



ASSESSING STAKEHOLDER OPINIONS ABOUT THE NANTUCKET COMMUNITY POOL

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Assessing Stakeholder Opinions About the Nantucket Community Pool

An Interactive Qualifying Project submitted to the Faculty of
WORCESTER POLYTECHNIC INSTITUTE in partial fulfillment
of the requirements for the degree of Bachelor of Science

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Date:
10 December 2024

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This report represents the work of WPI undergraduate students submitted to the faculty as evidence of completion of a degree requirement. WPI routinely publishes these reports on its website without editorial or peer review. For more information about the projects program at WPI, please see <http://www.wpi.edu/academics/ugradstudies/project-learning.html>

Abstract

The Nantucket Community Pool opened at Nantucket High School in 1989 and remains a vital community resource. The Nantucket Community School manages the pool but strives to meet the changing demands of a growing community. We analyzed patterns in pool usage and assessed the opinions of the community and stakeholders to determine how to optimize current programming with the current staffing, space, and scheduling limitations. Based on our findings, we recommend how to change program offerings, scheduling, and registration, and how to improve pool facilities to better meet community demands.

Executive Summary

Community pools have a long history in the United States, with the first public swimming pools built in the 1890s (Wiltse, 2008). Teaching people to swim is one essential function of public pools, especially given that drowning is the third leading cause of death worldwide (*World Health Organization*, 2024). Formal swimming lessons can reduce that risk, but public pools do much more than just teach people to swim (*Ramirez 2022*). They serve as a community hub, a place where kids and adults can socialize and engage in fun activities. Traditionally, community pools have offered a variety of programs from swimming lessons to Aquacise classes. Recently, programs for the elderly, physical rehabilitation, and people with special needs are becoming more popular (Tipping, 2023). Swimming programs are driven by public demand and a growing awareness of the multitude of benefits, including mitigating the risks of drowning, promoting physical and mental rehabilitation, improved cardiovascular health and overall wellness, and even enhanced academic success.

In 1989, the town of Nantucket, MA, opened a community pool as part of the new high school complex and tasked the Nantucket Community School with overseeing programming and maintenance. The Nantucket Community School tries to meet the changing and competing demands for programming with a modest staff and budget within the physical limitations of the pool. These challenges are exacerbated by the enormous seasonal variations in populations and the difficulties in recruiting sufficient staff because the cost of living on Nantucket is very high.

Goals and Objectives

The goal of this project was to evaluate the current usage of the Nantucket Community Pool and recommend new programs and how to optimize current programming with the current staff, space, and scheduling limitations. To accomplish this goal, we identified and completed four objectives.

Objective 1: Evaluate patterns in the recent and current uses of the Nantucket Community Pool.

Objective 2: Determine the opinions of staff and other stakeholders regarding topics such as programming, use, management, operations, and finances.

Objective 3: Determine the opinions of the community (pool users and nonusers) on pool usage and programming, hours of operation, communication and outreach, and management.

Objective 4: Recommend realistic and future changes to programming, facilities, and management that better fulfill the community's needs.

To achieve this goal and accomplish our objectives, we performed an analysis of past program participation data and the current scheduling of programs to identify trends in pool usage. We developed a survey that was distributed by NCS to current and former patrons of the Nantucket Community Pool and received 197 responses. We interviewed current and past directors who have managed the Nantucket Community Pool, staff members, other stakeholders,

and community members to better understand how the pool operates, the demands from the community, and the limitations that prevent the demands from being met.

Conclusions

Based on our research, we drew nine conclusions regarding pool hours, programming, registration, and facilities:

Conclusion 1: The scheduling of pool hours and programming is inefficient

The current schedule does not effectively optimize the hours between pool programming, open swim hours, and programs from other organizations. As a result, there are programs with an insufficient amount of time or sessions and lanes at the pool going unutilized for any activity during certain hours. Recommendations 1, 2, and 3 refer to this issue.

Conclusion 2: The capacity of programs is insufficient

There are no available slots in programs, such as Learn-to-Swim and Family Swim, to meet demand, which impedes many community members from attending programs at the pool. Recommendations 1 and 6 address this issue.

Conclusion 3: Registering for programming online is difficult

Members of the community have difficulties registering for programs online because registration times are inconvenient, and website navigation is difficult. Recommendations 4 and 5 address this issue.

Conclusion 4: The quality of the facilities needs to be improved

The overall facilities, particularly the locker rooms, lack both quantity and quality to satisfy the community. The locker rooms are too small and need more frequent cleaning. Recommendations 7 and 8 address this issue.

Conclusion 5: The facility's connection with the high school creates operational limitations

The physical and operational connection to the high school makes it difficult for the Nantucket Community Pool to operate independently from the high school. Thus, the pool cannot be open to the public as often or at all when the high school is closed on the weekends or holidays. Recommendation 10 addresses this issue.

Recommendations

Based on our findings and conclusions, we have developed two sets of recommendations. The first set of recommendations (1-5) can be more easily implemented given existing staffing, facilities, and resources. The second set of recommendations (6-9) is a 'wish list' of suggestions that may be more difficult to implement and will require more time, resources, and community support.

Recommendation 1: We recommend the NCS optimizes the current schedule to better suit the community's demands

NCS should consider rearranging the schedule to allow for more program times that are more convenient for their audiences (e.g., early morning lap swim, midday Aquacise classes, non-working hours Learn-to-Swim). Another change that could be implemented is overlapping programs of similar age groups to maximize the use of the pool.

Recommendation 2: We recommend adding more physiotherapy & adaptive swimming programs

Collaborating more with Nantucket S.T.A.R would help the Nantucket Community Pool become more inclusive to community members who have disabilities. Furthermore, adding more aquacise or physiotherapy programs to the pool would be both a popular addition and a beneficial resource to improve the community's health. Another method that could be explored is to utilize more types of equipment to improve the quality of the body.

Recommendation 3: We recommend NCS extends hours on Saturday and opens the pool on Sundays

Having more weekend hours for open swimming, early mornings on Saturdays, and midday on Sundays, would provide more accessible hours for the community. For a smaller scale extension to operational times, NCS could start by adding an additional hour at 7 AM for open swim.

Recommendation 4: We recommend improving the registration process equity

To improve equity in the registration process, NCS should consider changing the registration times outside of work hours or on Sundays to improve the accessibility of registration. We also recommend that registration times are staggered among programs instead of all occurring at the same time to allow parents with multiple children to register children of different skill levels at different times instead of simultaneously.

Recommendation 5: We recommend improving the website and registration system's navigability

We recommend reviewing the website with an expert in human-computer interaction to see how the website could be optimized to improve the user experience and comprehensibility. Alternatively, NCS could host an in-person think-aloud test with a sample audience to identify difficulties in navigating the website.

Recommendation 6: We recommend NCS recruits more staff members

We recommend that NCS promote the recruitment of high school athletes more by advertising the benefits of being a staff member and increasing the amount and frequency of lifeguard certification classes throughout the various seasons.

