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Judy Griffin
ORLEANS TOWN CLERK

**Marine and Fresh Water Quality Committee
Meeting Minutes
September 25, 2023 (Nauset Room and via Zoom)**

Attendees: Carolyn Auty, Ed Hafner (via Zoom), Carolyn Kennedy (via Zoom), Richard Levy (Chair), Robert Mullin and Judy Scanlon

Regrets: Judith Bruce, Mary Griffin, Valerie May

Other: Select Board Liaison Mefford Runyon and citizen attendees Carol Etzold and Betsy Furntey

AGENDA

1. Call to Order.

The Chair called the meeting open at 10:02 AM.

Rich Levy indicated that he would open each agenda item to public comment following discussion by the Committee and input from Meff Runyon.

Both Carolyn Kennedy and Ed Hafner experienced audio connection problems on Zoom throughout the meeting.

2. Welcome New Associate Committee Member – Carolyn Auty.

Carolyn briefly summarized her background and connections to preserving and monitoring water quality in Orleans. Carolyn's father, Bob, started the Town's Water Quality Task Force, and her family has resided on Crystal Lake for many years. She has been volunteering in the Town's water quality monitoring program. Carolyn recently retired as Director of Compensation at Boston's Children's Hospital and brings experience in data analysis, writing and education to her service on the Marine and Fresh Water Quality Committee. She is a member of the board of the Friends of Crystal Lake.

Judy noted that Bob Auty recruited her to join the MFWQC many years ago and that Carolyn's mother was a founding member of the Friends of Crystal Lake.

3. 2023 Pilgrim Lake Cyanobacteria Bloom – Updates.

Pilgrim Lake has reopened for use.

a. Public Health Update – Alexandra Fitch, Health Agent, Orleans

Ms. Fitch was not available for today's meeting.

b. October 16th Town Meeting and Warrant Article 32 Discussion - Consider Development of Educational Materials and Hosting a Public Informational Meeting - Judy Scanlon.

Judy had the following questions and comments regarding Warrant Article 32 – Alum Treatment at Pilgrim Lake:

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- It has taken many years to develop the Management Plan for Pilgrim Lake, upon which the recommendation for alum treatment is based and supported by the water quality data collected and due to the recent cyanobacteria bloom.
- Article 32 does not include background information that would provide citizens with an understanding of the urgent need for an alum treatment for the lake.
- Funding of remediation of one pond at \$40,000 was approved at the Town Meeting in May 2022 as clearly stated in the summary of the respective article [Article 18, May 2022].
- Would it be possible for the MFWQC to facilitate a public information meeting to present the data and expert recommendations with Ed Eichner of SMAST and/or other pond/lake experts available to address public comments?
- The MFWQC should prepare a fact sheet regarding the treatment to distribute to the public in advance of the meeting.
- Would George Meservey be available to present Article 32 and describe its basis at Town Meeting? George has a long history of involvement with pond management plans and funding that has been provided as well as the basis for the recommended Pilgrim Lake alum treatment.

Rich indicated the following:

- He will poll MFWQC members to determine availability to work on a fact sheet this week. Because the work will involve generating a specific document and not involve deliberation, the number of committee members assisting in the work will not be subject to quorum limitations.
- He will determine whether an additional MFWQC Committee meeting should be held to discuss the Article publicly in advance of Town Meeting.
- Rich will schedule a meeting this week with some MFWQC members to prepare a fact sheet and other information in support of Article 32.

Meff indicated the following:

- A Citizen's Forum regarding the Town Meeting is scheduled for this Thursday [9/27]; however, the agenda has already been established and it may be difficult to add a topic.
- Maxine Minkoff is president of the Orleans Citizen's Forum and could be contacted to request time to discuss Article 32 at the forum.
- Meff was not aware of who would present Article 32 at Town Meeting. He suggested Town Manager Kim Newman should be consulted regarding presentation of Article 32 at Town Meeting and at a Select Board meeting in advance of Town Meeting.

Betsy Furntey provided public comments generally as follows:

- She agreed and advocated for presentation of information to the public to facilitate their understanding regarding the need for alum treatment. This should include an appeal for time to do so at the pending Public Forum.
- George Meservey's participation regarding Article 32 was strongly recommended by Betsy.
- The State's [DEP's] role in approval of alum treatment and timeline involved should be included in public discussions and presentations.

