

Shellfish Conservation Committee Minutes

DATE 1/04/2022 TIME: 7:00 PM

MEETING LOCATION: COMMUNITY ROOM

Commission Members:

Attendance: A for absent, P for present

Attendance	Name	Town	Term
A	Stephen Demelle	North Yarmouth	June 30, 2023
P	Kevin Oliver	North Yarmouth	June 30, 2024
P	Len Kaminow	North Yarmouth	June 30, 2024
P	Judy Colby-George	Yarmouth	December 31, 2023
P	Brandy Adams	Yarmouth	December 31, 2022
P	Ben Tupper	Yarmouth	December 31, 2023

Staff Members:

Attendance	Name	Title/Role
P	Will Owen	Shellfish Warden
A	Randy Bates	Town Council Liaison
P	Ari Leach	Dept. of Marine Resources

Guests/Diggers : Meryl Grady, DMR, Andrew Feeney, Yarmouth resident

Minutes –

Votes/Quorum: All final votes of the commission shall require the affirmative vote of a majority of those members present and voting provided a quorum is present. A quorum shall be deemed present if a minimum of four (4) members are present. A CHAPTER 305 10 quorum shall be required for the transaction of all business except that a smaller number can adjourn to another time.

Reviewed Minutes for December 7, 2021

Vote taken, 5 for, 0 against, 0 abstain.

1. DISCUSSION	Warden's Report		
See attached repot. Question: Were any summonses issued in 2021? Will said no.			
ACTION ITEMS		PERSON RESPONSIBLE	DEADLINE

2. DISCUSSION

Discussion with DMR – Ari Leach & Meryl Grady

Meryl provided attached documents related to water quality in Yarmouth. We had a long discussion about the presentation and the impacts of various water quality results.

- In 2021 there were only 9 P90 results > 31.4 and 6 of those were in the Cousins River.
- 3 Investigative stations have been placed outside the mouth of the Cousins river, all three are heavily impacted by rainfall event. These have been placed because the number have been creeping up in surrounding stations and DMR wanted to know if water from the river was reaching out into the deeper areas. This will help if/when the numbers reach the tipping point to allow for a Rainfall closure rather than a full closure of the area.
- Increased pollution due to rainfall could be caused by flushing of the marsh areas (animal waste), general pollutions from the watershed, or point sources.
- There was some discussion of the impacts of the Royal vs Cousins and how would we figure that out.
 - We could track any thing that floats and trace its pathway using drone footage if that could be arranged.
- Talked about possibly looking at more point source (septic) related issues over time as well as looking at flow into the river to see where it could be slowed down to reduce pollution.
- P90 scores in rainfall areas have scores taken within a day of 1" or more of rain removed from their averages.
- Meryl said if we make progress on cleaning up any known point sources or even some significant area of non-point we should let her know and she can let us know if they will be able to increase the regularity of sampling in order to determine the clean up has reduced the P90 scores for that area.

Ari was asked a number of questions about licenses and how DMR decides if we can increase or decrease a license. She was also asked about the ramifications of us reducing our licenses below 5. We have been told a number of times that if we reduce our commercial licenses below 5, the state would not support the town having a municipal committee/licenses.

- Changes in licenses need to show significant change in resources before the DMR would support either an increase or decrease in licenses.
- Question about what is significant? Ari indicated they use a variety of tools to determine the level of resource.
- Ari said she would send us an outline of the way DMR makes their decisions regarding increasing or decreasing licenses.
- Ari will also look into the question of support of our municipal program if there were a reduction in licenses.