Recommendation 7: We recommend that facility repairs, and maintenance should be improved

We recommend more frequent cleaning should be performed in the locker rooms to reduce wet floors and improve cleanliness. The drainage system should also be upgraded to reduce the chance of clogging, flooding, and mold.

Recommendation 8: We recommend expanding the locker room and shower facilities

Larger or more locker rooms and shower spaces would reduce overcrowding and improve sanitation. Additionally, having more locker rooms will increase the flexibility of pool programs, allowing multiple programs to run at the same time.

Recommendation 9: We recommend building a second pool

The construction of another pool that operates fully independent from the high school would help solve many of the concerns about program scheduling and capacity. Also, a new facility means that larger locker rooms and more modernized pool cleaning technology can be installed.

We hope that this project helps the Nantucket Community Pool to run more efficiently and to better meet the needs of the Nantucket community.

Acknowledgements

Our team would like to thank the following for their contributions to our project:

Alicia Graziadei, Lindsay Pykosz, and James Voyages at the Nantucket Community School

Our Sponsors at the Nantucket Community School, Alicia Graziadei, Lindsay Pykosz, and James Voyages offered important guidance and support throughout our project. Their experience of leading the school and the pool was essential to the development of our project. They were always available to answer any questions and provided opportunities to engage more community members to take our survey.

Dominic Golding and Melissa Belz

Our Advisors, Dominic Golding, and Melissa Belz were crucial to the development and execution of our project. Without their feedback and support, our project would not have happened. Their understanding of the island and our project was instrumental to our success. We are grateful to have had them as our advisors on IQP.

The Nantucket Community Pool Staff

We would like to thank all the Nantucket Community Pool staff for all their help and cooperation while we conducted our research. A special thank you to all those staff who helped to provide lots of important information for our project by participating in interviews with our team.

The Nantucket Public Schools

A thank you to the Nantucket Public Schools for helping with our research. A special thank you to School Superintendent Beth Hallett, Director of Facilities Chip Clunie, NHS Athletics Director Travis Lombardi, and CPS PE Teacher Olivia Gallugi who participated in interviews with our team.

Nantucket S.T.A.R.

We would like to thank Nantucket S.T.A.R, especially executive director Eliza Steadman, who took time out of her day to participate in an interview with our team.

Nantucket Boys and Girls Club

We would like to thank the Nantucket Boys and Girls Club, especially CEO Jamie Foster, who took time out of his day to participate in an interview with our team.

Survey Respondents

We would like to thank everyone who took time out of their day to fill out our survey and provided valuable feedback on the operations of the Nantucket Community Pool. A special thanks to everyone willing to take part in a follow-up interview. Without their feedback, our project would not have been successful. We are grateful for all our interviewees and hope to accomplish what they desire.

The Nantucket Current

We would like to thank the Nantucket Current for releasing a press release about our project to engage more community members to take our survey.

The Nantucket Yacht Club

We would like to thank the Nantucket Yacht Club for providing us with a place to stay on the island and for always being available during an issue. We loved the space and felt at home.

Walter's

We would like to thank Walter's for fueling us at any time throughout our stay at Nantucket.

Young's Bicycle Shop

We would like to thank Young's for providing us with our bicycles for transportation around the island.

ReMain Nantucket and The Nantucket Historic Association

We would like to thank ReMain Nantucket for welcoming us to the island and providing us with gift cards from locations on the island. We are grateful to have received these gift cards and to try new things on the island. We would like to thank the Nantucket Historic Association for welcoming us to the island and creating a scavenger hunt for our cohort to learn about the island.

Our House and Fusaro's

We would love to thank Our House for hosting our cohort for dinner and Fusaro's for their generous donation of lasagnas for the dinner.

Table of Contents

| | |
|--|------------------------------|
| ABSTRACT | i |
| EXECUTIVE SUMMARY | ii |
| ACKNOWLEDGEMENTS | vi |
| TABLE OF CONTENTS | viii |
| LIST OF FIGURES | x |
| LIST OF TABLES | xi |
| AUTHORSHIP | xii |
| 1.0 INTRODUCTION | 1 |
| 2.0 BACKGROUND | 2 |
| 2.1 History of Swimming Pools in the U.S. | 2 |
| 2.2 Benefits of Swimming | 2 |
| 2.2.1 Water Safety | 3 |
| 2.2.2 Well-Being and Growth | 4 |
| 2.3 Recent Trends in Aquatic Programming | 5 |
| 2.4 The Nantucket Community Pool | 7 |
| 2.4.1 Open Swimming & Aquatic Programs at the Nantucket Community Pool | 8 |
| 2.4.2 Comparisons with Other Community Pool Program Offerings | 8 |
| 2.4.3 Advantages and Disadvantages of an Indoor Pool on Nantucket | 8 |
| 2.5 Conclusion | Error! Bookmark not defined. |
| 3.0 METHODOLOGY | 11 |
| 3.1 Evaluating Patterns in Pool Usage | 12 |
| 3.1.1 Analyzing Participation Data | 12 |
| 3.1.2 Interviewing Aquatics Director, Former Aquatics Director, Athletics Director | 12 |
| 3.2 Determine Stakeholder Opinions | 12 |
| 3.3 Determine Community Opinions | 14 |
| 3.3.1 Conducting Online Surveys | 14 |
| 3.3.2 Follow-Up Interviews | 15 |
| 3.4 Recommendation of Changes | 15 |
| 4.0 FINDINGS AND ANALYSIS | 16 |
| 4.1 Current Usage of the Community Pool | 16 |
| 4.2 Scheduling Challenges for Programming | 19 |
| 4.3 Adaptive and Therapeutic Programming | 21 |
| 4.4 Programming from Other Organizations | 22 |
| 4.5 Registration Challenges for Programming | 24 |
| 4.6 Facilities and Locker Room | 26 |
| 5.0 CONCLUSIONS AND RECOMMENDATIONS | 28 |
| Conclusion 1: The scheduling of pool hours and programming is inefficient | 28 |
| Conclusion 2: The capacity of programs is insufficient | 28 |

| | |
|--|-----------|
| Conclusion 3: Registering for programming online is difficult | 28 |
| Conclusion 4: The quality of the facilities needs to be improved | 29 |
| Conclusion 5: The facility's connection with the high school creates operational limitations | 29 |
| Recommendation 1: We recommend the NCS optimizes the current scheduling to better suit the community's demands | 29 |
| Recommendation 2: We recommend adding more physiotherapy & adaptive swimming programs | 30 |
| Recommendation 3: We recommend NCS extend hours on Saturdays and open the pool on Sundays | 30 |
| Recommendation 4: We recommend improving the functionality and fairness of the registration process | 31 |
| Recommendation 5: We recommend improving the website and registration system's navigability | 31 |
| Recommendation 6: We recommend NCS recruits more staff members | 31 |
| Recommendation 7: We recommend that facilities and maintenance improved | 32 |
| Recommendation 8: We recommend expanding the locker room and shower facilities | 32 |
| Recommendation 9: We recommend building a second pool | 32 |
| REFERENCES | 33 |
| APPENDICES | 40 |
| Appendix A. Sponsor Description | 40 |
| Appendix B. Preliminary Interview Scripts: Aquatic and Athletic Directors | 43 |
| Appendix C. Preliminary Interview Scripts: Stakeholders | 47 |
| Appendix D. Preliminary Interview Scripts: Pool Staff | 52 |
| Appendix E. Preliminary Survey Questions | 55 |
| Appendix F. Preliminary Interview Scripts: Follow up Interviews from Surveys | 64 |

