

Pond Remediation Q&A

Updated 11.30.22 ([New content in BLUE](#))

1. **Won't one heavy rain fix all this, like in previous years?**

Previous years' algae was only on the surface. It would decay and sink to the bottom, and become part of the sludge build-up. You could also break it up and it would sink and be gone, at least from sight. The current algae is different. It is a filamentous algae growing up from the bottom and spreading across the surface. Neighbors cut a bunch of it off and it grew back in two days. This will keep happening. It is happening now.

2. **What if we just do nothing?**

The ponds will not fix themselves. If we do nothing, the advantages we enjoy about having these ponds will be replaced by swamps and mosquitoes. We are deep into that process now. Once that happens, the ponds would have to be dredged in order to return them to some semblance of what they are now or have been in the past. Dredging is minimally a \$200,000 cost for just one pond.

3. **Did we go out for bids?**

Yes, we consulted with a number of groups, including Texas A&M AgriLife Extension Service; Brushy Creek MUD; TCEQ; Aquatic Features (Austin-based) and Clear Water Supply in Colorado. Only Aquatic Features was interested in a project this small. Interestingly, other companies we attempted to engage with referred us to Aquatic Features. [Aquatic Features has recently completed a treatment regimen for the City of Austin to rid Lady Bird Lake of toxic algae that was killing dogs at certain spots.](#)

4. **Why is the HOA involved?**

The HOA is more than just an equal property owner on a pond. The HOA has buying power and the ability to manage a project of this scale that no single or even small group of homeowners would have. The HOA would oversee the process to collect funds from Pond Homeowners, manage the Non-Pond Owner Fund, enter into an agreement with Aquatic Features for the work to be performed and equipment to be purchased, and advocate for Pond Owners, including the HOA, between Aquatic Features and Homeowners. Without HOA involvement, it is highly unlikely that the effort to adequately remediate our ponds could be achieved.

5. **What is the life expectancy of the equipment?**

Depending on the system, warranties range from 2-5 years. Actual life expectancies are reported to be around 10 years. It would be reasonable to expect that the infrastructure

(laying of cables, etc) may outlive the aerators themselves, and would therefore be less expensive to replace. All equipment purchases, at least in this initial phase, would be done through the HOA (after all funds collected from Pond Homeowners), so that individual homeowners have a single source for remedy should a piece of equipment fail or an issue arises with the vendor.

6. What about ongoing treatment?

It is expected that Aquatic Features would help set us up with a regimen of maintenance moving forward. This is not a one-and-done solution. It is a solid means of reversing the decline of past years' neglect, and moving toward renewed life. We anticipate that this will require periodic treatment with Phoslock (or some other method depending on monitoring) and of course ongoing diligence on the part of residents to keep the ponds clean by removing debris. The first treatment will be scheduled for Spring of 2023. There may be a need for a Fall Phoslock treatment as well, but because we expect it to be discounted and likely on a smaller scale, future treatment is expected to be funded 100% by individual pond owners.

7. What if all pond owners can't or won't contribute?

Obviously, there are lots of moving parts to this proposal, and of course there are economies of scale if all pond owners pitch in. We realize however, that some cannot...and others will not, for a variety of reasons. In the event that we do not achieve full participation, we anticipate the following actions:

- Pond owners (or perhaps even some non-pond owners) with the means to do so will step up and contribute more than the minimum to help make up the deficit.
- The HOA Board may pick up some of the slack, up to 10% of budget per TSHOA Bylaws
- Based on a particular pond's resident participation rate we may have to scale back on that pond's coverage. eg Maybe they get three aerators instead of four.

We are proposing a minimum participation rate of at least 60% of pond owners per pond. Anything below that makes it untenable, at least for that pond. NOTE: Understanding participation rates of individual pond owners will go a long way toward determining the correct term of action from the HOA, and will weigh heavily in terms of what the Board recommends. We are currently canvassing all the pond owners on the Beaver Creek chain (Ponds 1-7) to ascertain participation levels.

