



## City of Cambridge Conservation Commission

147 Hampshire Street  
Cambridge, MA 02139  
Ph. 617.349.4680

*Jennifer Letourneau, Director*

*[jletourneau@cambridgema.gov](mailto:jletourneau@cambridgema.gov)*

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### Public Meeting – Monday, March 11, 2024 at 7:00 PM Zoom MEETING MINUTES

The following meeting minutes were taken by Tracy Dwyer and are respectfully submitted.

Present Commission Members: Purvi Patel (Chair); David Lyons (Vice Chair); Jennifer Letourneau (Director); Erum Sattar; John Leo

Absent Commission Members: Kathryn Hess; Michelle Lane; Elysse Magnotto-Cleary

Attendees: Tracy Dwyer, DPW; Kara Falise, DPW; Lena Frappier, DPW; Adam Corbeil, Department of Human Services; Alex Martin, Department of Human Services; Sue Walsh, Department of Human services; Cecilia Warner; Lee Born; Paula Cortes; Ron Thomas; Eve Carr; Lyn Katterer; Sarah Green

Purvi Patel opened the meeting.

#### **7:01 – Informational Presentation**

Fresh Pond Golf Course – Human Services Department Recreation Division  
Integrated Pest Management Plan

Jennifer Letourneau introduced the proponents, Adam Corbeil, Director of Recreation from the Department of Human Services and Alex Martin, Superintendent for the Fresh Pond Golf Course. Adam went through what they would be speaking out this evening, the 2023 usage of the golf course, the goals that they have, the hybrid model/EIQ which Alex will speak about and the five-year forecast of the golf course.

Jennifer gave a little overview to say that the Fresh Pond Golf Course is in the Fresh Pond Reservation and has a significant amount of wetland resource areas, they have different ponds, receiving waters and some buffer zones. Jennifer stated that they have a representative from the Conservation Commission who sits on the Fresh Pond Advisory Committee and that is Kathryn Hess.

Adam stated that absent tonight was Joanna Krupa who is a PGA Professional and the new Director of the Golf Course. He said Joanna was the New England Assistant of the Year and believes in access for all and she is most excited about reaching into a lot of the other Human Service Programs to create better access whether it be for golf or education about the environment at the course. She works a lot with vets, and she does an adaptive program for

people with disabilities and aging coming in to find their new swing so they can continue to get out and play golf on the reservation. Adam stated that she also has a background in Landscape Architecture with a focus on golf course design at the University of Edinburgh Scotland. Adam stated that in 2023 Fresh Pond Golf Course served over 50,000 rounds of golf at the course. Adam stated they are on the higher end of rounds played in the area and are a very popular course for a lot of different reasons. The course is not a membership course, they do offer season passes and daily passes but the idea that it is an exclusive course is not true. Adam stated that in addition to the daily rounds of golf they also serve a lot of other programs such as MSYP, Junior PGA golf program, high school teams, Veterans Golf Program, Charity Tournaments, etc.

Adam said that the care for the course includes attention to the Fresh Pond Master Plan working with the staff on the reservation as well as staff at DPW. They are underway with rolling out Capital Improvement Projects for example the pathway along the ninth fairway to pull away from the moisture from the path which will help more so for off season use so the water doesn't pool and freeze in the winter months. Adam stated that they have an extensive product review before any application that they put on the course. They also try and purchase battery or electric powered equipment whenever possible. Adam said that they treat the course with preventative curative spot interventions and maintain buffer zones around bodies of water and also looking for ways to respond or refine their practices to respond to seasonal, long-term environmental conditions and he said Alex will talk about that in this report later. Adam stated golf is a sport that is impacted by how they care for the course much like other sports like baseball fields and soccer fields, however golf is over a larger acreage. In New England we need to hold up to a variety of weather conditions whether it is coming on of winter, spring or fall golf it is a pivot sport that involves striking the turf and causing damage on most shots. Fresh Pond is the only site to play golf in the city and needs to be maintained to accommodate all levels of play and invasives and pests impact play so that is part of the management care. Adam said more than eleven acres of turf need to be cut lower than three inches for play to maintain the golf course greens greatly impact the user experience and accounts for two acres and next is the tee boxes, followed by fairways and rough areas. Adam stated that some of their goals at the golf course are to build the soil biology to promote environmental health, maintain a dense turf stand, outgrow disease, and maintain course playability.