List of Figures

| | |
|---|----|
| <i>Figure 1: Swimming Lessons in the United States (CDC, 2024).</i> | 3 |
| <i>Figure 2 : Aquatic programs offered in the US (Tipping, 2023).</i> | 6 |
| <i>Figure 3 : Planned aquatic programs offered in the US (Tipping, 2023).</i> | 6 |
| <i>Figure 4 : Picture of the NCS Community Pool</i> | 7 |
| <i>Figure 5 : Project Goals, Objectives, and Related Tasks</i> | 11 |
| <i>Figure 6 : Registration and Waitlist Numbers for Learn-to-Swim programs, 2023-24</i> | 17 |
| <i>Figure 7 : Demand for Extended Hours for Lap Swim and Family Swim on Saturdays (n1 = 122, n2 = 90)</i> | 18 |
| <i>Figure 8 : Demand for Open Hours for Lap Swim and Family Swim on Sundays (n1 = 122, n2 = 90)</i> | 18 |
| <i>Figure 9 : Summer programs weekly schedule</i> | 20 |
| <i>Figure 10 : Nantucket Community Pool Lane Availability. A typical November week</i> | 20 |
| <i>Figure 11 : Additional programming requested by respondents</i> | 22 |
| <i>Figure 12 : The Nantucket S.T.A.R. organization logo</i> | 23 |
| <i>Figure 13 : The Nantucket Boys and Girls Club logo</i> | 23 |
| <i>Figure 14 : Survey responses to the question of program availability (n = 197)</i> | 24 |
| <i>Figure 15 : Survey responses to the question of whether the registration window is long enough (n = 197)</i> | 25 |
| <i>Figure 16 : Picture of men's locker room</i> | 26 |
| <i>Figure 17 : Nantucket Community School Logo</i> | 40 |

List of Tables

| | |
|--|----|
| <i>Table 1 : Comparison of aquatics programs offered by Nantucket Community Pool</i> | 10 |
| <i>Table 2 : Interviewed Stakeholders</i> | 13 |

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| Abstract | JY | ACF, LH, ET, JY |
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| Executive Summary | ACF, JY | ACF, LH, ET, JY |
| 1.0 Introduction | ACF, LH, ET, JY | ACF, LH, ET, JY |
| 2.0 Background | ACF, LH, ET, JY | ACF, LH, ET, JY |
| 2.1 History of Swimming Pools in the U.S | LH | ACF, LH, ET, JY |
| 2.2 Benefits of a Swimming | ACF, LH, ET, JY | ACF, LH, ET, JY |
| 2.2.1 Water Safety | LH | ACF, LH, ET, JY |
| 2.2.2 Well-Being and Growth | ACF, ET, JY | ACF, LH, ET, JY |
| 2.3 Recent Trends in Aquatic Programming | JY, ACF | ACF, LH, ET, JY |
| 2.4 The Nantucket Community Pool | LH | ACF, LH, ET, JY |
| 2.4.1 Open Swimming & Aquatics Programs at the Nantucket Community Pool | ACF | ACF, LH, ET, JY |
| 2.4.2 Comparisons with Other Community Pool Program Offerings | JY, ET | ACF, LH, ET, JY |
| 2.4.3 Advantages and Disadvantages of an Indoor Pool on Nantucket | JY, ET | ACF, LH, ET, JY |
| 2.5 Conclusion | JY | ACF, LH, ET, JY |
| 3.0 Methodology | ACF, LH, ET, JY | ACF, LH, ET, JY |
| 3.1 Evaluating Patterns in Pool Usage | ACF | ACF, LH, ET, JY |

| | | |
|---|-----------------|-----------------|
| 3.1.1 Analyzing Participation Data | ACF | ACF, LH, ET, JY |
| 3.1.2 Interviewing Aquatics Director and Athletics Director | ACF | ACF, LH, ET, JY |
| 3.2 Determine Stakeholder Opinions | LH | ACF, LH, ET, JY |
| 3.3 Determine Community Opinions | ET | ACF, LH, ET, JY |
| 3.3.1 Conducting Online Surveys | ET | ACF, LH, ET, JY |
| 3.3.2 Follow-Up Interviews | ET | ACF, LH, ET, JY |
| 3.4 Recommendation of Changes | JY | ACF, LH, ET, JY |
| 4.0 Findings and Analysis | ACF, LH, ET, JY | ACF, LH, ET, JY |
| 4.1 Current Usage of the Community Pool | LH, JY | ACF, LH, ET, JY |
| 4.2 Scheduling Challenges for Programming | ACF | ACF, LH, ET, JY |
| 4.3 Adaptive and Therapeutic Programming | ET | ACF, LH, ET, JY |
| 4.4 Programming from Other Organizations | ET | ACF, LH, ET, JY |
| 4.5 Registration Challenges for Programming | JY | ACF, LH, ET, JY |
| 4.6 Facilities and Locker Rooms | LH, ACF | ACF, LH, ET, JY |
| 5.0 Conclusions and Recommendations | ET, JY | ACF, LH, ET, JY |

1.0 Introduction

Community pools have a long history in the United States, with the first public swimming pools built in the 1890s (Wiltse, 2008). Teaching people to swim is one essential function of public pools, especially given that drowning is the third leading cause of death worldwide (*World Health Organization, 2024*). Formal swimming lessons can reduce that risk, but public pools do much more than just teach people to swim (*Ramirez2022*). They serve as a community hub, a place where kids and adults can socialize and engage in fun activities. Traditionally, community pools have offered a variety of programs, from swimming lessons to aquacise classes. Recently, programs for the elderly, physical rehabilitation, and people with special needs are becoming more popular (Tipping, 2023). Swimming programs are driven by public demand and a growing awareness of the multitude of benefits that include mitigating the risks of drowning, promoting physical and mental rehabilitation, improved cardiovascular health and overall wellness, and even enhanced academic success.

In 1989, the town of Nantucket, MA, opened a community pool as part of the new high school complex and tasked the Nantucket Community School with overseeing programming and maintenance. The Nantucket Community School tries to meet the changing and competing demands for programming with a modest staff and budget within the physical limitations of the pool. These challenges are exacerbated by the enormous seasonal variations in populations and the difficulties in recruiting sufficient staff.

The goal of this project was to evaluate the current use of the Nantucket Community Pool and recommend new programs and how to optimize current programming with the current staffing, space, and scheduling limitations. To accomplish this goal, we identified and completed four objectives.