8. Can individual pond owners finance their share of the Pond Remediation?

No. The HOA is not a bank. However, many of our residents have expressed a willingness to contribute to a *Friends Of The Ponds Fund* to help pond owners with these expenses.

9. Why do Ponds 4 & 5 get submersible aerators, and the others surface aerators?

Submersible aerators bring more oxygen more quickly to the floors of deeper ponds. Ponds 4 & 5 are deeper than the other ponds and are therefore better served by the submersible aerators. Surface aerators do pretty much the same thing, but can operate in as little average depth as 18 inches. Surface aerators do not require external compressors as they are self-propelled by a single electric source per unit. Submersible aerators operate off a daisy chain of air hoses driven by a single compressor – either a ½ hp motor for one pond, or ¾ hp for two.

10. Why should the HOA pick up the electricity for Ponds 4 & 5?

Two reasons: First, we believe that the HOA can and should, across all the options submitted for consideration, bear some burden of continuity in the maintenance of the ponds within its boundaries. Providing electricity to a single source for one or both of these ponds in perpetuity seems like a reasonable minimum contribution for an HOA to assume. Secondly, because these two ponds are deep enough to qualify for submersible aerators, there are economies of scale to be realized by combining aeration from a single compressor rather than two. In other words, the cost per lot is cheaper when divided by 11 property owners of both ponds, than when divided by 7 property owners of just one.

We estimate that the additional cost in electricity of a ¾ hp compressor over a ½ hp version to be negligible ([under \\$20 per month](#)) compared to the benefit of helping maintain the health of these two ponds, which because of their depth and position along the overflow route, together collect a disproportionate amount of accumulated debris and algae growth. [The submersible aerators will run 24/7 during the warm months of the year \(April 1 – November 15\). They do not need to run at all during the remaining cold months, according to Aquatic Features. The quoted costs of \\$400 and \\$600 are annual estimates for the ½ hp and ¾ hp generators respectively. Actual numbers may vary.](#)

11. Who picks up the electricity on the ponds with surface aerators, and how is that determined?

The surface aerators do not require compressors, and therefore avoid the costs associated with installing and running them. The trade-off is that somebody has to pay for the electricity to run them. For Pond #6 there are four aerators, meaning four people will need to assume that role, perhaps even writing responsibility for it into their deeds. Strictly voluntary, somebody needs to step into that role. The HOA does not have the ability to run electricity to each of these, but hopes to support and subsidize the ability of individual homeowners to work together to accomplish this component of the remediation effort.

12. Why aren't Ponds 1 & 2 and 8-10 included in the Pond Remediation Proposal?

For the sake of this study, we have limited the scope of this proposal only to Ponds 3, 4, 5, 6, and 7, as shown in the diagram below. These ponds run along “Beaver Creek”, and when subject to heavy rain, flow into one another and are therefore occasionally contiguous. They

are thus part of a separate eco-system from Ponds 8, 9, and 10, and to some degree from Ponds 1 & 2 because those ponds are primarily spring fed and separated from the others by a considerable expanse of dry creek bed. However, all ponds with property lines within the boundaries of Tonkawa Springs proper, including Ponds 8-10 and 1 & 2, may benefit from the same models and financial consideration as proposed in the proposal, depending on property owner input. These property owners are welcome to join in, but must meet the minimum participation rate of 60%. Their inclusion will obviously affect the costs for all parties, which may require adjustments to the HOA ratios, and certainly to the individual owners' costs.

13. We recognize that this is a huge undertaking, with lots of variables and moving parts. How can I help?

The TSHOA will conduct at least one Town Hall meeting for all interested parties to meet with Alex Arreguin of Aquatic Features Inc within the next 30-45 days. ([Done on Thursday, 11/10/22 to primarily pond property owners. We will host another community-wide meeting in the near future.](#)) We will also post some version of the Proposal itself along with a Q&A Forum to help answer questions and reveal updated information as we move forward. We have started to contact individual pond property owners to gauge interest and participation rates, as this one factor will make or break any effort to definitively address the issues with our ponds. We are aware many neighbors have conducted their own extensive research on the ponds. We encourage and welcome them to participate in a neighborhood committee to determine the best course of action and source of funds. Tony Garrant has ably taken the lead effort. Please contact him at Garrant000@yahoo.com or (512) 779-6744 to be part of that committee or to provide input.