Alex Martin, Superintendent of the Fresh Pond Golf Course for 7 years going on his 8<sup>th</sup> year. Alex stated he is going to go over the plan for the next five years to invest the soil biology at the golf course. He said that their plan is to elevate their cultural and nutritional practices, generally over the entire golf course which is going to help control pests and limit inputs is their goal. Alex said that they want to limit all inputs but especially synthetic inputs broadly moving forward towards a more organic golf course but that will take some time. Alex said he will be going through a little bit about how they are going to do that, he said they will start with nutrition and there are seventeen elements nutrients that are essential for plant growth on maintaining the correct levels of each nutrient is a balancing act soil pH can be a good indicator of a sound nutritional program. Alex had a graph which depicted the pH levels of the ninth green. He said that over the time from 2013 to 2023 the acidic level was 5.8 all the way up to 7 and turf is great between six and a half and seven. He said there is proof in the pudding of a good foundation nutrition function by bringing the pH levels up and that is where they want to be for the rest of the greens. Alex said currently he tests for a few indicator greens in the spring and tries to compare each test to the previous years tests to make sure that they are tending in the right direction. Alex said that is what they are doing on golf greens right now going forward they are

going to expand that soil testing to include tee's and fairways and that will help advise them on their nutrition plan for the 2024 season and going forward it will give them a good idea across the whole golf course exactly what they have in the soil and will allow them to spot treat areas. Alex stated that in year two, three and four moving forward they can set a blanket by applying products and they all continue to spot treat which is going to continually minimize products and that is their goal. Alex stated that they stay up to date on reports on Massachusetts guidelines for nutrient management and they apply anything based on these rules that are set for them. He said that they have settled for most of their granular application on sea blend fertilizer from Ocean Organics and this is a Pfas free fertilizer that is derived from organic sources. He said that sea blend as well as some other really interesting products that they will use this year have shown the ability to enhance soil microbial activity. Alex said they are just trying to build up that soil biology and limit other inputs and some of the pests that they deal with on the golf course are foliar diseases so a solid nutritional plan will help diseases just grow out letting the turf regrow. He also said growing and establishing new seeds will help them grow out any of the disease they might encounter so the best way to amend that root zone is to incorporate new types of seed to have a solid cultural practice program. He said that they were going to move to this also just like soil pest and move the program through the golf course from greens, to tees to fairways and this will consist of four aerations, slice seeding twice a year with new grass types into the existing turf stand. Alex said the new grass types are far more resistant to disease and drought, insects and some of the new cultivars that are out now just show how resilient they are to all sorts of different pests. Alex stated they are overdue with the introduction of these methods, and this is the right time to do it. He said he has talked to a lot of superintendents and other turf manages throughout the area and they all told him that the best way to limit any kind of application inputs is to have a solid overseeding program, so that is going to the foundational and core management to the golf course going forward. Alex said another good way to protect the plant is to top dress and they will roll that out to the tees and fairways and expand that. For example, in this area they cut down to a 10<sup>th</sup> of an inch and he said they will cut around a 6<sup>th</sup> of an inch which gives the plant a lot more room for photosynthetic activity and storing energy. He said that is the difference between a 10<sup>th</sup> of an inch and 6<sup>th</sup> of an inch so they will raise the height of the cuts. Alex stated that they will close the course on Monday to help save applications and properly irrigate the course because a lot of the products they use will need to be watered in and they don't have time for that right now so they are making sure that have time for deep and frequent irrigation to help the root system and help the plant defend against any kind of pests that might encounter. Alex said the final step is scouting for pests, looking at roots everyday and having your hands in the soil looking for grubs and smelling the soil to make sure it smells good so you can stay on top of troubles brewing in the soil whether you see it or not there is always pathogens, insects so getting ahead of the problems with a solid cultural practice will help lessen money, lessen inputs and he thinks scouting is the most important part of a solid IPM program. Alex said that they follow the Best Management Practices plan (BMP) and is a comprehensive manual that is almost done. He said in the BMP defines their IPM Integrated Pest Management Plan as a strategy that we use causes for the least toxic production solution to be used or applied only when necessary. Alex stated that they are a member of the National Audubon Society and this a third-party resource that they use to help with their IPM plan and their BMP to triple check all agronomic practices, they are not turf experts but it's a third party to make sure they are on the right track. Alex said he attends a lot of training on soil microbes and pesticide safety, so he is certified as well as all other golf course staff. Alex said when they are going to apply for anything they use the EIQ that Cornell came up with, which is an environmental impact quotient

