

# QUINEBAUG VALLEY ENGINEERS



## The Zagray Quarterly

10 March 2017

### PRESIDENT'S NOTES

Progress has been made on transferring ownership of the farm to the QVEA; see Art's update below.

During budget discussions at our last club meeting Feb. 28th, Dave Chester mentioned that he is moving from being Chairman for the Equipment Committee to Chairman for the Sawmill Committee. Connor Bishop and Ethan Bailey have agreed to be Co-Chairmen for the Equipment Committee. As a result of this decision, later in this newsletter, both Connor and Ethan gave us updates on the many items they've been currently working on.

A few donations have come to the farm and the shingle mill donated by the state is waiting to be retrieved. I'm especially grateful for the considerable cash donations and the loan made by some very devoted QVEA members to support the buyout of CF&G's lease.

The Mudslinger picnic at the farm is less than a month away (Saturday, April 8<sup>th</sup>). Hope to see you there.

### FROM THE DESK OF THE TREASURER – Art Chester

It's that time of year again! 2017 dues will remain at \$20.00 per year. 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 stamped, self-addressed 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](mailto: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.

## Stationary Engine Building

The weather was so nice the other day that my truck drove itself to the farm. After soaking up the sunshine for a bit, I started looking at the electrical portion of the project. We had purchased period looking hanging pendant interior lights and Edison style LED bulbs last fall, and stub-ups were placed in the concrete during construction, so there is not a lot of work needed. I am fabricating the conduit pieces needed to go to the outlet locations, and we have picked up the remaining parts needed. The only problem is that the building has filled up with new donations! Once the weather really improves, we will be pouring the concrete pads in front of the doors, some exterior lighting, and completing the air intake and exhaust for the Fairbanks.

## Atlas Imperial Project

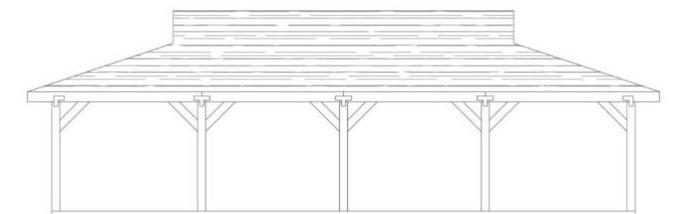
The crankshaft, rod boxes, center-frame, cylinders and pistons are installed in the engine, as well as some of the peripheral parts. We do not have enough compression shims to step the pistons up to the specified height. There seems to be some discrepancy between what the manual says and what Dan has seen in the field, so I asked him to look into it, as well as sending some of his spare shims. The manual says a height of 31/32 from top of piston to top of cylinder. Dan said the 464 engine they set up this way was very low on compression and they had to install additional shims to get it to run properly, a task that will consume several hours. I'm running in to some other interesting issues as well -- the 1/2 bolts used in the engine are actually 12 pitch. This explains why some of the bolts are miss-matched lengths -- you have to use what you have. But the cylinders shipped from Seattle are from a newer engine and are 1/2 13 SAE pitch. So I have to watch what bolt I use in every casting. Someday (after I'm long gone) some Zagray Farm Museum engine guy making repairs on the engine will be perplexed as to why the bolts are different in the same engine! The original cylinders were relieved to accommodate one of the dustless components, the cam follower box. Since we installed different cylinders from a standard marine engine I'll need to make some modifications to the cam follower box to compensate. Karl has been busy providing me with the needed machine work, and working with Ed on leather seals for the 4 1/2 inch crankshaft.

## Saw Mill

Still wanted – Logs for the saw mill. Even though we received a substantial number of logs, we are still on the lookout for more. 16'6" pine logs in particular 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 a good supply, but having extra material in stock would be nice.

