

**South Central Connecticut Regional Water Authority
Environmental, Health & Safety Committee**

**March 18, 2021
Meeting Transcription**

[STARTS AT 1:47 P.M.]

Jay: Good afternoon. This is Jay. I'm on board now.

Kevin: Hey, Jay.

Suzanne: Hey, Jay. And David, do we have to take any action to change the name of the committee or you as chair just changed the name?

David: I think ... I would assume that I have the authority.

Suzanne: Okay, great.

David: [inaudible] just ask Jennifer to continue.

Kevin: Yeah, I would agree with that. So, we're all in favor. We're out of the committee and, we're convening as the Environmental Health and Safety committee.

David: Yes. In favor.

Kevin: Yeah. Thank you. Good afternoon, Ted.

Ted: Good afternoon, Kevin.

Kevin: Welcome back.

Ted: It's good to be back, Kevin.

Suzanne: Yeah. Who's the new guy?

Kevin: I hope the rent's not too high for the office. So Ted, did you want to ... Well, actually, I'll take a motion for the minutes to [inaudible] any discussion.

David: Move full of approval of the minutes.

Suzanne: I'll second.

Kevin: Any discussion? All in favor?

Group: Aye.

Kevin: It passes unanimously. We have Water Chestnut update and video, and we have, Mr. Tracy. Ted, would you like to kick it off?

Ted: Sure. As you know, we've been working on this for a few years now. The infestation started actually in 2006, but Josh and Will, and their team really went after it last summer and want to bring an update of what happened last summer and what it looks like going forward as well.

Kevin: Great. Thank you.

William: Great.

Kevin: [inaudible], Whenever you're ready.

William: I'm going to start out guys. I hope you guys are doing well today.

Kevin: Yeah. Yeah.

William: This is just an update on the Water Chestnut Infestation in Furnace Pond and like Saltonstall and some of our management efforts there. We go to the next slide. So I just wanted to give you some brief background on the project. The plant on the left is what Water Chestnut looks like. It's a uniquely adapted invasive plant. It has a surface floating leaf that looks like this rosette here, and it has some merchant leaves as well. So it's particularly adapted to grow really quickly. Picture on the right are the seeds that it produces. So each of these plants produces 10 seeds. So the plant can grow exponentially fast. It came from Eurasia in the early 1800s and it's found throughout North America now, it shades out native vegetation. It can because water quality impacts. It grows across the surface of really shallow ponds. It can deplete dissolved oxygen, cause fish kills and it adds a lot of nutrients to water bodies. Because the plants die. They fall to the bottom, causes sedimentation and adds all those nutrients that the plants been using to grow into the system.

William: Next slide. So, here's some historic imagery of the growth of the infestation in Furnace Pond. We discovered the infestation in 2017, and that was confirmed in 2018 when we began making our management plans. But the Water Chestnut was present for many years before that, as can be seen in these aerial photography. Sometime between 2008 and 2010, you can start to see the plant grow. And by 2016 we've reached basically what is the maximum growth in Furnace Pond. The plant is inhibited by depth of the water and water clarity. So it can only grow in really shallow water. So the deeper parts of the pond are not going to have growth on them. So at this point in time, depending on the Lake level, each year we get between eight to nine acres of this plant. And as I said, each of these rosettes, each of the foliar part produces 10 seeds.

William: So each plant, is depositing these seeds into the seed bank and they can stay in the sediments of the Lake for up to 10 years. So this is a 30 acre pond. So over a third of it is covered with this Water Chestnut. Next slide. So our main concern here ... Well, Furnace

Pond is part of the water supply. It's not the main part. It flows through a culvert, underneath the railroad embankment into Saltonstall where the intake is. This is a risk map here based on the depth of the Lake. Essentially you have 25 acres of the Lake that will definitely be covered by this, if it invades the primary body of water like Saltonstall. And there's up to 35 additional acres, depending on Lake level, that could also be covered by it. This can cause major ecological impact on Saltonstall[inaudible 00:14:34]. Right now there's only a small number of plants that we've found in Lake Saltonstall. When we first started inspecting the Lake in 2018, we found plants growing somewhere between like a eighth to a quarter of the way up the lake.

William: We removed those. In subsequent years, we've found it only along the railroad embankment and we've found only a few plants there last year and we removed those. Our management plan is to basically use mechanical harvesting to remove the Water Chestnut from Furnace Pond. We do the harvesting early in the year before the plant has released its seeds. So we're depleting the seed bank and we're not allowing additional seeds to enter the pond. And we're also removing all those organic material that would be deposited into the pond. And the idea is to reduce the risk to Saltonstall and reduce the population in Furnace Pond. We've installed a boom across the culvert that prevents the flow of some of these seeds into lake Saltonstall and we do inspections at lake Saltonstall each year and [inaudible] any of the small stands that we find. Next slide. Josh.

Josh: Yeah. Is that video not working Jennifer?

Jennifer: It worked when I tried it before.

Josh: If you can ... Am I allowed to share my screen?

Jennifer: Yes. Hang on a minute.

Kevin: This is Kevin. One of the ... Just a suggestion if this is the same presentation for the hearing tonight is that ... and we're fortunate to have both of you available to explain to us the reasons that this is important, but I think other than maybe aesthetics or it's going to clog something, like in slide three or four area, perhaps, you could go just to re-highlight what's the [inaudible] water? What's the negative impact to water quality or to the treatment facility or something like that, that brings it home and ties it all in connection together. That would be really ...

William: Sure.

