

## Item 25-0040: Request to approve resolution for Emergency Sodium Hypochlorite Tank Replacement at Appleton Water Treatment Facility

Finance Committee

Wed, Feb 05, 2025 6:45PM

**Aldersperson Brad Firkus (District 3) 00:31**

We have no minutes to approve from the previous meeting, and we have no public hearings or appearances, so we'll move right into our action item, 25-0040, request to approve resolution for emergency sodium hypochlorite tank replacement at Appleton water treatment facility.

**Aldersperson Denise Fenton (District 6) 00:50**

I'll move to approve.

**Aldersperson Katie Van Zeeland (District 5) 00:51**

Second.

**Aldersperson Brad Firkus (District 3) 00:51**

All right. Motion and a second, and why don't I hand over to you, Director Stempa, to just kind of give us the brief overhead of this. District three? All right, thank you.

**Director Chris Stempa (Utilities) 01:03**

Just a short rehash of the memo. So, these hypochlorite tanks, bleach tanks—there are three tanks that we have in the facilities used for disinfection, and we also use it for periodically cleaning some of our other processes and filters.

**Director Chris Stempa (Utilities) 01:18**

These tanks were originally installed when the plant was constructed and commissioned in 2001. At about the 15-year mark, they were first relined, and I will say that when they were first relined we did notice some leaks at the time. And then, based on some of the industry standards, the folks that did this, the normal cadence with real landing is approximately—chemically dependent—about every five years. So, from that point on—and we knew that some point it had to be replaced. So, the objective always along which we're going to try to get two more life cycles relining and then replace the tanks. That was, that was the original goal, you know, plus or minus some year within the capital plan when some of the other projects sort of eased up. So that was the plan that we had going forward from the 2015 and then, most recently, to the '22 and 2023 we had them relined. I use two years because it bridged 2022 and a 2023 with three tanks.

**Director Chris Stempa (Utilities) 02:17**

Within about a year, we start noticing some pin leaks—and some of those are just attributed to, if you can appreciate like a coffee mug and then a pipe, a small pipe, coming into some of these, what they call, gussets. Some of are easier to reline from the inside because they're larger. Some are more difficult because they're small. It's hard to grind out and reestablish this corrosion control barrier, which is just aligning to protect the outer shell, which is a structural part of the of these tanks.

**Director Chris Stempa (Utilities) 02:47**

So, when they first were revealing themselves, like, okay, it's realigning, it's imperfect. It's not a factory created tank. We had the company come back under warranty, but they ended up coming back a couple more times.

And for the one tank that most recently went down twice we noticed more substantial leaks in there. And from memory, I do remember that tank when we first relined it in 2015 to be a little bit more problematic; there was more substantial leaks in that one.

**Director Chris Stempa (Utilities) 03:13**

So fast forward to the last time the company relined it. We both were in agreement that there's something else going on here, and it's not their workmanship, and they were really good about coming back and honoring the warranty, which was two years. But there was obviously something else going on, and the response to that was really—it was the structural components of these tanks had been eaten away to a point where, when you fill these tanks—right?—and the normal routine for filling based on a certain volume of consumption, there's a tank filled about every two weeks (that's production based, demand based; it's seasonal. So just about every two weeks) is that when these tanks are loaded the tanks flex. Well, it's not as forgiving if the outer shell is flexing to the point where the interior glass lining is cracking. That's what's happening.

**Director Chris Stempa (Utilities) 04:06**

So, in short order, given the nature that one tank that has some more substantial leakage that was repaired twice, I asked the mayor to proceed with emergency authorization, with finance's approval. We need to act quickly, but we have time. The contractor that did the relining did come in on Monday. They're still wrapping up a repair which is more substantial in nature. It goes beyond an in-place reestablishment of that corrosion period. They're trying to beef up the base of that tank. And what that is basically a spot repair to buy us time, to give us some time to go through the engineering to replace these tanks.

**Director Chris Stempa (Utilities) 04:50**

This building doesn't lend itself well, the chemical room, to just coming in. It's not like you're going to roll in a brand-new tank and just pop it up. There's a chemical pump table in front of the three in the middle. There are electron—er electric wires, cable trays, both for electrical feeds, 480 volts and down, including communication cables. So, this stuff is kind of strong everywhere in trays at about an elevation about nine feet above the floor. The tanks are over 10 feet in diameter—right?—and they're about 14 feet tall. so, you can cut them up and get them out. You can't just roll a new tank in, right? So, working with McMahon right now to come up with a plan. The tanks will be probably be sized differently to allow us to get these tanks in there without moving a whole bunch of stuff at a great cost and yet still have the capacity we need to treat water.

