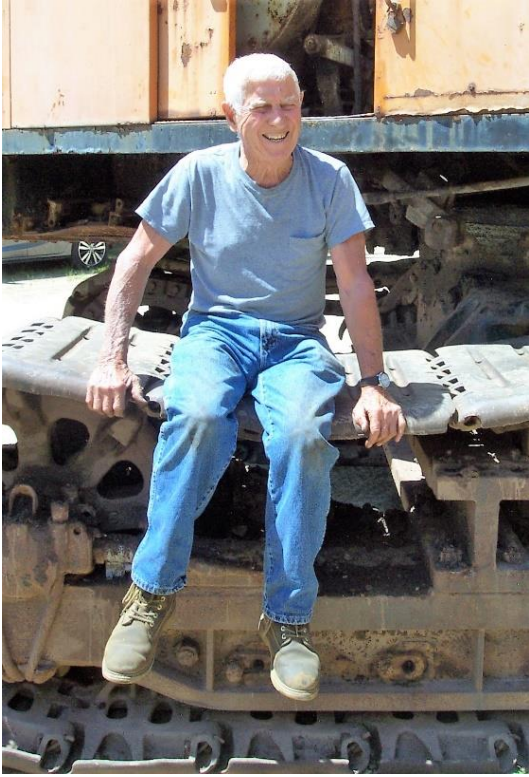




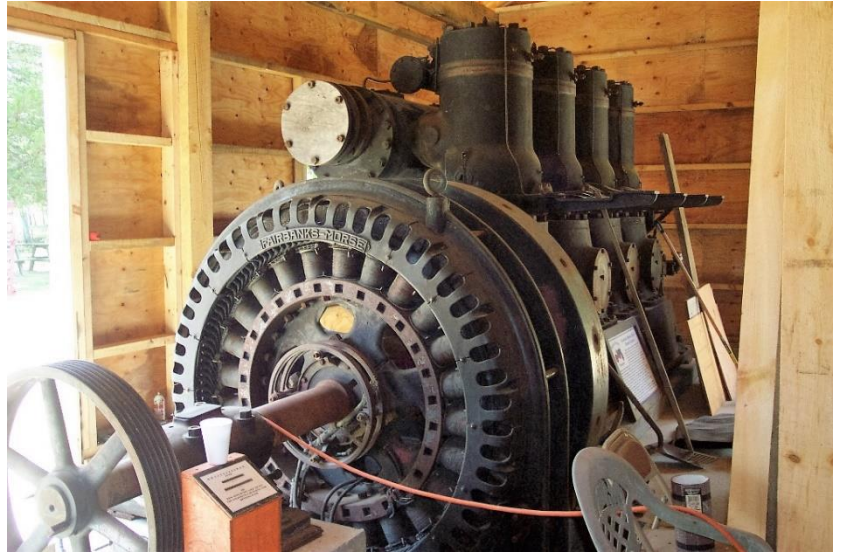
Taking a break (from left) Ethan Bailey, George Lehr, Ned Tewksbury, Pete Bucci



At first, they lowered the engine down onto wooden blocks. Then they had to work very meticulously to gradually lower it down so that the bolts secured in the cement platform would line up “exactly” with holes in the bottom of the engine’s base. It took a while but with Ed Bezanson’s watchful eye and several other pairs of eyes constantly checking everything, they got the job done!



WHEW!!! George was really, really happy the job got done successfully!



Now, with the building nearly complete, the Fairbanks Morse engine is finally protected from the weather and soon will be operational for all to see during the shows.



Project Manager, Art Chester



Dave Chester utilizing the apple picker which came in very handy as a manlift



George Lehr, Dave Chester, Ethan Bailey, and Sean Mason (not shown)



John Gibson helping Dave on a very hot day



Ethan Bailey, Connor Bishop, George Lehr and Curt Munson



Dianne Tewksbury, Kathryn Chester and Joan Chain tried to keep the workers fed and Ned Tewksbury took time out from the building to lug the grill to the farm and helped transfer food and everything else back and forth with his golf cart.

Dianne Tewksbury
QVEA Secretary & Editor
90 Park Road
Colchester, CT 06415

APPLICATION FOR MEMBERSHIP

QUINEBAUG VALLEY ENGINEERS ASSOCIATION, INC. (QVEA)



NAME _____

STREET _____

CITY _____

STATE/ZIP _____

PHONE _____

E-MAIL _____

Dues are \$20.00 per person for one year, payable with application.
Dues include liability insurance at the farm.

RETURN TO: QVEA, 180 SOUTH PLUMB RD, MIDDLETOWN, CT 06457