Ed provided the following comments later in the meeting after overcoming audio limitations with responses by others as indicated:

- Ed recommends that a public meeting regarding Article 32 be scheduled by our committee, particularly considering the lack of information included in the article.

- Meff responded that he was not aware of the schedule for establishing a public meeting, but indicated that he would look into getting the topic on a Select Board meeting agenda. However, there would only be 1 or 2 Select Board meetings before the Town Meeting.
- Meff also indicated that the Select Board voted 5-0 to approve Article 32, so there will be no opposition by the Select Board.
- Judy also noted that the Conservation Commission would have a public hearing, which would occur after Town Meeting and only if Article 32 is approved at Town Meeting.

4. APCC Cyanobacteria Monitoring Program Update – Ed Hafner.

Ed indicated the following:

- Baker Pond and Crystal Lake have accelerated bloom-forming counts that require continued monitoring as of the most recent monitoring a week ago Wednesday [9/13].
- The Pilgrim Lake cyanobacteria bloom has abated and water quality is currently acceptable based on recent monitoring.
- Cyanobacterial monitoring will continue through November 1.

5. Friends of Pilgrim Lake and Friends of Crystal Lake – Recent Meeting Updates – Committee Members who these attended meetings are invited to comment.

Bob attended both meetings and provided a brief summary as follows:

- Friends of Pilgrim Lake (FOPL), which has been inactive, is considering returning to become an active 501.C3 organization once again. Bob will check with the organizers of the meeting to determine if reorganization of the organization is proceeding.
- No formal presentation regarding alum was made at the FOPL meeting; however, misinformation regarding alum was presented by some attendees of the meeting, some of which was refuted by other attendees.
- The Friends of Crystal Lake (FOCL) meeting included a presentation by Ed Eichner. A handout of Ed's presentation is available.
- Ed Eichner refuted misinformation that had been frequently communicated regarding alum treatment.

Carolyn Auty attended the FOCL meeting and indicated the following.

- The meeting was well attended by FOCL members and Pilgrim Lake area residents.
- In response to a question by Meff, Carolyn indicated that FOCL members support both home rule petitions regarding the use of fertilizer and pesticides and have prepared educational information regarding restrictions on both.
- In a poll held at the meeting, 31 FOCL members voted yes in favor of alum treatments at both Pilgrim Lake and Crystal Lake and one member voted no.

Judy attended both meetings and provided the following information (some of which was discussed at other times during the meeting) along with some discussions with Meff and others:

- Misinformation presented at the FOPL meeting included a claim that alum is a neurotoxin.
- In response to a question by Meff involving the proposed bylaws to limit fertilizer and pesticide use, Judy provided a more detailed summary of Ed Eichner's presentation at the Friends of Crystal Lake meeting, noting that watershed loading of phosphorus to both Pilgrim Lake and Crystal Lake as principally resulting from wastewater discharge and regeneration from existing

phosphorous in sediment. Relatively minor contributions of phosphorous by lawn runoff occur at both lakes. Runoff from Route 28 contributes some phosphorous to Crystal Lake.

- FOCL has been providing information to members to advocate for restricting the use of fertilizer.
- Meff also cited the Route 28 runoff source and noted that modifying its contribution of discharge to the lake would be complicated because it's a state highway.
- Judy noted that some modifications have been made to mitigate impact from Route 28 runoff to Crystal Lake.

Rich attended the Friends of Crystal Lake meeting and provided the following information along with some discussions:

- Ed Eichner's presentation included the conclusion that Crystal Lake water quality indicates that it is moving toward impairment.
- Ed Eichner clarified misconceptions regarding alum; i.e., it is not a heavy metal and it is not a neurotoxin. Aluminum is generally ubiquitous in the environment. Alum has been used for centuries for treatment of water supplies from surface water sources.
- Meff asked whether treatments may affect a species that consumes cyanobacteria.
- Rich and Judy responded that *Daphnia* are a genus of zooplankton (microfauna) present in surface waters that consumes green algae and cyanobacteria. However, cyanobacteria have evolved to a condition that is less desirable for consumption by *Daphnia*. Microfauna do not tend to be active in the low oxygen conditions that result in cyanobacteria blooms, but the overall benthic environment including microfauna will tend to improve with time after phosphorus is sequestered by alum treatment and benthic deposition proceeds naturally.
- Meff, Rich and Judy discussed placement of the alum treatment which would be targeted for the three deep locations of Pilgrim Lake and would not be subject to direct contact by recreational users of the lake.
- Judy noted that permissible alum concentrations resulting from treatment of ponds and lakes are equal to those resulting from treatment of surface water supplies.