14. What if I don't live on a pond, but want to help?

[For starters, please vote for the Pond Remediation option that makes most sense to you. Secondly, grab a rake or a chain saw and pitch in on one or more of the Pond Clean-up days scheduled throughout the year. Or, you can do as several non-pond owning residents have offered to do already, and contribute to a *Friends Of The Ponds Fund* set up to help cover the costs of Pond Remediation for those neighbors who may otherwise be unable to participate. We expect that through the generosity of the whole community that this initiative will reap benefits for all residents of Tonkawa Springs for generations to come.](#)

15. The water level seems to drop more quickly than in the past. Do we have a dam leak at the spillway?

[Yes. We will do a dye test to see for certain where and to what extent that occurs. Then, a product like Bentonite or "Dammit" could be applied to help plug those, of course under the guidance of pond professionals. Where there is a dam leak, the repair will likely be assumed by the TSHOA for two reasons: 1. If it is occurring at or near the spillway, it would be on the HOA's portion of the pond. 2. We want to make sure, since it would be an infrastructure issue, that it is identified and fixed correctly. Because this could affect](#)

multiple homeowners, and perhaps the entire neighborhood should the road be damaged, we should not leave this to an individual homeowner or group of homeowners to address. **Any dam remediation required will be done before any of the other proposed Pond Remediation measures occur (to be scheduled for Spring 2023).**

16. Is damage to the dam(s) and levies due to past flooding? What about trees and brush that has grown into the road and dam?

Yes, part of the damage we think is due to flooding in the past and the levees have been damaged. Particularly with the spillways on ponds 3 and 4. We will inspect the dam and levees and have asked both the Brazos River Authority and the TCEQ Texas Commission on Environmental Quality. They have a Dam Safety Program that monitors and regulates both private and public dams in Texas. The program periodically inspects dams that pose a high or significant hazard and makes recommendations and reports to dam owners to help them maintain safe facilities. We will also consult with civil engineers and dam repair experts before initiating any dam repair activities. If leaks occur on private property we will ask permission from said property owners. For more information look here: <https://www.tceq.texas.gov/compliance/investigation/damsafetyprog.html>

17. Will we dredge any of the ponds to get the muck out?

Not as part of this initiative. Dredging is a VERY expensive operation, to the tune of \$200,000 per pond, and is not recommended as an option at this point. According to our pond consultants, the aeration will actually help dissipate some of the silt at the bottom of the ponds and help make them deeper. As an aside, there is a mini dredge that is operated by a winch. Check it out [here](#). It would not be very expensive if several neighbors pitched in, but it does look like a lot of work, and should only be done under informed guidance and in agreement with surrounding neighbors.

18. Can the pumps be driven with solar panels or wind power?

Solar powered pumps would incur the cost of a pretty extensive panel array. Of course that means you either run the aerators only when the sun is shining, or invest in expensive battery storage. Obviously electric is easier, and over time, more reliable. A more promising sustainable method is wind-driven. I (Tony) live on pond 4 and I have a fountain in my area of the pond. I also have a windmill that pumps air through two aerators close to that fountain. I've been experimenting with things like this that are non-invasive to the pond to determine what works best. However, because of the more reliable availability of electricity to the entire neighborhood (and because many may object to \$2,000 windmills in their yard, this option is not included in the Pond Remediation proposal. NOTE: Solar or Wind Power may *indeed* be a viable option for powering the surface aerators, because individual homeowners will need to step up for that. I'm happy to discuss all of this in person if you want. Here's a link to the surface aerators: <https://kascomarine.com/>

19. How much do the geese contribute to pollution in the ponds?

According to a neighbor at our meeting, the geese that he and others have been feeding poop up to three times their body weight each day. That's a lot of poop! It was suggested that those who continue to feed the geese stop doing so in order to help lessen the amount of effluence that goes into the ponds. There was no response concerning the Black Belly Whistling Ducks that also migrate through our area.