Objective 1: Evaluate patterns in the recent and current uses of the Nantucket Community Pool.

Objective 2: Determine the opinions of staff and other stakeholders regarding topics such as programming, use, management, operations, and finances.

Objective 3: Determine the opinions of the community (pool users and nonusers) on pool usage and programming, hours of operation, communication and outreach, and management.

Objective 4: Recommend realistic and future changes to programming, facilities, and management that better fulfill the community's needs.

In this report, we first discuss the history and benefits of swimming, highlighting water safety and holistic well-being. We then examine recent trends in aquatic programming, the strengths, and limitations of an indoor community pool, and finally, the aquatic services provided by the Nantucket Community Pool. Following the background section, we discuss our research methods, followed by our findings, conclusions, and recommendations.

2.0 Background

2.1 History of Swimming Pools in the U.S.

The history of public swimming pools in the United States reflects contemporaneous views on racial segregation. Philadelphia was one of the first cities to build public swimming pools, with the city operating nine pools at the start of the 1890s (Wiltse, 2008). The pools were originally built for functionality rather than recreation, as they were “austere public baths” rather than “leisure resorts” (Wiltse, 2008, p2). In the early 1900s, there was a switch in public pool usage to be more recreational. At this time in the north, swimming pools were segregated by class and gender; however, public pools for the working class were not segregated by race. In the early 1920s, there was a social reconstruction of public recreation spaces, including public swimming pools, barring people of color from using the pools.

In the 1950’s, the segregation of public swimming pools was continuously challenged. For example, in Baltimore, following the drownings of several Black children, the National Association for the Advancement of Colored People (NAACP), successfully sued the city to desegregate their public pools so that everyone had equal opportunity to learn how to swim (McGee, 2021). The desegregation of public pools across the United States precipitated a variety of responses from both city officials and White pool users. Many pools were privatized, allowing them to restrict membership based on income and race. Other cities, such as Montgomery, Alabama, and New Orleans, Louisiana, simply shut down their public pools following the desegregation decision. In St. Louis, there were riots and violent attacks on black people that used the pool. Although public pools are desegregated, many factors continue to restrict minority access, which may help explain the lower rates of swimming proficiency among minorities (CDC, 2024). As of 2023, 309,000 public pools in the United States offer a variety of programs (Pool News, 2023). These pools serve important roles in bringing the community together through recreation and offer a variety of benefits, most obviously the benefit of learning how to swim.

2.2 Benefits of Swimming

Swimming is a beneficial activity for people of all ages, providing a full-body workout with minimal impact on the joints or can serve as a relaxing, therapeutic exercise. Swimming is a sport that can be done in teams or groups, providing an opportunity for children and adults to socialize, make new friends, and learn fundamental teamwork and communication skills (*Upstate Splash Charity*, 2023). While swimming has many benefits for a child’s health and well-being, it is also vital for children to learn how to swim at a young age for safety reasons.

2.2.1 Water Safety

Drowning is a major concern in the United States. It is the leading cause of death in children ages 1 to 4 (*World Health Organization, 2024*). However, drowning is not just a risk to children, as 40 million adults report being unable to swim. Surprisingly, the total number of drowning deaths in the U.S. has been on a steady increase over the past five years (*CDC, 2024*). The COVID-19 pandemic is thought to be a driving cause of the increase in deaths by drowning (*Hernandez, 2024*). During the pandemic, most public pools closed, and access to affordable Learn-to-Swim programs decreased. Once pools reopened, there was a shortage of certified water safety instructors and lifeguards, which continued the shortage of accessible and affordable swimming lessons.

Coastal areas suffer a greater risk of drowning because there are more unsupervised swimming areas. A study of the recent literature on coastal drowning found that a majority of the risk factors were demographic characteristics, including race, gender, and age, as well as swimming ability and the lack of CPR skills among onlookers (Koon et al., 2021). Swimming lessons that teach water safety techniques in addition to swimming techniques, are the best way to reduce drowning deaths (*U.S. National Water Safety Action Plan, 2023*). Unfortunately, Black and Hispanic people are less likely to have had swimming lessons. A national CDC survey (Figure 1) found that only 28% of Hispanic adults and 37% of Black adults reported ever having swimming lessons, compared with 52% of white adults (*CDC, 2024*). This lack of access to swimming lessons lowers the number of people who know how to swim while also lowering the number of people who might be able to assist in an emergency. In Black communities in urban areas, there has been a severe lack of access and exposure to swimming lessons and swimming in general (*Ito, 2014*), which reflects the history of segregation in public pools and the ongoing problem of a lack of access to nearby pools in many poorer urban areas.

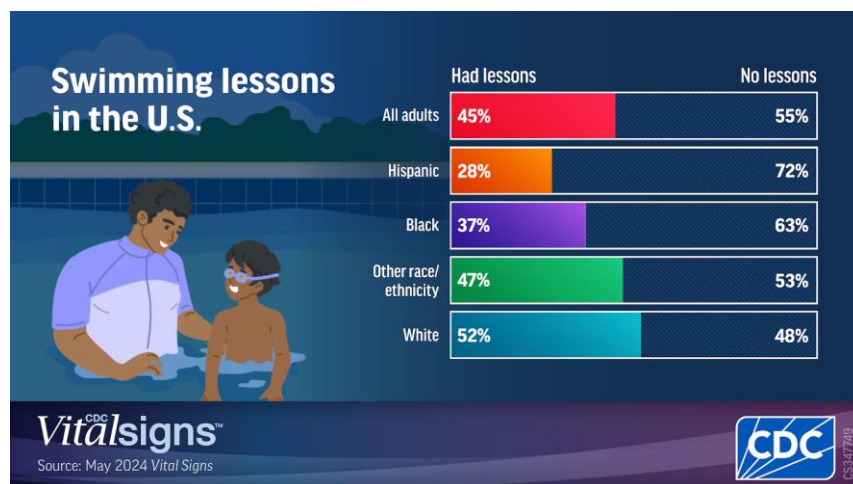


Figure 1: Swimming Lessons in the United States (CDC, 2024).

Several obstacles reduce the accessibility of swimming lessons to certain demographic groups in any community. One of these obstacles is the affordability of swimming lessons. According to the Red Cross, “79% of children in households with incomes less than \$50,000 have few-to-no swimming skills” (*Red Cross, 2017, p.1*). Another barrier to accessing swimming lessons is geographical location. In some communities, there are no pools nearby that offer affordable swimming lessons. The general accessibility of the aquatic center and the accessibility of the programming of swimming lessons also create a barrier for people with disabilities to receive effective water safety training. Due to the lack of inclusive water safety training, drowning is the leading cause of death for people with autism spectrum disorder (ASD) (*Red Cross, 2017*). However, swimming pools can modify their programming to make it more inclusive for people with disabilities, such as ASD. Adaptive swimming lessons may provide more staffing, have an aid assist in the pool, or allow someone to use a flotation device (*Barley et al., 2017*). Extending beyond safety, swimming has several other benefits for an individual's health and well-being.