**Director Chris Stempa (Utilities) 05:45**

With that said, the plan right now is to replace at least two. That affords us access to the tank that's currently being spot repaired to buy his time, because the lead time in these tanks is at least six weeks, and I venture to guess it's more. We're looking at four different suppliers across the country to get quotes from. So, we're looking at getting something that's competitively priced, but we're also looking at lead times, right? So, if, if one provider is eight months out and one's four and the eight month—the guy that's eight months out—is lower in cost, we're probably gonna have to make a decision to go with the higher cost and better lead time and just not running the risk.

**Director Chris Stempa (Utilities) 06:22**

And, yes, there are always work arounds. So, if we did have a catastrophic failure in two of the three tanks, or even all three, we can, we can come up with a plan, but it's not simple. It's not reliable. We can mobilize totes and tankers, but if it's freezing cold, you got problem of freezing, and that's not a place we want to be in. So, I don't want to ring the alarm bell like the sky is falling. We have plans in place, and the plan right now is to move forward, presuming the authorization is granted to advance a procurement for at least two tanks—it may be three, but for at least two—and that will that will establish some reliability. It will also afford us to continue with

a project next year that was already going to replace what we call our sodium hydroxide system. It's part of our lead and copper treatment. That will provide the space then to replace that third tank that's kind of bottlenecked in. And then again all three tanks—and there may be a fourth. May be adding a fourth tank, because these tanks are configured a little bit differently. We're going to make we're going to make up more room with the hydroxide side. So, unless anybody was walking in the plant, most of this is meaningless unless I'm holding up a picture. But if you can imagine limited footprint, and we're just we're just trying to buy time and reconfigure and hold off on a third tank until next year when we do another public bid project to take care of the balance of the system. And so, in a nutshell, that's where it's at with the current status of the tankage. We're still treating water, but we do want to reconcile what is a known deficiency.

**Aldersperson Brad Firkus (District 3) 08:00**

I see Alder Croatt, and then Alder Hartzheim.

**Aldersperson Chris Croatt (District 14) 08:03**

Thank you, Chair. Sounds like something that we really need to take action on and approve, but I'm curious, what kind of costs are we looking at, and where's the money coming from?

**Director Chris Stempa (Utilities) 08:14**

Yes, and you're not the only one that asked that. And there's reason why I didn't put in the memo, because I just didn't want to put a number out there and then and then somebody may not remember that it's just a ballpark estimate. I—so I don't want to say I don't know. I know the tanks of—the one estimate I got from a tank manufacturer out of Scofield, which we've procured tanks from before, they're looking at about a \$50,000 per tank. That's not with delivery. And there's some odds and ends in terms of some features that we would want or weren't included in that, but it's about \$50,000 per tank. Contractor cost to do the demo and then re installation—and again, I'm just guessing—I would assume, that would be at least \$100-\$150,000. So, in total, with some of the other items that go along with this, I am guesstimating about \$300-\$350,000.

**Director Chris Stempa (Utilities) 08:25**

Does that include McMahon?

**Director Chris Stempa (Utilities) 08:43**

McMahon's contract right now is \$24,000, and that wasn't to sneak under the procurement threshold. That really—the luxury of having the person under contract is same person for better, for worse. The engineer that designed the plant, he knows the plant, he knows what we need to do to get this done, and he's got a lot of contacts. So, I'm pretty confident that that will lead us forward pretty successfully and pretty quickly.

**Aldersperson Chris Croatt (District 14) 09:32**

Okay. And maybe the second part of the question is for Director Ohman. Where is the funding coming from? Or Director Stempa?

**Director Chris Stempa (Utilities) 09:40**

So, we worked as part of carry over. This is existing leftover on—not under contract or on use funds from our corrosion control project, and there's some also some unused, not under contract funds from some other projects. We have enough in total to at least cover the \$350,000 plus probably some contingency. So, we're not looking at trying to scrounge up some other funds.

**Aldersperson Chris Croatt (District 14) 10:05**

Thank you.

**Alderman Brad Firkus (District 3) 10:06**

Alder Hartzheim.

**Alderman Sheri Hartzheim (District 13) 10:07**

Thank you, Chair. Two questions. One, I'm not sure who would answer this, but the—what we are voting on today, I want to be clear on what this means, since there's no numbers on the line. Is this just meaning a fast track of this, this process or—and will there be then some approvals of what is being contracted later on?

**Director Chris Stempa (Utilities) 10:30**

Want to answer the first part. Maybe Chris can answer the second part. So, the first part is, I'm not circumventing competition because that's just good for the price. We're not just going for the quickest bid or the easiest one. I'm asking for a minimum of four. Originally was two. The engineer knows of at least four reliable tank manufacturer. We're looking at getting at least four quotes cross country.

