

A special meeting of the Board of Aldermen was held Monday, June 24, 2019, at 7:00 p.m. in the Aldermanic Chamber.

Vice President Michael O'Brien presided; City Clerk Patricia Piecuch recorded.

Prayer was offered by City Clerk Patricia Piecuch; Alderman June M. Caron led in the Pledge to the Flag.

The roll call was taken with 10 members of the Board of Aldermen present; Alderman Wilshire, Alderman Gidge, Alderman Harriott-Gathright, Alderman Jette and Alderman Clemons were recorded absent

His Honor, Mayor James W. Donchess and Corporation Counsel Steven A. Bolton were also in attendance.

President Wilshire turned the meeting over to Alderman Dowd, Chair of the Budget Review Committee, to conduct the public hearing.

PUBLIC HEARING

R-19-142

**AUTHORIZING THE MAYOR AND CITY TREASURER TO ISSUE BONDS
NOT TO EXCEED THE AMOUNT OF SIX MILLION TWO HUNDRED THOUSAND
DOLLARS (\$6,200,000) FOR VARIOUS IMPROVEMENTS TO THE JACKSON MILLS
AND MINE FALLS HYDROELECTRIC FACILITIES**

Vice President O'Brien

So that the rest of the Board knows I did hear from Alderman Wilshire and Alderman Gidge, both are on excused absences due to illness. Tonight's meeting will be a Public Hearing on R-19-142. I am going to call on Sarah Marchant to give us a brief overview of R-19-142. There is a little presentation to hopefully explain it better. Would you like to come up, however you can see best, my seat is available.

Sarah Marchant, Director Community Development gave a brief overview of R-19-142 before the Board heard public testimony.

Ms. Marchant

Good evening, thank you very much. I have just a few slides and I will go through them quickly. If you have questions, I'm more than happy to answer them. I have more information but I didn't want to overload with data. I am here to talk to you about our two hydroelectric facilities. A very, very brief history is that we, the Jackson Mills Hydroelectric facility which is part of the Margarita's Restaurant, you can actually enjoy a beverage on the deck that is directly about our hydro plant was returned to the City's ownership as of January of 2015, it was December 30th or something like that. So we didn't pay anything for it; there was originally a lease. The City was part of the original construction, the hydro, the entity who was running it had a lease for 30 years. The lease ended it and suddenly we had a dam. And so that one we didn't pay anything for. But we have a 35 year old facility that is in need of some upgrades.

The second dam was the Mine Falls Dam, that was built about the same time. During the early '80's there was a lot of money through FERC who put in hydro facilities and that one was built at the same time. That had a buyout provision so that the City had the opportunity to buy it out at a preset rate which we did exercise in April of 2017. We paid just over \$4 million dollars for the Mine Falls Dam at that time. We did a lot of studies, a lot of work on it. We did a complete evaluation before we purchased that dam, we have a whole lot of, somewhat of a mini-CIP if you will of what we knew needs to be invested, how we need to, what things needed to be upgraded, what things don't and how we can move forward with that one.

Another big different between the two dams is Jackson Mills is one megawatt and it is actually has an exemption from Federal Licensing, from the FERC Licensing Process. So we can operate that without having to get a license from FERC that has to be renewed every so often. The Mine Falls Dam is a 3 megawatt

facility and that one does not have a license exemption. So the license, we also knew about as part of this process, is going to expire in and I'll talk about that on the next slide I think, in 2023. So that is driving a lot of this. When the City acquired both dams, we put an RFP out and we have hired an operator who has been operating them daily for us, Essex Power Services.

So I am just going to go through what the revenue has looked like since we brought both of these one. The green line is the total revenue; you can see the revenue numbers on the side and the years. Jackson, we started halfway through the year of FY16 so the total revenue produced versus the operation and maintenance is the red line and repairs. And then the net revenue is the balance of the two. You'll see on the Jackson, the very drastic red and purple lines in the opposite directions. Since we have had Jackson again 35, you buy a 35 year old entity that needs some repair, or we didn't buy it we were given it and it needed repairs. The turbine has been down twice; once for 3 months this Fall and 6 months last year. So those repairs have been very costly and they've also lost a lot of time where we are not operating, therefore we are not making money. So that is some of the big problem here; but overall it has been a net positive experience.