2.2.2 Well-Being and Growth

A community pool can be a powerful tool for enhancing overall wellness in multiple dimensions, including emotional, spiritual, social, intellectual, occupational, and environmental health (Ramos et al., 2019). Aquatic activities such as swimming improve physical health metrics like body composition and blood pressure (Baena-Beato et al., 2014; Chase, Sui, and Blair 2008; Mohr et al., 2014). Swimming facilitates both social and emotional well-being since swimmers have found a decrease in strong negative emotions and improvements in social functionality and mood. Pool usage also helps people with psychological issues to be more mentally stable (Berger and Owen 1992). For children, pools provide a constructive and enjoyable environment, promoting positive engagement. Furthermore, frequent swimming strengthens the body's hippocampus and neural systems, which enhances learning, memory retention, and overall cognitive health (Cotman and Berchtold 2002).

In addition to promoting overall wellness and cognitive benefits, community pools also provide a valuable resource for aquatic rehabilitation, focusing on rebuilding muscle strength and enhancing joint flexibility. The natural buoyancy in water supports the body's joints, lessens the restriction on mobility, and helps balance and body awareness. This is particularly beneficial for individuals who struggle with exercising on land due to physical restrictions and individuals with musculoskeletal pain or post-surgery injuries (Buckthorpe et al., 2019). Aquatic rehabilitation is also very effective for patients with degenerative joint diseases like osteoarthritis (Fisken et al., 2015; Clay, 2019). Seniors suffering from osteoarthritis reported that not only was water exercise less pain-limiting than exercising on land, but it also provided joint pain relief. Even seniors without osteoarthritis felt an improvement in mobility, balance, and strength from participating in group-based aquacise classes (Fisken et al., 2012; Bartels, et al., 2016).

Beyond its role in aiding recovery and joint mobility, aquatic exercise also serves as a powerful cardiovascular workout, helping to strengthen the heart and blood circulation, which reduces the risk of cardiovascular diseases (CVDs) and coronary heart diseases (CHDs) (*Cardio*

Exercises Benefit More Than Just Your Heart, 2024). These diseases are one of the leading causes of death globally, affecting around 18 million people in the world (*Cardiovascular Diseases*). Furthermore, swimming builds endurance and muscle strength and provides an all-body workout. It improves posture, flexibility, and alleviates stress and muscle tension from the body.

Lastly, in addition to supporting physical and mental health, physical activity through community pools like swimming correlates with improved academic performance in middle and high school students. Studies show that exercise enhances cognitive resource allocation and processing speed, while also promoting cell stability and reducing stress (Hillman et al., 2008; Puterman et al., 2010). While their brains are still developing, this cognitive boost directly impacts students' academic abilities. For example, increasing weekly physical activity from less than 2.5 hours to 7 hours improved grades by 5.7%-9.1% (Fox et al., 2010; Rasberry et al., 2011). Swimming can also boost self-esteem, leading to better academic attributes and behaviors (Tomprowski et al., 2011; Trudeau & Shepherd, 2008). Recognizing the benefits of community pools for holistic wellness, the next step is to look at evolving trends in aquatic programming that reveal popular water-based activities in the community.

2.3 Recent Trends in Aquatic Programming

Aquatic programs offered by public and private recreational facilities reflect both community interests and a growing demand for diverse, inclusive options. While we do not have data specifically on community pools, in 2023, Recreation Management surveyed 628 aquatic establishments in the US that identified the top 10 most common programs they offered (Figure 2). Most of these involve traditional swimming, such as leisure swims, children's swim lessons, and lap swimming. Lifeguard training is frequently taught at aquatic facilities as well with YMCAs being a common teaching location (Tipping 2023). Figure 3 displays the top 10 most common aquatic programs that pools are *planning* to implement beyond 2023 (Tipping, 2023). Comparing the two figures reveals that programs are changing to meet the rising demand for adult classes and specialized options for individuals with special needs.

More aquatic facilities are starting to implement programs such as aquatic exercise, aquatic sports, and the use of aquatics equipment like floats and boats (Cameron, 2017). Classes that engage certain age groups or needs can create camaraderie between participants. Another area that has appealed to communities is group-based classes like adult swimming lessons and senior walk sessions. For example, the Wisconsin Athletic Club's most popular activity aside from adult swimming lessons was GlideFit, a fitness class using a paddleboard-like board in the water (Dyer, 2018). Figure 3 shows that 31.3% of the US's aquatic centers plan to offer opportunities catered to individuals with physical disabilities and 28.6% for those with developmental disabilities (Tipping, 2024). The increase in adaptive programming helps to reduce the risk of drowning for children with disabilities, a group that is more vulnerable. Autism, for example, increases the level of risk of drowning in children from the ages of 1 to 4 to the range of 1 to 14 (Roweton et al., 2022). Aquatic physical therapy, for which the benefits have been outlined, is also becoming more popular in the US. All these valuable programs can be

offered year-round for everyone to benefit from because of indoor pools that can offer a regulated, safe environment. With these emerging trends shaping the future of aquatics, it is essential to also consider the practical implications of running an indoor pool on Nantucket.

Top 10 Offered Aquatic Programs (2023)

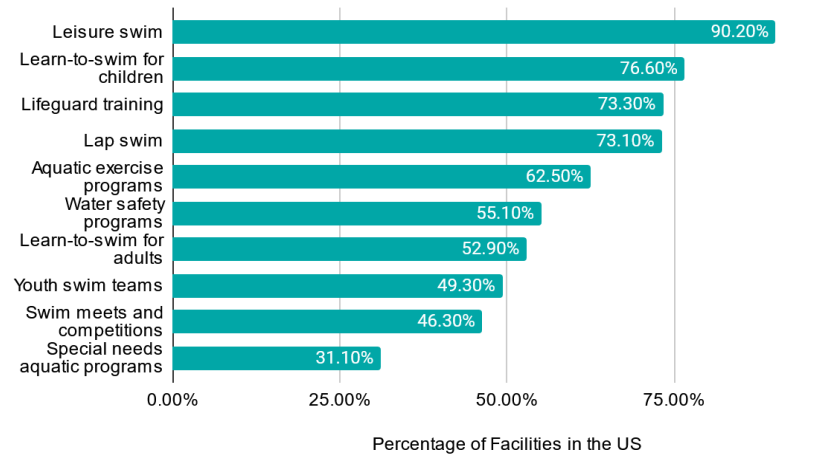


Figure 2 : Aquatic programs offered in the US (Tipping, 2023).