ACTION ITEMS	PERSON RESPONSIBLE	DEADLINE

3. DISCUSSION	Set Survey Dates		
Tabled			
ACTION ITEMS		PERSON RESPONSIBLE	DEADLINE
4. DISCUSSION	Shellfish Management Plan/Survey Plan		
Tabled			
ACTION ITEMS		PERSON RESPONSIBLE	DEADLINE
5. DISCUSSION	Grant Report		
Tabled – Draft report attached			
ACTION ITEMS		PERSON RESPONSIBLE	DEADLINE

OLD BUSINESS	
NEW BUSINESS	

NEXT MEETING DATE	February 1, 2021
MEETING WILL BE HELD AT THE COMMUNITY ROOM IN THE TOWN HALL.	Agenda for Next Meeting: 1. Review Minutes 2. Warden's Report 3. Set Survey Dates 4. Discussion of 8:30 end time 5. Grant 6. Shellfish Management Plan 7. Licenses 8. New Business 9. Set Agenda

TIME MEETING ADJOURNED 9:00 pm



Town of Yarmouth
Marine Patrol
200 Main Street
Yarmouth, ME 04096
(207) 846-3333 Telephone (207) 846-2433 Fax

Jan 4th, 2022 Shellfish Committee Report

Checks Conducted between Dec 8th – Jan 4th.

Day Locations Checked: 112

Night Locations Checked: 15

Contacts Made: 0

Worm Diggers: 0

Summonses: 0

2022 Final Numbers

Conservation Points:

Lower Cousins River Survey (04-24-21)

(6 hours credit)

Kevin Oliver

Ben Tupper

Branden Gibbs 52 Royal Rd NY

Lanes Island Survey 05-08-21

(6 hours credit)

Kevin Oliver

Ben Tupper

Branden Gibbs

Amanda Moeser

Theresa

Middle Cousins River Survey 09-12-21

(6 hours credit)

Ben Tupper

Len Kaminow

Green Crab Trapping June 7th – Sept 7th

Joe Delano (12 credit hours)

Meeting Points

Joe Delano 5-4-21, 12-7-21 (2 points)

Amamda Moeser 11-2-21 (1 point)

Mike Brown 3-2-21 (1 point)



Green Crab Trapping

Photos by Joe Delano

January 4, 2021







JOE DECARO 2021 CRAB TRAP LOG YARWORTH ME

	PULL DATE	POUNDS		PULL DATE	POUNDS
June	9	12	Sept	1	12
	11	8		5	21
	14	20		8	26
	17	11		13	20
	21	18		17	35
	25	19		20	36
	28	23		27	21
July	2	16	Oct	2	34
	6	10		24	30 pulled trap
	9	11			
	13	10			
	17	19			
	20	24			
	24	24			
	28	7			
Aug	2	8			
	7	31			
	10	33			
	15	27			
	19	32			
	21	28			
	27	18			
	29	24			