## Pavilion Building

We have had in mind to build a 36' X 48' open pavilion with a 24' X 12' food concession located in the rear center section. The pavilion will be located where the Fairbanks sat for the last dozen years. Construction will be a conventional concrete foundation and slab, 8 X 8 pine post and beams, and a truss roof. We are



FRONT ELEVATION

talking with Ct Post and Beam to assist us (they are at our shows, set up near the pond). We should have room for 16 to 18 tables as well as a brand new facility to serve breakfast from. It will also give us a venue for other gatherings, and perhaps rentals. It will also open up space out front for handicap parking, remove the ugly existing food trailer, and eliminate the need for tenting the seating area.

### **CHS – QVEA – CF&G**

The CF&G and QVEA have reached a tentative agreement to avoid another costly court battle. It involves QVEA buying out the lease for \$150,000 from the CF&G after the property and endowment is transferred to QVEA by CHS. We are close to signatures on the deal, thus finally ending a 17 year old problem. We have financing in place with a 10 year, \$100,000 loan, but welcome donations to help retire the loan early. We have asked the court to schedule a hearing on the CHS complaint and approve the plan. Then we'll need to have a typical real estate closing to transfer the property. Stay Tuned! We are going to get there!

### **WANTED!!!**

**A SMALL rock crusher, preferably flat belt driven, to complement our screening plant!!!**

### **Equipment Update**

#### **Connor Bishop**

Despite the cold weather, I've been able to keep busy on a couple farm projects. Our Bucyrus-Erie 15B is getting some well-deserved attention, since it is one of the most often used shovels during our shows. Joe Turco pointed out to me severe wear in the bushings that are in the sheaves that guide the inhaul cable. After disassembly and inspection, all three bushings needed replacement, and two shafts were scored and needed repair. Karl Hansen volunteered to repair the scored shafts and I ordered new bushings, machined them to size, cut grease grooves, and pressed them into the sheaves. The cable guides on the padlock sheave were also worn through, so I welded in new material and ground them smooth. Once the shafts are returned, I will be able to put the machine back together and hopefully have it functional for the spring show. Also, the motor got a well-needed oil and fuel filter, along with an upcoming oil change.



In my personal shop, I have the Miller welder-generator that I volunteered to rebuild. The Onan P216 motor had thrown a rod and was running on one cylinder. It also had severely worn valves and seats. The valve seats were cut and lapped, cylinders honed, and galled aluminum from the bad connecting rod removed off the crank journal. New and new-used parts have been purchased and installed, currently the motor needs the heads, intake, carb, and sheet metal replaced; then it can be re-installed on the welder unit and tested. It should be ready for use on the service truck this spring.

We have also all noticed that the Allis HD11 is in bad need of a clutch. Before that job is delved into, I wanted to make sure we had a functional dozer to use while the HD11 was apart. I began working on getting the International TD-14 running as a replacement. The fuel system had been taken apart, so after I had put all the filters and lines back together, Bill Williams, Austin Primus, and myself tried to start the machine with a battery to no avail, so we tried pop-starting it with the D6. It fired right off and ran great on gasoline! However, we were unable to bleed the diesel fuel system, and upon further inspection, I learned that the metering valve and delivery valves were all seized in their bores. We have an NOS injection pump at the farm, but before I use that pump I will try using the pump off of the air compressor that is in the treeline by the trailer bodies. After the motor is able to start on gas and run on diesel, the steering clutches need to be freed up and a radiator leak addressed.

A new, young member of ours, Nate Perzanoski, took the task of repacking the HD11 lift cylinders last fall and did a great job. The cylinders are now tight and leak free, and now he is using his new skill to fix the leaking steering cylinder on the International R210.

On another dozer note, last year John Gibson and I had the idea to get one of our several Caterpillar D4's running. We selected the best one and after minimal work, got it running! However, the hydraulic cylinders leaked very badly and the lower radiator tank, which is cast iron, was freeze cracked and did not hold water. We replaced the cylinders and radiator with ones from other dead machines, and now the only task that remains is to replace the steering clutches and brakes, which are in very poor shape. It is a back burner project, but the machine will hopefully be functional by the end of this year.