Kevin: I guess, just a polite suggestion. I think it would be helpful. Thanks.

William: Yep.

Josh: Okay. So moving right along. Will was able to secure a contractor for us to utilize, as you can imagine, this is a fairly niche project and there's only a few places that will do this

work. So we have this contractor called Solitude and they have a whole fleet of these specialized boats that utilize paddle wheels and a conveyor belt in conjunction with each other to harvest this floating biological matter off of ponds. And Water Chestnut is one of their specialties as it's an invasive. So this boat utilizes a conveyor belt in the front, as you can see, it's got these scissor like teeth on the sides of the conveyor belt that cut the Water Chestnut away from the main pack. And it takes in the Water Chestnut via the conveyor belt and inputs it into a hopper that runs underneath the operator.

Josh: And that hopper can hold 435 cubic feet of material. Once that hopper is full, the operator will return back to shore where we had a facilities worker waiting with a payloader to move that material up to a de-watering site. And that de-watering site was large enough to not only hold the material, but for the tractor to be able to move in and out of. And that's where the plant material will decompose. And once the seeds dry out, they're no longer viable. So this will be the staging area for future harvest as well to input this material.

Josh: And this is the final product, after the harvest was done. You'll notice that in this go, we were not able to get all of the Water Chestnut, and that's due to time constraints. We hired them for 80 hours of work. And since this was the first year, there was just so much material for them to collect. 80 hours didn't quite cut it. But we also were dealing with some droughts this year. So the water level was reduced in Furnace Pond and that limited the access of the boat to certain areas. So by the end of the project, they were cherry picking areas that they could reach with their boat. So we're hoping in subsequent years though, the water will be higher. It'll allow the boat to access more areas and we'll be able to remove more of this ... the larger areas of the Water Chestnut.

Josh: So though it's really fun to fly the drone and take cool videos of the boat collecting Water Chestnut. The main reason we're utilizing the drone is to be able to get maps like this. We can fly the drone over Furnace Pond prior to the harvest and after the harvest and you get a really good picture of how much Water Chestnut was harvested. Utilizing GIS, we can estimate that we harvested four and a half acres of Water Chestnut out of the eight and a half to nine acres that was estimated. It's worth noting too, that as Will mentioned, these plants grow in rosettes, but they can also grow multiple rosettes deep, where you could have two, three, four layers of rosettes growing on each other. When we first had the contractor come out, they said it could take up to 40 minutes for the boat to fill up.

Josh: But what we were noticing is they were only taking 25 minutes in between passes. And that was because there was such a high density of the Water Chestnut that it took a far fewer time to collect it. So in the future, we have to keep maintaining Furnace Pond. We have to keep calling these contractors back. It's projected that these seeds can last 10 years in the seed bank. But we'd like to get to a point where, Will and I, and maybe some other people can go out and hand-pull the Water Chestnut. That is not out of the question. And we would also, just like to keep flying these drone missions to see how

much the population increases after each harvest. And that'll help dictate when we can stop the contractor from coming and we can move in with our crews to start managing it. So if you guys have any questions, we'll be free to take them now. Thank you.

Kevin: Thank you very much. And any questions?

Ted: Josh, could you just discuss about how long you think it's going to take to be able to not have the contractor there, assuming you have the right water conditions and the lakes high enough? How many passes [inaudible] make? And also just briefly discuss the Deep grant you applied for.

Josh: Grow. Yes. Thank you for reminding me Ted. I'll start with the grant. So this year, the state, let us know that there's an opportunity to get a grant for maintaining aquatic invasive species on lakes, ponds, and rivers, and our company, is eligible for that. So will, and I worked together for a grant proposal, to get all the funds covered for, the 2021 harvest. This grant is only expected to happen once, it could happen in the future, but they made it clear that for now it's a one-time deal if you get the money it's for this one particular year. So we're hoping to get that and save the company roughly \$22,000 for this harvest this year. But that being said, one of the stipulations of the grant is that we have to continue maintenance on the pond after the grant.

Josh: The grant is not for a one and done project, it's for something that, we had already planned to maintain and to foresee into the future. That being said, this harvest ... based on how much was collected this year and based on weather conditions in the future, it could be anywhere between five, six, seven years out before we have to determine if the contractor is necessary anymore. Will and I have gone out and done hand pulling early on in 2019 and you can remove quite a bit of material by hand. The contractor is significantly more efficient, and it may come to it where, we don't have the contractor come in for 80 hours. We hire them for 40 hours as the population gets smaller. And that'll save us a lot of money in the long run as well.

Kevin: Thank you very much. Any comments from the board? Questions? I really appreciate the presentation and all the work you've done with it. Thank you very much.

Josh: Thanks, Kevin.

Suzanne: [crosstalk].

William: Thank you.

Larry: Thanks Will, thanks Josh.

Josh: Have a good one, guys.

Kevin: Thanks. And then, we just have this committee work plan as well. I don't know if we can post that briefly.

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Jennifer: Yeah. Give me one second to put it up.

Kevin: Yep. Thank you. This is the work plan for the next 12 months of this committee. I don't know if there's any thoughts, questions, comments, additions. If anything comes up, we can obviously talk about it offline. So thank you. Thank you, Ted.

Ted: Welcome.

Kevin: If there's nothing further, we can ... I'll have a motion to ... entertain a motion to come out of committee.

Suzanne: So moved.

Kevin: Is there a second.

Joe: Second.

Kevin: All in favor.

Group: Aye.

ADJOURNS AT 2:04 P.M.