In 2016 total net income was about \$46,000.00 for the 5 months. FY17 \$105,000.00; FY18 was negative \$178,000.00 as we put so much into repairs. And FY19 so far, even though we have been down for 3 months, we have had so much water we are at a positive of almost \$300,000.00 at the moment. So that's kind of where we've been with revenue there, net revenue.

So Mine Falls, again we bought in the Spring on '17 we do have one turbine down now, it went off-line in March maybe. But we have two turbines at Mine Falls and they don't both run at the same time all the time. They both run only at very high water; usually we run one and bring the other one in. So one has been down, the other is still running. The revenue at Mine Falls is significantly higher and repairs, while they peaked a little bit first buying it, we knew we had some initial capital, we have a longer term plan to do those investments over time. This is very much a revenue generator so as general in '17 for the short year a total net revenue was about \$140,000.00. Last year we are \$700,000.00 in the positive and so far this year we are at \$600,000.00 and there is quite a bit more I think to come in because of the delay and how that works.

So I am here before you to ask for a bond for the improvements that we know are coming. We are trying to be proactive at Jackson and not have emergency shut downs and expenditures that are unbudgeted for. With the spending cap as you all know it's very hard to just say well I'll just need an extra \$400,000.00 this year or I need an extra bit this year. So we are working with Essex Power and HL Turner, who is the hydro experts, we have put out an RFP for a new turbine at Jackson. Jackson is a very, very unique situation; there is no other hydro-facility anywhere in the whole world that is exactly like that. It is a custom-made turbine that's there right now. So it's not like we can say we just want to buy that kind off the shelf and let's pop it in. And going out to bid for this turbine this spring we have had four responses from some companies, you know, from all over the world. It is unique; the costs are ... it's just an expensive proposition. So about \$4 million dollars of the bond before you is for the new turbine at Jackson and not just the purchase, but all the engineering and the actual fabrication and installation. It is, again, built into the side of a functioning restaurant and building; it is not the easiest place to do major work on. We do have that beautiful crest gate which gives us a lot more control but it is a major, major proposition and it is expensive and unique.

At the same time, the fish ladder which is probably the biggest part of the dam that you see; it is the big wooden piece that goes back and forth. That is literally how the fish climb the ladder to get up. It is also 35 years old so there are some other things that as we upgrade the turbine it might change some flows so those things, we've tried to pull all that together. We are talking about the improvements that have to be made there. So this is a process that will take about 18 months from once we pick something to design, fabrication and installation. So it is a big process and that's why we'd like to get started before it breaks again so that we are further along so we are not off-line for say 18 months or two years. So we keep running until we have it all fabricated, we hope, that's the goal.

In addition, even though it isn't subject to Federal Licensing, we do get it inspected every year and because of the age of the facility, just like when you buy a really old house, the home inspector comes in and says "Oh you're going to need to upgrade some of these things, some of these wooden components like the fish ladder need to be upgraded a bit". And also the fish species that we are most concerned about passing every year has changed since this was first installed. We used to be really concerned about salmon but we have now accepted the fact that we are never going to have salmon again and so now we are very concerned about herring and eels and so they need slightly different things. So being able to modify everything to make sure we are in compliance is important.

At Mine Falls one generator is down and we are doing a complete rehabilitation of it. There are some other things when that goes off line that you fix if you are fixing things and you have a giant generator out of the way you are going to fix those things while you can. But most of the bulk of the money that would go for Mine Falls is the other repairs in that CIP that we have listed out for the next 5 years and all these licensing studies that are required by the FERC License. The FERC re-licensing process is 5 years; we started last August with our pre-application document and from that document FERC came back and they have requested 9 studies that we conduct as the next phase. And we from these different, well US Fish & Wildlife, The National Marine Services, NH Fish & Game, NH DES together requested nine studies. We have put out an RFP, we are bringing on a specialist firm to help us conduct these studies. We are not fish specialists. We are going to start negotiation on what those studies will and will not include. But these are studies that will cost a very substantial amount of money over the next two seasons and so we need to be ready to do that so that is included in this bond as well to keep us on track. I think that's it. I'm happy to answer questions if you have more specific questions.

Vice President O'Brien

Just for a moment, tonight's Hearing was supposed to be to receive testimony from the public. However I know that many of us are on a tight schedule to be somewhere else. So we will open it up for brief questions, but to remind you that it is also on the Budget Review Committee's meeting, which is going to be immediately following this. Director Marchant will you be available for the Budget Hearing as well?