Ethan has been diving into work on getting our Nelson bucket loader running and functioning, and I have been tasked with making several bushings for the undercarriage and for a clutch drum. The clutch drum that drives the bucket chain will also have a new drive sprocket machined to fit it, as the current sprocket is in very bad shape and prone to failure.

**On a final note, there are several items that the farm strongly needs for donations:**

- Firstly, we need a donation of a better lathe, most importantly with a good set of tooling! Our current set of tooling is very mismatched and most is unusable. A lathe that is smoother and quieter with a variety of chucks (3 and 4 jaw), collet closer, faceplate and drive dogs, steady rests, tailstock tooling, cutters, etc. would be a big help and allow some novice machinists at the farm progress their skills.
- Also, any other machine tooling for a vertical milling machine would be appreciated – we have the Bridgeport that was purchased last year with a small amount of tooling, but more will always be needed (end mills, flycutters, drills, collets, parallels, rotary table, dial indicators and other measuring equipment, etc.).
- Lastly, a good pallet jack will prove to be invaluable to us, since we are starting to have more and more concrete surfaces to roll it on! Keep an eye out for possible donations of this sort, and if you happen to have any of these, consider a donation to the farm!

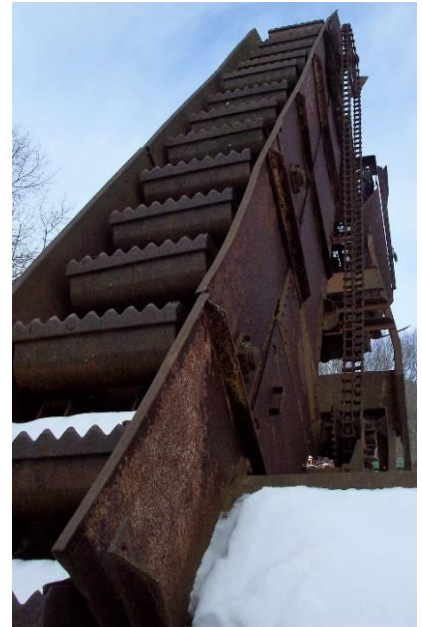
-Connor

## Equipment Update

Ethan Bailey

### 1948-1949 Nelson Rotary Screen Loader

The Nelson rotary screen loader is an ambitious project that has been sitting on the Zagray farm for many years. It is believed to be a Nelson Truck Track Model Q-10 Heavy-Duty Bucket Loader from 1948-49. It could dig from a pit, screen sand from gravel, and deliver to a truck in one operation with one operator. It could produce up to 500 yards daily.



I just bought an original sales brochure off EBay. The 4-page brochure has tons of great information on this unique piece of machinery. So I have all the basic specs and pictures needed to complete this project. Yes, it's beat up and has not aged well.

The hardest part was getting another engine for it. The engine that was in it, an LE Roi Model D226 engine, is no good. It has had years of water going down the exhaust and has even rotted the exhaust manifold to pieces. Cannot imagine what the insides looked like. Ironically, an "exact" engine was discovered on the farm late last year and it's in running condition! It



was taken into the repair shed and cleaned, oil changed, and carburetor rebuilt. It started and RUNS GREAT. Very happy with it. Winter was mild enough to start the huge task of removing the old engine and scraping off the huge amount of dirt and dried grease. Once engine was out of the loader, the 2 clutches were removed, unstuck the clutch disks, cleaned and reassembled. Conner is in the process of installing a new bushing for one clutch housing. The transfer case was removed, special flywheel removed, cleaned and installed on the good engine.

The 2 front track rollers had bad wear on the bushings and shaft from lack of grease and playing the dirt for many years. The one roller is off the machine and Connor is replacing the bushings for both front rollers, 2 new shafts, and the adjusters will be reworked and made usable again to tighten the tracks.