Top 10 Most Commonly Planned Aquatic Programs

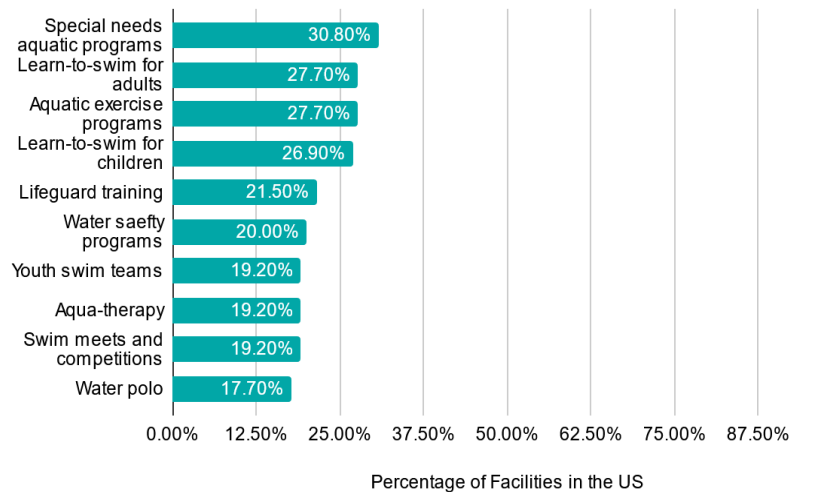


Figure 3 : Planned aquatic programs offered in the US (Tipping, 2023).

2.4 The Nantucket Community Pool

The Nantucket Community Pool (Figure 4) was established in 1989 when Nantucket High School was rebuilt. Later, the Nantucket Community School (NCS) would be “created to utilize the public-school facilities ‘outside of school time’ to offer adult education classes and a community pool program” (*Community Foundation for Nantucket*, 2016). The NCS initially focused on adult education and swim lessons, but now offers programming designed for all members of the community. Specific information about the school’s programs can be found in Appendix A.



Figure 4 : Picture of the NCS Community Pool

Initially, the community was skeptical that the pool would be fully utilized, but, over the past 35 years, the pool has proven to be indispensable and a cornerstone for recreation in the community. The Nantucket Community Pool is “a six-lane, twenty-five-yard pool with a one-meter diving board, separate adult and youth locker rooms, and a Colorado Timing System¹” (*Pool Information and Resources*, 2024). With access to changing facilities and various pool equipment, the Nantucket Community Pool provides a safe and enriching space for people to ensure that community members of all ages have access to essential life skills and fitness opportunities all year round. The members of the community can fully utilize the facility through swim hours and aquatics programming hosted by NCS.

¹ Colorado Time Systems is a company that provides athletic facilities around the world with quality timing, scoring and display systems

2.4.1 Open Swimming & Aquatic Programs at the Nantucket Community Pool

The Nantucket Community School allows people to swim at the Nantucket Community Pool during any of its open swim hours with a drop-in fee. However, paying members can instead make an unlimited number of pool visits during public hours (Nantucket Community School, 2021). Additionally, every Saturday, a free Family Swim session is offered. There is also individual lane rentals offered for individuals who want their own personal space to swim (Nantucket Community School, 2024). Throughout the year, programs are offered by the Nantucket Community Pool to help the overall community. Swim lessons are offered to teach swimming to people of all ages since not knowing how to swim can be “an uncomfortable reality for many people on Nantucket” (Mofsen, 2024). Another example is an impact-free Aquacise program that gives the island’s seniors a space to exercise (Nantucket Community School, 2024). Furthermore, they have a swim team that has been running since 1990 and competes in multiple swims meets throughout Massachusetts. All the pool programs are very popular; for example, youth swimming lesson classes fill within minutes of registration opening (Personal communication, James Voyages, Aquatics Director, 09/04/2024).

2.4.2 Comparisons with Other Community Pool Program Offerings

Table 1 summarizes the programs offered at four other community pools in Massachusetts as a comparison to those offered in Nantucket. The Nantucket Community Pool offers many of the same aquatic activities as other aquatic facilities but is unable to offer the same range as larger facilities due to the limitations of the budget, staffing, and physical space. Currently, the Nantucket Community Pool offers several of the most popular aquatic programs offered at the other four Massachusetts facilities. However, some classes, such as lifeguard certification and private swim lessons, are only offered seasonally (*Nantucket Community School*, 2024). Additionally, NCS leases out the pool to other organizations for their own programs. Examples are the Nantucket Boys and Girls Club and S.T.A.R. which uses the pool to host special needs recreation (Nantucket S.T.A.R., 2024). The Nantucket Community Pool does not currently offer water safety training or any form of water sports such as water polo, water volleyball, or water basketball. James Voyages, Nantucket Aquatics Director, would like to offer water polo, but does not currently have the staff necessary to do so (*Nantucket Community School*, 2024).

2.4.3 Advantages and Disadvantages of an Indoor Pool on Nantucket

Indoor pools offer a controlled environment for residents to swim with year-round access, enhancing safety due to close supervision by staff in a smaller, enclosed space (Bouchier et al., 2011). Swimmers are protected from natural hazards like ocean currents and wildlife, which are common at beaches (Thom et al., 2022; Campell et al., 2019). Injuries are not entirely uncommon on beaches. There will be the occasional news report of some beachgoers being hospitalized by waves (Graziadei, 2022) or being pulled out into the sea to their deaths (Graziadei, 2024). Additionally, unlike outdoor bodies of water which can contain harmful bacteria or pollutants, indoor pools are regularly cleaned and treated, minimizing health risks

(Graziadei, 2024). Swimmers do not have to worry about beach and pond-related risks while swimming in a well-maintained swimming pool. Indoor pools can maintain a consistent temperature, offering a comfortable swimming experience year-round, even during cold months. This attribute increases the value of memberships, particularly in locations where outdoor swimming is seasonal. The indoor environment also provides moist air that can ease breathing which is beneficial for individuals with respiratory issues like asthma (Nemery et al., 2002). Lastly, indoor pools can be a venue for fundraising and community events, such as Swim Across America.

On the other hand, indoor pools are complicated to manage and expensive to run due to the high demand for water treatment, heating, and energy consumption (*ENERGYSTAR*, 2023). Using potable water for pool maintenance can strain the limited amount of freshwater (Maglione et al., 2015). Furthermore, potable water must be allocated away from other sources that need it such as showers and drinking water. Maintenance for an indoor pool, including draining, cleaning, and replacing water, also adds to the operational burden by being labor-intensive and costly (Chan, 2022; Post, 2022). Pool covers are used to reduce the amount of evaporation when the pool is not in use, but do not prevent all water evaporation. (Gomez-Guillen et al., 2024; Silva et al., 2021). It is challenging to balance water conservation with providing a quality swimming experience. The enclosed environment can become hot and humid making it uncomfortable for swimmers and spectators alike (Ward, 2017). While moist air is beneficial for asthmatic individuals, irritants from pool chemicals may pose risks that have not been fully addressed (Nemery et al., 2002). Some users may be put off by hygiene concerns. Additionally, some people may just prefer outdoor environments, like beaches or lakes, for a more scenic experience (Nantucket Land & Water Council, 2024; Graziadei, 2024).