6. Orleans Herring Run NRCS Grant Status, Joint MFWQC and Annual River Herring Meeting, and Orleans Herring Count Volunteer List – Judy Scanlon and Rich Levy.

Grant Status

Judy indicated that the Town's application for a grant for improvement of the herring run has been approved by NRCS (Natural Resources Conservation Service). Funding for the project totals \$2M, consisting of \$400K approved by the Town and \$1.6M in federal funding, which will be used for reconstruction of sections of the herring run.

Judy indicated that receiving the grant reinforces the need for remediation to improve water quality in Pilgrim Lake and reduce the probability of future cyanobacteria blooms with potential for fish kills, which may compromise the opportunity to proceed with construction of improvements under the grant.

Judy also indicated that the recent count demonstrates that herring are thriving in Pilgrim Lake, with population more favorable than at many other runs. Recent small-scale improvements to the run by the Town have contributed to the strong population shown by recent counts.

Judy will provide a copy of the grant approval to the committee. She summarized the schedule, which ultimately involves awarding a contract for construction in February 2026.

Joint Meeting – November 1, 2023

Judy indicated that MFWQ committee will host a joint meeting with the Annual River Herring organization in the Nauset meeting room on November 1, (probably 9 AM to 2 PM). Agenda and speakers at the meeting are to be determined. The joint meeting will be held in conjunction with an MFWQC meeting.

Rich indicated that the meeting will be an opportunity for Pilgrim Lake herring run volunteers to be recognized in public and for the volunteers to learn more about the Pilgrim Lake data and data collected at other herring runs within the organization.

Rich will work with herring team captains to identify volunteers who are willing to be publicly identified and recognized for their contributions.

7. Final Reporting - 2023 Season Freshwater Lake and Pond WQ Sampling, and Summer Estuary WQ Monitoring - Update - Judith Bruce, Carolyn Kennedy, and Judy Scanlon.

Judy spoke briefly in Judith's absence and limitations in Carolyn Kennedy's audio connection. It was a very successful year for both estuary and fresh water sampling. Estuary sampling was completed with 100% compliance with sample collection and QA/QC conformance. Freshwater sampling was also fully completed. Judy noted that the new Assistant Town Planner joined her in one of the estuary sampling events. Judith and Carolyn will likely update the reporting at a future meeting.

8. OPC Sarah's Pond Oxygenation Project Update – Judith Bruce.

Item deferred to a future meeting.

9. Wastewater Management Advisory Committee - MFWQ Committee Representative Report - Judith Bruce, WMAC Representative.

Item deferred to a future meeting.

10. Citizen/User Friendly Data Presentation - Update and Discussion of Freshwater Lake and Pond Candidates - Rich Levy.

Rich and Judy reported that George Meservey negotiated a contract with SMAST. Summaries will include three estuaries and five freshwater lakes/ponds, with presentation of data collected over the long term. The five lakes/ponds to be included need to be identified via concurrence of MFWQC. The process will involve an update of data and development of citizen-friendly summary sheets, with posting on the Town website.

11. Review and Approval of Meeting Minutes- August 28, 2023.

Rich summarized comments received and incorporated to accurately reflect the meeting.

Bob motioned for approval. Judy seconded the motion. Vote of 5-0-1 approved the minutes.

12. Announcements/Action Items

Action Items.

1. Judy suggested that we schedule 2024 meeting dates. We will do so at the next meeting (currently scheduled for 10/23/23).

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2. Rich will poll committee members regarding scheduling an additional meeting before Town Meeting on October 16.
3. Rich will contact committee members to schedule work on a fact sheet regarding treatment of Pilgrim Lake.

13. Public Comment

There were no public comments other than those noted above.

14. Adjourn

Motion to adjourn at 11:25 AM. Bob motioned to adjourn, then Rich seconded. Approved 5-0-0.

Future MFWQC Meeting Dates: YR 2023- 10/23, 11/1, 11/27, 12/18.

Robert Mullin, Clerk Submitted Date: 12/06/2023 (Revision of 11/28/2023 submittal).

Ram 12/06/2023