Water Quality Station Locations

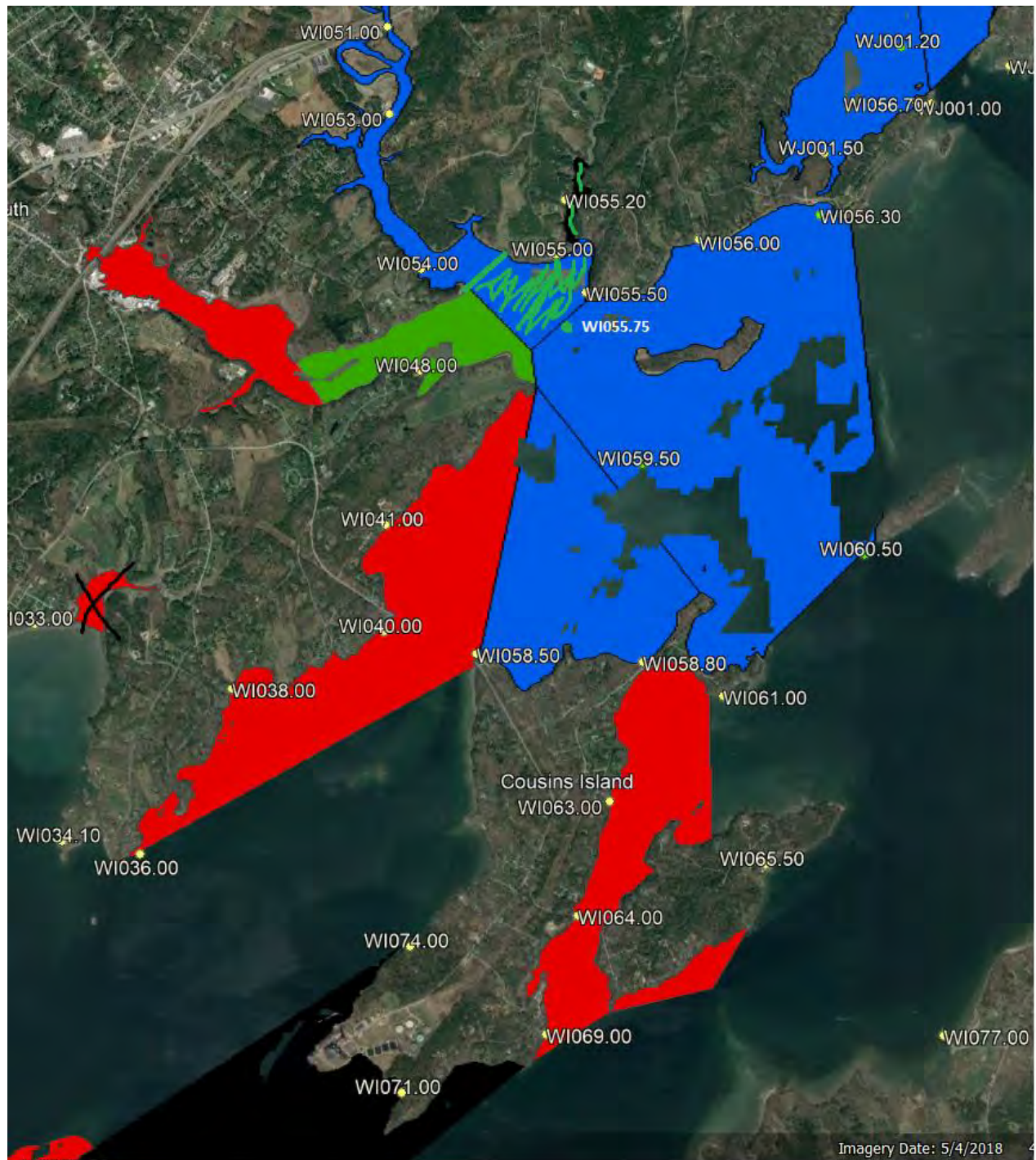


Table 1. Samples taken in 2021 with a score greater than 31.

Station	Date	CATEGORY	Status	Class	Strategy	Salinity	Score	Rain0Hrs	Rain24Hrs	Rain48Hrs	Rain72Hrs
WI040.00	29-Jun-21	A	C	P	R	32	112	0	0	0	0
WI048.00	30-Jun-21	A	O	CR	R	32	400	0	0	0	0
WI055.00	20-Jul-21	A	C	CA	A	11	>1600	0.25	0	1.68	0
WI055.75	20-Jul-21	Z	X	X	I	25	1520	0.25	0	1.68	0
WI059.50	20-Jul-21	Z	X	X	I	28	152	0.25	0	1.68	0
WI060.50	20-Jul-21	Z	X	X	I	28	118	0.25	0	1.68	0
WI041.00	13-Sep-21	A	C	P	R	32	32	0	0	0	0.51
WI055.00	18-Oct-21	A	O	CR	R	31	100	0	0.38	1.22	0
WI055.75	18-Oct-21	Z	X	X	I	32	35	0	0.38	1.22	0

Table 2. 2021 P90s.