2.5 Conclusion

As beneficial as it would be to expand the Nantucket Community Pool and its offerings, such expansion poses a challenge. Limited staffing, space, time, and resources make it difficult for the Nantucket Community Pool to grow beyond its current scale. Accordingly, NCS asked our team to determine what changes in operations and programming community members would like to see, and to explore how those demands could be met

Table 1 : Comparison of aquatics programs offered by Nantucket Community Pool (Nantucket Community School, 2024), Charles River Aquatics (Charles River Aquatics), Chelsea Piers Athletic Club (Chelsea Piers Sports), the YMCA at Martha's Vineyard (YMCA of Martha's Vineyard), and the pools operated by the Tualatin Hills Park & Recreation District (Tualatin Hills and Park Recreation District (THPRD)). Includes non-affiliated club information from places like Chelsea (CT Premier Water Polo Club).

| PROGRAMS | NANTUCKET COMMUNITY POOL | CHARLES RIVER AQUATICS | CHELSEA PIERS ATHLETIC CLUB | YMCA (MARTHA'S VINEYARD) | TUALATIN HILLS |
|-----------------------------|--------------------------------|------------------------------|--------------------------------------|--------------------------------|-------------------|
| LEISURE SWIM | ✓ | ✓ | ✓ | ✓ | ✓ |
| CHILDREN SWIM LESSONS | ✓ | ✓ | ✓ | ✓ | ✓ |
| ADULT SWIM LESSONS | ✓ | ✓ | ✓ | ✓ | ✓ |
| PRIVATE SWIM LESSONS | ✓ | ✓ | ✓ | ✓ | ✓ |
| AQUATIC EXERCISE | ✓ | ✓ | ✗ | ✓ | ✓ |
| LAP SWIM | ✓ | ✓ | ✓ | ✓ | ✓ |
| SWIM TEAMS | ✓ | ✓ | ✓ | ✓ | — |
| SWIM MEETS/ COMPETITIONS | ✓ | ✓ | ✓ | ✗ | — |
| WATER SPORTS | ✗ | ✗ | — | ✓ | — |
| LIFEGUARD CERTIFICATION | ✓ | ✓ | ✗ | ✓ | ✓ |
| WATER SAFETY TRAINING | ✗ | ✗ | ✗ | ✗ | ✓ |
| SPECIAL NEEDS PROGRAMS | — | ✗ | ✗ | ✗ | ✓ |

| LEGEND | SYMBOLS |
|---|---------|
| HAS PROGRAM OFFERED BY FACILITY | ✓ |
| DOES NOT HAVE PROGRAM | ✗ |
| OFFERED BY UNAFFILIATED CLUBS/ ORGANIZATIONS AT THE POOL | — |

3.0 Methodology

The goal of this project was to evaluate the current use of the Nantucket Community Pool and recommend new programs and how to optimize current programming with the current staffing, space, and scheduling limitations. We were able to achieve this goal through the four objectives below.

- **Objective 1:** Evaluate patterns in the recent and current uses of the Nantucket Community Pool
- **Objective 2:** Determine the opinions of staff and other stakeholders, such as the director of facilities, school superintendent, and various organizations that use the pool, regarding topics such as programming, use, management, operations, and finances
- **Objective 3:** Determine the opinions of the community (pool users and nonusers) on pool usage and programming, hours of operation, technological communication, and management
- **Objective 4:** Recommend realistic and future changes to programming, facilities, and management that better fulfill the community's need

We used a mixed methods approach to accomplish our objectives, including background research, analysis of existing data, and surveys and interviews. Figure 5 shows the main tasks associated with each of our objectives. At the end of our data collection, we developed a report and presentation detailing the data results we collected and our recommendations on changes and improvements to the Nantucket Community Pool in agreement with the data.

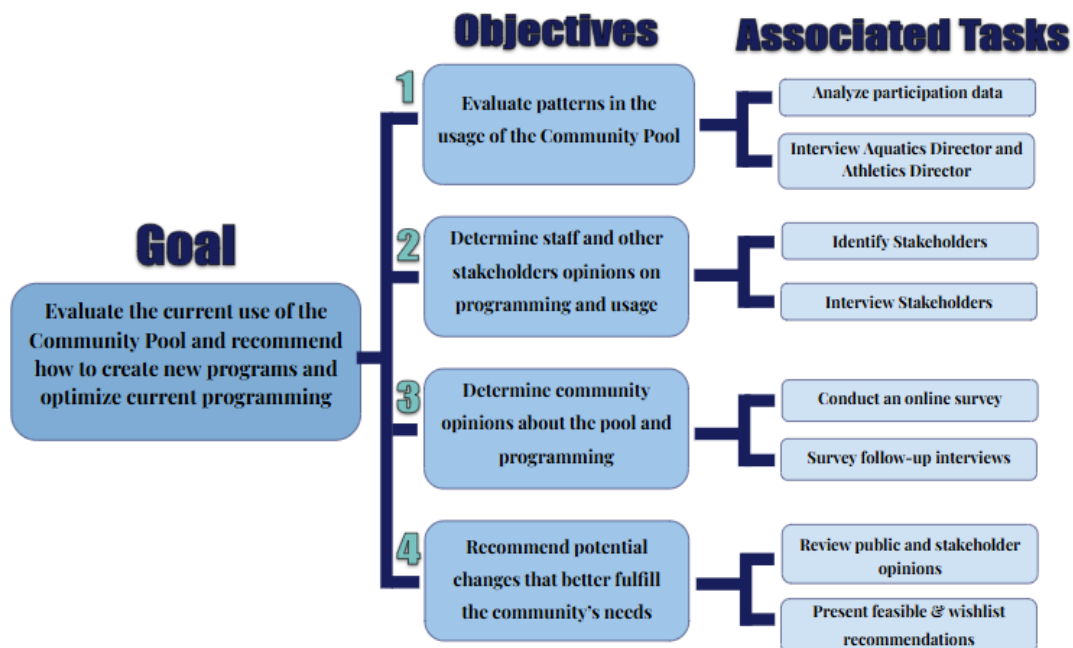


Figure 5 : Project Goals, Objectives, and Related Tasks

3.1 Evaluating Patterns in Pool Usage

Our first objective was to evaluate patterns in the recent and current uses of the Nantucket Community Pool. We explored several key questions regarding pool usage, such as whether the current operating hours and programming will continue to meet community needs, which programs attract the most participation and why, and whether there are opportunities to expand services. By examining potential usage trends across various age groups and demographics, we also sought to determine whether the Nantucket Community Pool effectively serves all groups equitably and effectively. Our steps to achieve this objective were: (1) research and analyze participation in programs from 2015 to the present and (2) interview the Aquatics Director, a former Aquatics Director, and the high school Athletics Director.

3.1.1 Analyzing Participation Data

We analyzed program participation from 2022 to the present to capture patterns after the COVID-19 pandemic. Aquatics Director, James Voyages, stripped all personally identifying information from the data prior to sharing it with us to ensure privacy. We used simple, descriptive statistics to evaluate trends in program participation and frequency and to identify potential overbooked or underbooked areas.