they use as tool to help guide them with whatever products they are going to apply to the golf course. He said they do have licenses and they do file the correct reports to MDR along the same lines as the Audubon, but they have approached another environmental consultant to triple check all their materials and methods. Alex went through the EIQ that Cornell came up with which is a formula that considers several environmental factors and variables, human toxicity, bird toxicity, etc. and there is an online calculator, so no one needs to do the formula. Alex said any products that they use, they want the value to come under 25 which puts it in a very low toxicity rating and these products tend to last a two-to-three-week span. Alex said a good hybrid application schedule is that an application is made to greens and tees every two to three weeks throughout the entire season. Alex stated that they chose these products using the EIQ formula and the total volume of all the products used last year in the hybrid model is seventy-eight (78) gallons in liquid and fifty-four (54) pounds dry. Alex said he has investigated biological controls offseason looking into all possible methods and research. He said biological control products require frequent high-rate applications. They serve strictly as preventative but storing and mixing these products can all be points of failure because these are live organisms in a bottle. Alex said that an all-organic strategy consists of two applications to each area per week, that would be tees and greens which is 400% more product that is applied preventatively. Alex said from the people he has talked to this method does not work well and you end up getting to a point where you have death, where turf just melts away and dies from several diseases and no protection. During this method you end up reseeding and applying more products that you were trying to avoid and applying them at twice the rate, so an organic fungicide program is not the best course of action. He said that anyone he's talked to the hybrid model is the way to go and that is what they are going to focus on this year and building a cultural practice.

Alex said in 2023 they experimented at the golf course and sprayed synthetics in some places that they normally would spray and left out some places as well. He said they had some pretty bad results, they had crabgrass and when the crabgrass died, they just had bare spots. He said they also had dollar spot which kills the plant, and you have nothing left but hard ground that gets compacted in a day or two from golf carts and play. Alex said they also had pythium which is a totally different disease with its own issues, so they got hammered and this was all to try and avoid using synthetic products but would have controlled these. Alex showed two pictures of areas in the golf course which they used the hybrid EIQ model instead of an organic model and they had really good results using low-rate applications and low EIQ products. Alex also showed a chart depicting two chemicals that are used in other area golf courses and how many products are used. One other 9-hole golf course used twice as much prodiamine as well as some dry product on top of it than Fresh Pond used. Alex said they are already practicing IPM and EIQ and doing everything they can to limit inputs and be a safest course they can. Alex said over the course of time they hope to bring their applications down and their seeding a soil biology up and establishment of new seed with new grasses with very little inputs. They hope in the future the course will act like a great filter for the water source, a great green space for the community and a good environment for the wildlife.

Jennifer announced to the attendees on the Zoom that if anyone was there for the Memorial Drive Phase III project that was moved to the March 25<sup>th</sup> hearing.

Purvi Patel said she has two comments, she thanks them for allowing people to park in the golf course parking lot in the winter months so they can go and walk their dogs around Fresh Pond. Also, she thanked them for their thoughtfulness and not using Pfas in any of the inputs, as the

city is spending a lot of money with new technology in terms of cleaning and making sure the water has the lowest amounts of Pfas in the water.

Jennifer also recognized that Sue Walsh joined the Zoom. Sue Walsh introduced herself, she is the Assistant Director from Adult and Family Services for the Department of Human Services Programs and supports Adam and the team over at the golf course.

David Lyons asked if this was coming back for a permit from the Conservation Commission at some point.

Jennifer stated no that it was not. Jennifer said that this is just to have a fully transparent discussion and asking for any input from the Conservation Commission because it is adjacent to the wetland resource area, but there are no adverse effects on the wetland resource area specific to the plan. Jennifer said this was just to make sure the commission is fully aware of the environmental sensitivity lens that the golf course is adding to their operations. She said this was just for the commission to ask any questions, voice any comments or concerns to help direct the five-year plan that is being implemented. Jennifer said she will try to make this an annual presentation from Adam and Alex to keep the commission in the loop as well as staff from the reservation and Water Department.