Station	Class	Count	MFCCount	GM	SDV	MAX	P90	Appd_Std	Restr_Std	Min_Date
WI034.10	A	30	30	3.4	0.49	300	14.7	31	163	11/15/2017
WI036.00	P	30	30	4	0.5	96	18	31	163	3/29/2017
WI038.00	P	30	30	7.4	0.85	1040	92.1	31	163	5/3/2017
WI040.00	P	30	30	5	0.54	360	25.1	31	163	3/29/2017
WI041.00	P	30	30	5.6	0.59	1020	32.4	31	163	5/2/2017
WI048.00	CR	30	30	11.2	0.73	840	99.8	31	163	3/5/2019
WI051.00	CA	30	30	4.7	0.42	41.8	16.6	31	163	10/16/2018
WI053.00	CA	30	30	3.6	0.38	58	11.5	31	163	10/16/2018
WI054.00	CA	30	30	3.6	0.53	620	17.6	31	163	10/16/2018
WI055.00	CR	30	30	6.3	0.74	1700	57.8	31	163	6/11/2019
WI055.20	CR	30	30	8.8	0.65	200	61.3	31	163	6/12/2017
WI055.50	CA	30	30	5.1	0.64	1700	34.3	31	163	10/16/2018
WI056.00	CA	30	30	3.7	0.64	1700	25.1	31	163	2/11/2019
WI058.50	CA	30	30	3.8	0.48	120	16.2	31	163	11/19/2018
WI058.80	CA	30	30	4.4	0.47	86	18.3	31	163	11/19/2018
WI061.00	A	30	30	4.1	0.44	58	15.1	31	163	7/17/2018
WI063.00	P	30	30	5.2	0.48	98	22	31	163	6/19/2017
WI064.00	P	30	30	3.5	0.49	128	14.9	31	163	6/12/2017
WI065.50	A	30	30	2.7	0.31	20	6.8	31	163	5/2/2017
WI069.00	P	30	30	4.4	0.67	1700	32.2	31	163	6/19/2017
WI071.00	R	30	30	3.6	0.46	120	14.7	31	163	7/18/2017
WI074.00	R	30	30	3	0.49	240	12.8	31	163	5/2/2017

Table 3. 2021 investigative stations and their total sample counts.

Station	Class	Count
WI055.75	X	5
WI056.30	X	28
WI059.50	X	26
WI060.50	X	12

Table 4. 2021 samples for investigative station WI 55.75.

Station	Date	Class	Salinity	Method	Score	Rain0Hrs	Rain24Hrs	Rain48Hrs	Rain72Hrs
WI055.75	16-Jun-21	X	31	MFCOL	<2	0	0.4	0.4	0.2
WI055.75	20-Jul-21	X	25	MFCOL	1520	0.25	0	1.68	0
WI055.75	04-Aug-21	X	28	MFCOL	13	0	0	0.1	0
WI055.75	22-Sep-21	X	31	MFCOL	2	0	0	0	0
WI055.75	18-Oct-21	X	32	MFCOL	35	0	0.38	1.22	0

Yarmouth Water Quality Monitoring Project



Maine Shellfish Restoration and Resilience Project Report

Yarmouth Shellfish Committee

December 2021

Project Contact:

Judy Colby-George, Yarmouth Shellfish Committee Member

judycg@gmail.com

207-846-2355

Project Summary

In January 2020, the Town of Yarmouth Shellfish Committee was awarded a \$5,000 grant through the Maine Shellfish Restoration and Resilience Fund to identify the sources of point and non-point bacterial pollution near clam flats in Yarmouth, Maine. While one shoreline survey was conducted in 2020, a majority of project activities occurred in 2021 due to challenges posed by the COVID-19 pandemic. An area known as White's Cove was of specific interest to the town shellfish harvesters and shellfish committee members, thus was identified as the primary area of focus. P90 scores in this cove are an order of magnitude higher in its P90 score than all the other sampling locations in our community. Homes in this area are all on individual septic systems and there is at least one overboard discharge nearby. Upon further discussion and review of DMR water quality data from the past 3 years, survey efforts were extended to cover the areas adjacent to water quality sampling stations with declining P90 scores ("orange" stations on [DMR Shellfish Sanitation Map](#)). These areas include Cornfield Point and the South Freeport shoreline from Winslow Park to Fogg Point. In total, 4 shoreline surveys were conducted by 2 contractors, the harbormaster, and volunteers from the shellfish committee (Fig. 1). We then collected water quality samples from locations identified during shoreline surveys to be analyzed for fecal coliform at the Yarmouth Wastewater Treatment Plant. Based on this information, we identified 3 specific areas to collect samples for microbial source testing to determine if sources of pollution are associated with humans, dogs, or geese.