Overall, progress is good--everything moves or turns, except for the buckets. The buckets do move back and forth about 2 feet, but the bucket chains are stiff and rusted from sitting outside too long. I believe that this machine will at least be running and driving before the spring show. Should be a great addition to the Zagray farm show.



This 1943 Case Model S Industrial was donated to the Zagray Farm Museum in November 2016. Duke Dutka donated it to the farm museum in memory of his son, Kevin.

After an oil change and PB blaster for the valves, it runs and drives smooth. Great donation for the farm.

-Ethan

## **Waterford Case 1200 Restoration by Ed Bezanson**

This story starts when a Waterford resident, Scott Gardiner, came to the July 2012 Engine and Tractor show at the Zagray Farm Museum in Colchester, CT. Scott told our President that he and his brother, Allen, were clearing out their father's estate and had two Case Farm tractors they were interested in donating to the museum collection. As the Vice President and a Waterford resident, I was given the job to look at the tractors and see if they were worth accepting for the club. I met Allen early one morning at their father's home out on Millstone Road. The two tractors had been sitting in the woods down near the Niantic River for nearly 20 years. When I got out of my truck, I couldn't believe my eyes. Sitting about 30 feet apart were two huge prairie type farm tractors, each capable of pulling 6 plows or a 25 foot disc. They were both built in the 1970s time period and were much bigger than any tractor you would normally see on a Connecticut farm. The biggest was a Model 1470 that weighed in at around 18,000 lbs. and a slightly smaller one was a Model 1200 still fairly heavy at 14,000 lbs. The 1200 was a lot more stylish with its curved fenders and long wide hood. It is 9 feet high and 18 feet long and used a unique four wheel drive, four wheel steer drive system. The operator sits 8 feet off the ground so he has full view of the tractor operation.

The major problem our volunteers had to deal with was to get both units out of the woods, up a driveway and over a weight sensitive Amtrak bridge. We made arrangements for a large detach trailer from Kahn Tractor to pick them up out on Millstone Road. It turns out the engine on the 1470 was frozen after water had seeped into it over the 20 years it had been sitting. Fortunately, the 1200 actually started on the third crank over and ran reasonably well for something that had been asleep for so many years. The volunteers devised a steerable tow bar that hooked to the 1470 which allowed us to move it out onto the road in about 30 minutes. The move required two trips during which the 1470 was taken to the farm in Colchester and the 1200 to a member's home in Cohanzie to be restored to "like new" condition.

It sat in his back yard for a year and a half until he had time to start work on this big tractor. With the exception of the brakes, the tractor was in good mechanical condition. Unfortunately, all the outer metal required major reconstruction. Rust and dents took a lot of work including remaking many new pieces. One year later and about 450 man hours of labor, the tractor was reassembled, painted and looking as good as new.

In July of "2015" the 1200 was ready to be moved to its new home at the Zagray Farm Museum in Colchester. For the first time, enthusiasts got a look at our new addition and it was a big hit. Because of limited acreage, tractors this size were rarely seen in New England. A full article about this tractor and its total restoration will appear in a future issue of "Antique Power Magazine". The Zagray Farm Museum is run and maintained by The Quinebaug Valley Engineers Association and information about the farm can be found at [www.zagrayfarmmuseum.org](http://www.zagrayfarmmuseum.org) or [www.qvea.org](http://www.qvea.org). The Farm hosts three antique machinery shows each year in May, July and October. Come on up to the May show on the 6<sup>th</sup> and 7<sup>th</sup> to see acres of old machinery including this big beautiful Case 1200.

Ed Bezanson

85 Dayton Road, Waterford, CT 06385, Cell: 1-860-208-2422

***DON'T FORGET!***  
***The Mudslinger!***  
***Saturday -- April 8***  
**Stationary Engine Building**  
**We have electricity!!!**

No generator and long extension cords will be needed this year!!

We'll have coffee by at least 9AM. Please bring food & drinks. The club will supply hamburgers and hot dogs on the grill.

**Bring some good weather! See you there!**

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**