David said he's sure that this has been discussed with the Fresh Pond Advisory Committee. He said they had mentioned in the presentation that some areas of the golf course they went full organic last summer in their practices and that didn't work out well. He said he knows in the past the commission has permitted various maintenance issues that have related to the wetland resources on the golf course was that after anything to do with their permitting requirements or was it just a test from the Fresh Pond Advisory Committee's direction.

Alex said that the whole landscape industry is moving toward organic, so they thought it was a good time to try it out. He said they tried it last year and it didn't work out and was a disaster. Adam said that only one other club in the area which was the Martha's Vineyard Club they went all organic which only has about 12,000 rounds per year but now is spending \$500,000 to replace their turf because the program didn't go well.

David thanked them for the presentation and to echo Purvi's comments about not using Pfas compound containing products which is hard to identify sometimes but also critical for the water supply.

Erum Sattar thanked them for the presentation and thanked Jennifer for scheduling this on an annual basis. She said she recently heard that EPA just announced that they are outlawing or phasing out Pfas in food containers which means that when they get into the waterways and degrade and there is less of decomposition coming from that food packaging. She said she was glad to hear that they are on top of these things and anticipating anything that is coming down the line. Erum said she doesn't know how much other places have tried to go all organic and then recorded and demonstrated what the impacts were, she assumes that they did this over a sufficient duration and area and speaks to the longer duration and broader area, she assuming they got all of that and is helpful to see. Erum is wondering if this is something that they would make available for others to see and replicate.

Adam said it has been a learning process and a process of documentation for the practices. He said they are getting good information for the next five years.

Alex said he attended a conference and got some good information and learned some updates on the biological control area. He said to answer Erum's questions he did the experiment over an

indicative portion of the golf course and through life cycles of disease and pests and saw them come to life and then die. Alex said he thought it was a worthwhile experiment and there have been very comprehensive experiments done in 2001 at Bethpage State Park in New York on the greens course. He said he would send the three-page report summary of everything they did to have a fully organic course, and this was right before the Vineyard Club which was built to be an all organic golf course was built. He said at Bethpage they lost three golf greens in the first year and lost turf everywhere and the project was very well funded by the USGA and there were PHD's all over the course trying to give input on what to do. Alex said it didn't really work at the Vineyard Club, but he guesses it depends on what your definition of doesn't work means but spending \$500,000 worth of sod doesn't seem like it is working to him. Alex stated that the one good thing that he learned from talking to these people and doing some research is that they all said it didn't work, but they cut out 15% or 80% of their pesticide products he said it just goes to shows you can get stuck in your ways and you can listen to industry standards too much that are saying this is what you are suppose to be doing. Alex said this allowed them to step back and reevaluate.

Erum said this is so rich and so invaluable, it allows them the opportunity to get the calibration just right and it's a great learning opportunity.

Jennifer stated, like Adam and Alex said, that the next steps are for them to enter into a contract and have staff triple check their methods and follow along on this season's program. Jennifer said that this will all come back to the science and data driven decision making process which the commission will follow along annually.

Jennifer stated that this is not a public hearing and just an informational presentation but wanted to check in and see if anyone from the public had any comments or questions.

Paula Cortes thanked the commission for the opportunity to listen. She congratulated Alex for all his hard work and started to keep up the good work. She also thanked Adam for all his support and thinks this is really tremendous and it bodes well for good playing for everyone.

### **7:43 – Administrative Topics**

Meeting minutes from the February 26, 2024 – approved

There were two edits on page 22 and page 8. Also, David asked to add in page numbers.

4 – In Favor, 3 – Absent, 0 – Abstained

Jennifer said that some of the feedback she got during the Jerry's Pond hearings was where are the meetings posted, how does someone find out about the meetings. She just wanted to run through the process. She said that all RDA's and NOI's get a legal advertisement now through the Cambridge Day, it needs to be a print legal ad and it goes into the Cambridge Day a minimum of five (5) business days in advance of the meeting and she said it's usually more than that. Also, there are direct notices to the abutters of the project site and Jennifer receives the cards back from those mailings as well as their certified mailing list. In addition to that Tracy and/or Lena, with help from other city staff post the agenda with includes the Zoom link for the meeting on the city calendar at minimum 72 hours in advance of the meeting, most times more than that. Jennifer wanted to make the commission aware that people will also reach out regarding meetings, and she will email them back directly and call people back. Jennifer said that these are all the different elements of public notice that are happening during a public hearing.