Shoreline Surveys

INSERT FIGURE 1. MAP OF SHORELINE SURVEY TRANSECTS

During the shoreline surveys, multiple, potential sources of pollution were observed and marked with GPS, including pipes extending from home lots and road runoff, groundwater seepage causing excess algal growth, and the presence of animals (geese, wading birds, gulls) and/or animal feces (dog,

deer, birds) (Fig. 2). Other interesting notes from shoreline surveys included the presence of hardened shorelines, major erosion issues, derelict aquaculture gear, and limited shoreline access (“private” and “no trespassing” signs).



Figure 2. (Left to right, clockwise): Bright green algae growing on rocks, example of groundwater seepage; example of one of the pipes observed during shoreline surveys; continuously flowing stream draining upland neighborhood.

Water Quality Sampling

Water quality samples were collected at DMR sampling stations at high and low tide, in addition to sites identified as potential sources of pollution during shoreline surveys in the White’s Cove area (Fig. 3). During this first round of water quality sampling, samples were sent to the Yarmouth Wastewater Treatment Plant and tested for fecal coliform. Seawater samples collected at low tide near

Cornfield Point and White's Cove were above the regulatory limit, as well as freshwater samples collected in White's Cove from upland drainage. Seawater samples collected at high tide near the Cousins Island Bridge at the edge of White's Cove had no detectible fecal coliform bacteria, although it's important to note that only two samples were collected at high tide.

INSERT FIGURE 3. Map of WQ sample gps points

From this information and based on remaining funds, we decided to focus microbial source testing efforts at the locations in White's Cove with high scores, as well as the DMR sampling site near Cornfield Point, and use human-associated, goose, and dog *Bacteroidetes* as the primary targets. Samples are being collected in duplicate—one set is taken to the Yarmouth WWTP to identify samples that contain fecal coliform, while the second set is sent to a private lab (Microbial Insights, Knoxville, TN) who is storing the samples, and will run MST in bulk once sample collection is completed in mid-December. As this type of analysis is expensive, we are able to run approximately 3-5 samples, depending on holding and shipping costs. Results from this project will be discussed by the town shellfish committee, hopefully in collaboration with regional DMR staff, and will inform future plans and decision-making. Any locations where human-associated *Bacteroidetes* is identified will be passed on to the town inspector, who has agreed to follow up and conduct inspections. Our long-term goal is to identify and remediate sources of pollution in White's Cove, as well as monitor and address water quality issues that arise at locations where P90 are increasing.

Sharing Project Data and Learning

The project report and associated data collected during this project are accessible to the Town of Yarmouth and DMR. Data has been stored in the GIS application and program developed by Judy Colby-George which enables us to visualize the presence of observed, potential pollution sources in

relation to town parcels, septic systems, and overboard discharge sites. Data produced during the project are available as GIS layers which include sampling locations and results, septic year and location where available, parcel data, Catch basin locations, and associated photos. Preliminary results of the project were discussed at the November 2021 shellfish committee meeting. Final water quality sampling results—to include the microbial source analysis (humans, birds, dogs)—will be shared with the committee as soon as results become available. Furthermore, a list of companies that provide microbial source testing, including contact information, pricing, and sampling protocol is available to share upon request. As promised in our grant proposal, shellfish Commission members are willing to participate in a presentation during Shellfish Day at the Maine Fisherman's Forum.

Acknowledgements

This project would not have been possible without the support of town staff, including the Harbormaster Will Owen, along with the hard-working employees down at the Yarmouth Wastewater Treatment Plant. They contributed supplies, staff time, and ran water quality samples at no charge to the shellfish committee. The committee would also like to thank Broad Reach Foundation and the Maine Shellfish Restoration and Resilience for supporting this project, in addition to their patience and flexibility in 2020. Lastly, we want to thank and acknowledge town shellfish committee members who volunteered their time to assist with the project, specifically Judy Colby-George and Ben Tupper.