Ms. Marchant

Yes.

Vice President O'Brien

So I will allow a limited amount of questioning.

Alderwoman Melizzi-Golja

Yes thank you. Director Marchant, in looking at the life of the bond that is being requested, what is the life expectancy for the repairs that are being proposed.

Ms. Marchant

Excellent question. So the turbine, the new turbine and the rehabilitated turbine are expected to last another 30 years. The bond that is being proposed is a ten year bond, so certainly a lot longer than that. And the other repairs that we are doing say fish ladder type repairs, all have those same kind of time frames associated with them.

Alderwoman Melizzi-Golja

Ok thank you.

Alderman Laws

I was just wondering if the revenue generated from the Jackson is going to be included in the TIF for that area.

Ms. Marchant

That's a great question, no. The revenue from that does not go to the TIF at this time.

Alderwoman Kelly

I just wanted to know if historically we know what these would be at once they are at capacity because I know both of them have been down for a while in terms of revenue generation.

Ms. Marchant

That's a great question. So we look back at a 10 year average even though we didn't own them, we have pulled the FERC records to see what they have generated over a 10 year average. This past year has been an incredible amount of water, incredibly high revenue which is a good thing in many ways, but it isn't necessarily an average. So we do believe that in an average flow year, that these would net a little under \$1 million dollars, closer to \$800,000.00, the two together.

Alderman Caron

My question is that money that we get from Mine Falls is that going to go pay off the bond?

Ms. Marchant

It goes to the General Fund but it certainly would off-set the bond costs.

Alderman Caron

Thank you.

Vice President O'Brien

And this may be a good segway, I'll let Alderman Klee make the decision, but currently the State is looking at net metering which could affect this potential dam. I'll allow you a brief summation as to what is happening right now.

Alderman Klee

It is being held off until this fall, it was vetoed by the Governor, as far as net metering was concerned to allow greater than 1 up to 5 megawatts. I guess I would ask my question, are we exempt from the current net metering of 1 megawatts?

Ms. Marchant

It's a great question. So at Jackson Falls we currently net meter. We get just under 10 cents a kilowatt hour, right so 9.7 cents something like that. At Mine Falls we are not allowed to net meter. When we bought Mine Falls it came with a longer term power purchase agreement that will expire in 2023, with our license as well that we could net meter and we could make again almost twice, we were about 5.6 cents right now per kilowatt hour at Mine Falls. So we could almost double our revenue at Mine Falls if we could net meter, which we can't do yet. But hopefully we are on our way there and it would make a very substantial difference in the amount of revenue that we would be earning.

Alderman Klee

I do have one other comment, currently when it was originally voted in it was what we could call veto proof, but as we know things change as time moves on. This will be brought up in September but the key is if we were able to net meter in someplace like Mine Falls we would be able to cover much of the City, like City Hall kind of thing, not the individual people but the City's expense as far as our electricity, etc. If we could get to the 3, which it does right now, 3 megawatts, if we could use the full capacity of it.

Ms. Marchant

So just as a point of reference, the City alone is about 25,000 kilowatt hours a year; the school is about 25,000 kilowatt hours a year. We could cover, in theory we would produce enough electricity to cover the City's hall of 25,000 kilowatt hours in an average between the two dams.

Alderman Klee

Which would be quite a savings, thank you.

Vice President O'Brien

Further questions for Director Marchant? Alright, Director Marchant thank you very much and look to seeing you when we open up the Budget Hearing. At this time we are going to open up the meeting to the public. Bear with me as we wrestle quickly through this.

Testimony in Favor - None

Testimony in Opposition - None

Testimony in Favor - None

Testimony in Opposition - None

ADJOURNMENT

**MOTION BY ALDERMAN TENCZA TO ADJOURN
MOTION CARRIED**

The meeting was declared adjourned at 7:20 p.m.