Jennifer also said the Con Com agenda is posted, the meeting minutes and now the Zoom recordings also get posted to the webpage. She said that part of the conservation they had at the last meeting regarding documents, that the city has purchased a new platform for posting agendas and meeting minutes and any documents associated with those meetings. Jennifer stated that it is going to be a phased rollout and will start with the city council and then work through larger departments like the Planning Board. She said that she is also working with the IT department on an open gov platform for online permitting and the only other municipality that currently has online permitting in this area is Newton, so she is working closely with them on what works for them and what does not work. Jennifer said right now they are meeting and exceeding their outreach and notification requirements. She said for those projects along the Charles River she will ask the proponents to go beyond the required limits so there is some notification to residents in the area.

Purvi thanked Jennifer. She said during her work with MEPA she has a chance to look at a lot of the different municipalities when she sends out site meeting notices. She said she notices that there is a tendency to have a consistent interface and Cambridge's is different. She said the interface that others have shows the intent and requirements that the commission has and then it identifies the commission members, chair, vice chair and director. Purvi said she thinks that is a good template and would like for them to have something like that because right now she does not have access to that information.

Jennifer stated that they do have something like that which is maintained through the City Manager's Office, and this has come up over the last few weeks. Jennifer stated she thinks that this has fallen off the staff's radar at the City Manager level and there is an expectation that they have all your names and information. She said that there is a boards and commissions page that is maintained by the City Manager's office, and they will be updating that very soon.

Jennifer said she also had a draft agenda for the next meeting on March 25<sup>th</sup>. She said that the Museum of Science has an RDA for their Blue Wing Renovation. Jennifer said there is no wetland resource area disturbance but there is an access issue and there is in question how they are putting in their barges and putting up their protection. Jennifer also said that they will have the Notice of Intent for the Memorial Drive Phase 3 project as well. She said they do have a DEP file number but there were no technical comments posted yet.

Purvi said that the last agenda item for discussion as David mentioned earlier were the conditions for Jerry's Pond to review.

Jennifer said she does have a draft for them to review and will email that out to the commission.

David thanked Jennifer for all the updates with the website and public access. He said it would be great if eventually we could get applications and staff comments and a way to post public comments or not. He said it would be helpful for the information to be available to everyone in addition to how to contact the commission members like the Zoning Board. He said if they get all the way to doing online submission to permitting that's incredible. He asked Jennifer when the deadline was for the Jerry's Pond decision, if it was Monday.

Jennifer confirmed it was Monday.

Erum stated that she wanted to bring up with the last meeting that there was dissatisfaction, because one group didn't know what the other group had written in for comment and didn't have

time to respond and couldn't submit to the commission what their comments were. She said she didn't know how the commission becomes kind of a node where they can see more of what other affected people are saying and then be able to see what the commission is receiving so it's out there in the public. She said maybe this is what Jennifer is heading towards like David said but she thought there was a lot of dissatisfaction about that.

Jennifer said she believes that the dissatisfaction was adding to the rhetoric of the discussion and may not have been rooted in the issues at hand. She said there was a lot we should continue and continue but she said the goal for the commission is to be making decisions based on the Wetlands Protection Act and she thinks David stated it very well and brought it back. She said it was to have a fully transparent public process but not to have a fully transparent public process with the goal of creating consensus in the city.

Erum said she fully agrees, and it also was not to create consensus amongst different groups either, she completely agrees.

Jennifer said she spent time after the hearing to think and said she thought she loosened some boundaries when trying to create dialogue within groups but was that a good thing because it became a capacity issue for her, and she thought she should focus more on the commission and making sure they have all the information. She would like to talk more about this at an administrative session and what does the commission feel is the correct balance and give her the direction because she said statutory doesn't state anything about public comment.

Erum said she agrees with what Jennifer is saying. She said there was a lot of information coming to the commission and she didn't know if they were the right place for this to be litigated but it was being litigated by the commission.

Jennifer stated that the public was submitting comments were also those same comments that were being shared at the meeting. Jennifer said that there were a lot of redundancies associated with the comments. She thought this would be a good conversation to have and for the commission members to give her some direction.

### **8:02 – Meeting Adjourn**

4 – In Favor, 3 - Absent, 0 - Abstained