**Director Chris Stempa (Utilities) 10:51**

In terms of the contract, I'm looking at least two right now, but two that have done work at the plant, two that I know are reliable and that I can trust and are do very good work. There may be a third, but two for sure. So, from the estimating and RFQ process, in lieu of a public bid, it is a fast track, but we are still seeking out competition. I'll defer to maybe, to Chris on the approvals.

**Alderman Brad Firkus (District 3) 11:17**

Two. Go ahead.

**Attorney Christopher Behrens 11:20**

Director Ohman may have to jump in and correct me too. But with this being an emergency process, typically this—this is a little bit of a different type of emergency, because, as you heard, there is some time to work through this where oftentimes it's really imminent, but—so it's an emergency. It's just it's a little bit of a different type in that there's some time afforded. But typically, through an emergency process like this, the idea is to allow staff to take whatever actions they need and expend what's necessary to correct the emergency. So, while there may not technically be a requirement to come back and report back these are the bids that were received, and this is the recommendation to be awarded for approval. That's not to say if there isn't the opportunity for time to report back, that Director Stempa can't report back, provide the Finance Committee with an update of where he is in addressing this particular matter.

**Alderman Sheri Hartzheim (District 13) 12:21**

Thank you. And then the second question I had goes back, I believe, to Director Stempa. What if anything do you expect rate payers to experience as far as rate changes? Nothing? Because this, because we have the funds available elsewhere. Or, you know, I—where do we see that at? What do we see the impact is there?

**Director Chris Stempa (Utilities) 12:44**

I may have to defer to Jeri on this, but given that they're exist—existing, approved budget budgeted funds, just not used, I would not anticipate there to be an impact on future rates. But again, I may be misspeaking.

**Director Jeri Ohman (Finance) 12:59**

So, because we're talking about the water utility. We're regulated by the PSC as far as rates go. We cannot just increase rates because we have an unexpected item that we need to take care of. We are in the process of a

water rate study this year, so this could work into that. But it's the whole picture. It's not just, oh, we have an extra expense.

**Alderson Sheri Hartzheim (District 13) 13:22**

Thank you

**Alderson Brad Firkus (District 3) 13:24**

Alder Fenton.

**Alderson Denise Fenton (District 6) 13:25**

Thank you, Chair. May I direct to Director? And Director Stempa, thank you for your offline explanation about how we couldn't just keep a spare and plop it in there. But my concern is that even with replacing two of these tanks, we're going to have a situation like we do now, where everything's the same age, and what could we do going forward to build some redundancy into that configuration?

**Director Chris Stempa (Utilities) 13:55**

And so, once we get through at least one year of that full scale demonstration, I'll be able to speak to how—I won't be able to; an engineer will speak to how big. And with that, I'm hoping the footprint is small, and if it's small, like I believe it will be, we can accommodate that additional tank, or at least preserve space to add another tank. And maybe it's a hydroxide tank, maybe it's a hypochlorite tank, but at least you have a space in reserve that's there to do that kind of thing.

**Director Chris Stempa (Utilities) 13:55**

So that's one of the reasons I'd like to hold off on that third tank, not just because I don't feel like putting it in, but there's accommodations, again, with this other chemical system that I can't—we're going through a process, again, not to confuse anybody or conflate anything, but there with our lead and copper optimization. We got another extension, or an extension, from DNR, so the lead and copper treatment part is in place. We're using a phosphoric acid. It's all part of coating the interior pipe. As part of that though, that acid causes a change in pH, and right now, we are demoing a temporary chemical feed system to get an idea of size. So how much hydroxide we use to balance the pH once we add this other agent, how big does that system need to be? And DNR requires redundancy—right?—so it's not—we can't just put in one thing. I need two things, but I don't know how big the things are.

**Director Chris Stempa (Utilities) 15:20**

That same philosophy, though, if employed to anywhere else in the plant, it's really hard to have a replacement scheme or a construction scheme where you would be adding something at a different point in time and then having a replacement schedule, because I can't think of anything like that, whether it's rotating equipment or tankage or anything else. It's not like street pavement, where you can say, I'm gonna target this block and then so much per year. So really it ends up being—and I don't want to speak badly for how planning has been—but it really is doing a more predictable replacement schedule, and you have to honor that, right? So, one of the things that we're looking at doing in the next year, maybe later this year, is reevaluating our capital planning at the facilities, whole scale, from the assets on up through operations and maybe even staffing levels. So that that's really a place in time, and that will change over time, but at least gives you a reference point, whether it's me at the helm or somebody else.

**Alderson Denise Fenton (District 6) 16:23**

Thank you. That helps.

**Aldersperson Brad Firkus (District 3)** 16:25

All right, anyone else? Okay, seeing none, we'll go ahead and vote. All those in favor? Aye. Opposed?  
Abstentions? That passes five to zero.