Attest: Patricia Piecuch, City Clerk

Nashua Hydroelectric Facilities



HISTORY

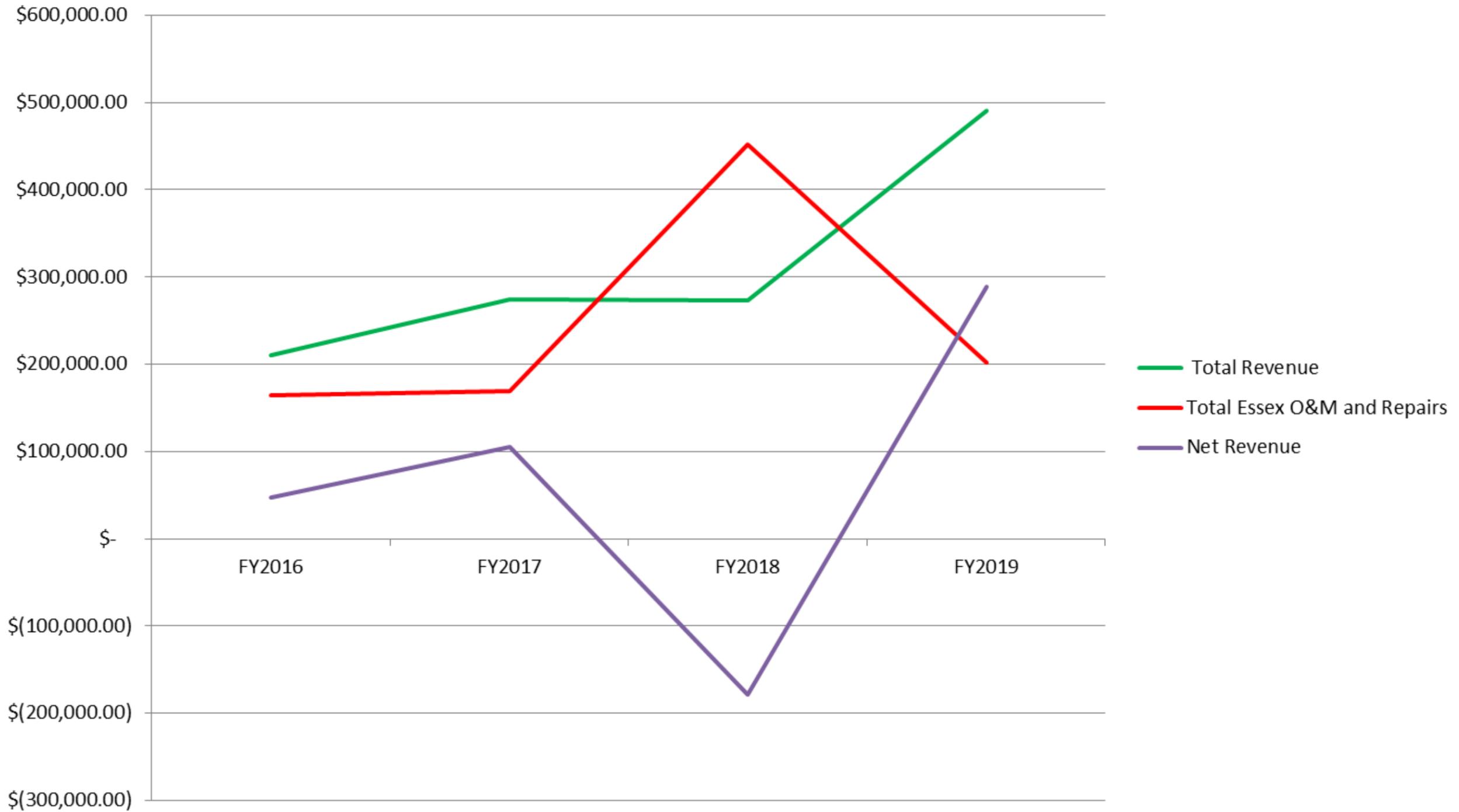
- The Jackson Mills hydroelectric project was returned to City ownership at the end of a long term lease in January 2015.



- The acquisition of the Mine Falls facility was completed on April 13th, 2017.
- Both facilities are operated and maintained for the City by a contractor, Essex Power Services.