20. What happens if only Ponds 3, 4 and 5 receive treatment?

We acknowledge the ponds 3, 4, and 5 suffer the most because, well, "stuff" travels downstream. However, cost saving measures are available to residents on the shallower ponds upstream and downstream of 4 and 5, and we hope that all of the targeted pond owners on the Beaver Creek chain opt in. However, if an insufficient number of property owners on these ponds do not participate in order to qualify (at least 60% or 20/30 homeowners), it is still highly recommended that individual pond owners band together to enact similar measures on their own in order to maintain their ponds.

21. There was a study conducted by an earlier Board on the community. Did that address the ponds?

In 2019 the TSHOA Board conducted a reserve study. The reserve study did not include maintenance of our ponds.

Three years ago a group of pond homeowners met to discuss a proposed pond project and engaged a remediation company to weigh in on the proposal and overall health of the ponds in Tonkawa Springs. Many of the same issues were identified then as problems. Those problems have only worsened. The project proposed by the homeowner was abandoned, the pandemic ensued and kiboshed any further sustained effort until now.

22. How will the HOA hold Pond Owners responsible for the commitments made to support these efforts ongoing so the HOA does not incur more costs in the future?

First, the HOA will not incur any costs (outside of the dam repairs) until funds have been received by those who commit to individual pond efforts. Second, the HOA will ask Pond Owners to sign a document outlining their agreement to support ongoing efforts. We may ask that this be notarized. Lastly, the HOA will explore the opportunity to add a clause to their deed that ensures future homeowners understand the commitment prior to purchasing the property.

23. What are our current reserves and how will this proposal impact those reserves, support dam remediation, allow for future neighborhood maintenance and emergency funding?

As of October 31, the TSHOA has approximately \$33,000 in reserves. In an effort to ensure fiscal responsibility we revised the options to only include a 20% commitment by the HOA if all ponds move forward. This will ensure that we have reserves for unexpected maintenance and emergencies.

24. We hired a management company last year because of the time commitments and efforts involved for a volunteer Board. What additional work does this put on the Board/management company?

The Management Company would manage this project similar to other vendors they manage on our behalf (i.e. tree maintenance, tennis courts, etc.). The work being done by the Board today is the heavy lift to gauge community support, collect the funds and purchase the equipment.

Summary

The Pond Remediation Proposal appropriately places the lion's share of the burden for its execution on the shoulders of individual pond property owners, while at the same time acknowledges a need for HOA leadership, a role without which we believe this important task simply could not be achieved.

While all options provide some coverage for some ponds, we will withhold making a final recommendation until we are able to gauge participation levels of individual pond owners. It should be noted that **Option D** provides the greatest level of comprehensive remediation for **all ponds** on the Beaver Creek waterway, at the lowest entry rate to individual pond owners, which we believe will make participation more affordable to a greater number of people than any other option. Of course, such a bold position requires a higher financial commitment from the HOA, a position which is anticipated to be supported by available reserves. *The Board is currently looking at our reserves to ensure that any proposed action undertaken by HOA on the ponds is properly weighed between the urgency associated with pond remediation vs maintenance of sound financial status for other contingencies. The Board will make adjustments to the Pond Remediation proposal based on these considerations, and also on projected participation levels of pond owners.*

At this time we are providing four different entry points for the community to consider as appropriate for HOA involvement. A vote will be taken by the community on or before the last meeting of the year, Dec 13.

Stay tuned for updates and discussion forums in the meantime. We look forward to meeting with as many of you as we can to help achieve the goal of saving our ponds!