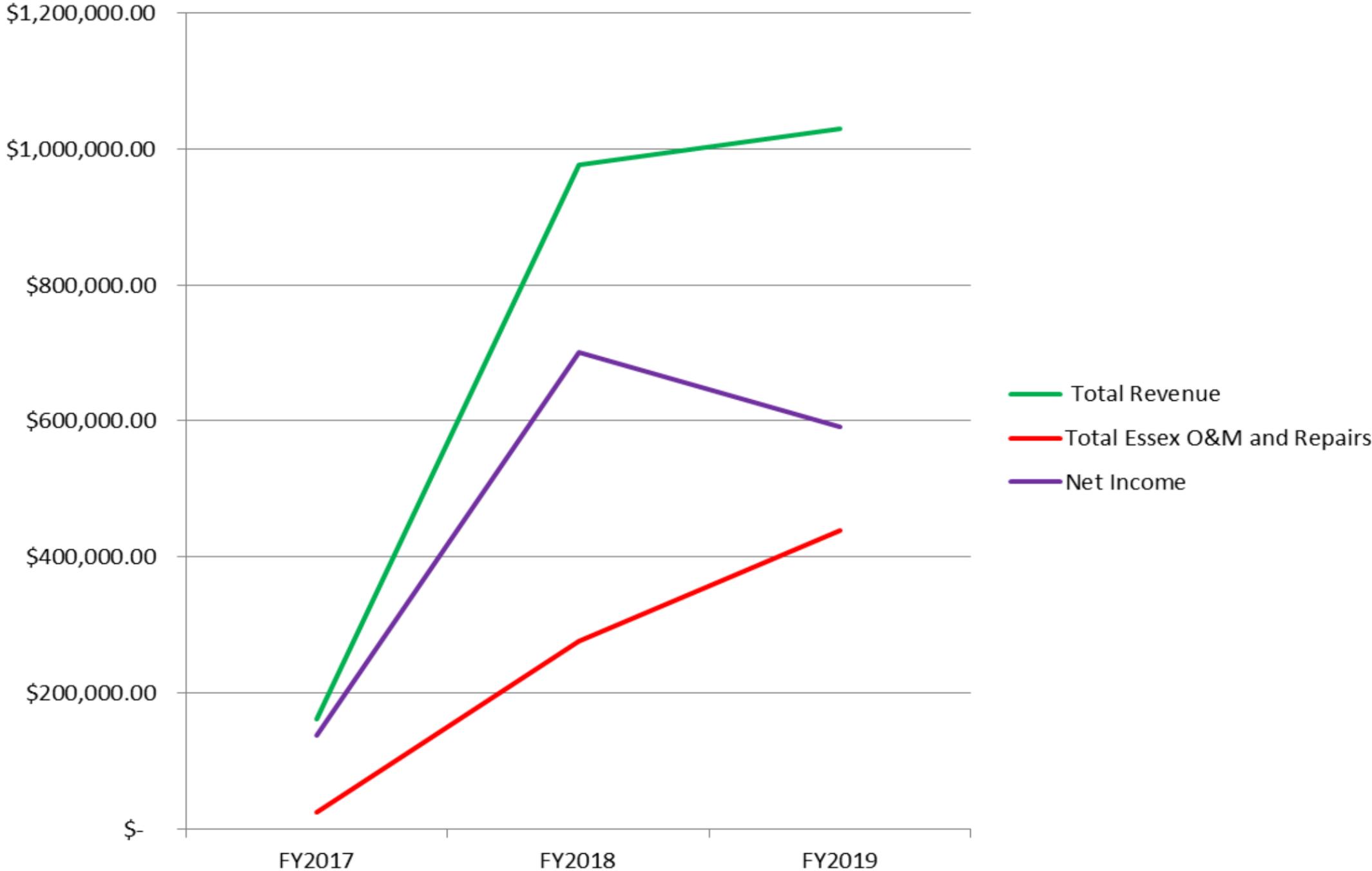
JACKSON MILLS

TOTAL REVENUE AND EXPENSES 2016-2019



MINE FALLS

TOTAL REVENUE AND EXPENSES 2017-2019



IMPROVEMENTS NEEDED

JACKSON MILLS

- Existing 35-year old turbine was down for 3 months in FY19 and nearly 6 months in FY18 for major repairs. The turbine is at the end of its life. In anticipation of future failures, the City has been working with Essex Power Services and HL Turner to begin design, engineering, fabrication and installation of new turbine.
- Continued work with federal and state agencies relative to fish and eel passage will also require improvements to aging infrastructure of the fish ladder.

IMPROVEMENTS NEEDED

MINE FALLS

- Rehabilitation of 1 of the 2 turbines, with associated repairs while offline
- The current 40 year FERC license for the Mine Falls project will expire on July 31, 2023.
- Relicensing started in August of 2018 and continues through 2023
 - Performance of studies requested by the US Fish and Wildlife Service, National Marine Fisheries Service, NH Fish and Game Department, and NH DES
 - Additional measures required by FERC



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