3.1.2 Interviewing Aquatics Director, Former Aquatics Director, Athletics Director

We interviewed the current Aquatics Director, James Voyages, a former Aquatics Director, Jim Pignato, and the high school Athletics Director, Travis Lombardi, to help interpret the findings from the data analysis and address operational issues. The interview scripts can be found in Appendix B. The interview with Mr. Voyages focused on pool usage patterns and scheduling, including who the primary users are, and when the pool is the busiest (both daily and seasonal). We asked how the needs of various swim groups are balanced with staffing capacity and what strategies are used to handle scheduling conflicts. The interview with Mr. Pignato helped us to analyze how operations compared in the past to now. Our interview with Mr. Lombardi focused on understanding whether swim meets and practices have caused conflicts with other programs, how this is managed, and the nature of collaboration between the athletics department and Mr. Voyages.

3.2 Determine Stakeholder Opinions

Pool staff and other stakeholders, such as town officials, provided critical information on programming, use, management, operations, and finances. Current and former pool user opinions are covered in Objective 3.

Table 2 : Interviewed Stakeholders

| Interviewee | Title/Position | Date Interviewed | Interviewers |
|----------------------|--|------------------|--------------|
| Chip Clunie | NPS Facility Director | 11/4/2024 | ACF and LH |
| James Voyages | NCS Aquatic Director | 10/31/2024 | ACF and LH |
| Eliza Steadman | Executive Director of Nantucket S.T.A.R. | 11/5/2024 | LH and ET |
| Jamie Foster | CEO of Nantucket Boys and Girls Club | 11/6/2024 | ACF and JY |
| Jim Pignato | Former NCS Aquatics Director | 11/7/2024 | LH and ET |
| Travis Lombardi | NHS Athletic Director | 11/14/2024 | ACF and JY |
| Elizabeth Hallett | NPS Superintendent | 11/18/2024 | LH and ET |
| Olivia Gallugi | CPS Phys. Ed. Teacher | 11/25/2024 | LH and ET |
| James Meehan | Volunteer ALTS Instructor | 11/7/2024 | ACF and JY |
| Lucy Cobb | Lifeguard Substitute | 11/8/2024 | ACF and JY |
| Jeff Cowles | Lifeguard and Assistant Swim Coach | 11/13/2024 | LH and ET |
| Doreen Allen | Aquacise Instructor, Front Desk Staff, Assistant Coach, Lifeguard Substitute | 11/12/2024 | ACF and JY |
| Karol Lindquist | Aquacise Instructor and Lifeguard | 11/8/2024 | ACF and JY |
| Forest Bell | Desk Staff, LTS instructor, and Lifeguard | 11/16/2024 | LH and JY |
| Andrew Trott-Kielawa | LTS Coordinator | 11/8/2024 | LH and ET |

We determined a list of stakeholders from our background research, conversations with our sponsors, and snowball sampling (Simkus, 2023), listed in Table 2. Conducting interviews with stakeholders rather than surveys allowed us to personalize each conversation to the stakeholders' interests and expertise and to pursue follow-up questions as needed. The topics and questions are listed in Appendix C Part 2. We interviewed the Nantucket Community Pool staff, including lifeguards, instructors, and swim team coaches. The interview scripts used for these interviews are shown in Appendix D. We asked about their assessment of community involvement and engagement in current programming, the pool schedule, complaints received, and potential future programs. We also queried NCS management about pool usage, management, and finances.

We contacted each of the stakeholders by email and then conducted interviews in person when possible and by Zoom when necessary. Most interviews ranged from 30 to 40 minutes. Each interview included two team members; one member took the lead in the interview and the other took notes. We prefaced every interview with an interview preamble, shown in Appendix C, asking for consent to record the conversation, and asking to quote directly.

3.3 Determine Community Opinions

Our third objective was to gather the opinions of current and former pool users regarding their usage and pool programs, hours of operation, technological communication, and management. The Nantucket Community School maintains email lists of current and former users of the pool. We asked them to distribute a survey to this email list on our behalf. At the end of the survey, we included a question to ask if respondents would be willing to participate in a follow-up interview. We conducted follow-up interviews with willing survey respondents and intercepted interviews with adults in and outside the Nantucket Community Pool.

3.3.1 Conducting Online Surveys

We developed the survey instrument in an iterative process in collaboration with project advisors and sponsors. The survey had separate questions based on whether someone is a member, used to be a member, or is not a member and solely uses the pool for programs. The survey targeted adults only, although we included a bank of questions for parents regarding their opinions about youth programs at the pool. The cover email explained the purpose of the research and solicited the participant's consent. The survey was anonymous and included primarily multiple-choice response questions and a small number of open-response questions. Participants were made aware before taking the survey that participation is completely voluntary and that they could choose to end the survey at any time. The survey covered a variety of topics including program participation and membership status. The final version of the survey can be found in Appendix E. We pre-tested the survey ourselves and in person at the pool with a small number of users at the pool to ensure that it took less than 5 minutes to complete. Then, the survey was refined based on user feedback before finalization. NCS distributed an email with a link to the finalized online survey on our behalf on November 12th. The link was distributed to current and former members of the pool. With permission of the school, past members from up

to 5 years were included in the survey. With NCS' help, we offered an incentive to encourage participation and increase survey response rates. We included a question asking respondents to provide an email or phone number if they wish to be entered into a raffle for a free, one-month, adult membership. We explained that the contact information was collected separately to maintain the anonymity of their responses to the other questions. We used their contact information only for the purpose of contacting them should they win the raffle. NCS also distributed the link through their Instagram to encourage more respondents and had a press release about our project on the Nantucket Current.

Furthermore, with the permission of the Aquatics Director, we posted QR codes around the facility to encourage other users to participate. The survey was kept open until Wednesday, November 27, 2024, to maximize response rates while still allowing time for analysis at the end of the project period.

3.3.2 Follow-Up Interviews

We conducted follow-up interviews with 3 survey respondents. The respondents were asked to provide a contact email and/or phone number. Credentials were collected in a separate database to maintain the anonymity of the respondent's survey responses. Interviews were conducted following the same protocols as the intercept interviews because we knew the interviewee's identity, however, we used a different preamble/consent script explaining that we would keep their identity confidential. The final version of the questions can be found in Appendix F. Any quotations we used are anonymized to protect the identity of the respondent.

3.4 Recommendation of Changes

Based on our analysis of community and stakeholder opinions and current and previous program participation data, we identified a set of recommendations for possible changes in programming, facilities, and management to better meet future community needs. We identified short and long-term recommendations based on considerations such as cost, feasibility, and desirability. We also identified where the pool is currently doing well, what the pool already does that it needs more of, and what should not be changed about the pool. Additionally, we developed a "wish list" of potential recommendations that are currently unfeasible to make but may be beneficial to consider in the future.

4.0 Findings and Analysis

This section describes the important findings from our analysis of pool usage data, surveys, and interviews. Our interviews with stakeholders and parents reaffirmed the survey findings. In the subsections below, we identify the current usage of the Nantucket Community Pool, the various challenges for programming including staffing and scheduling, the registration challenges for programming, programming with other organizations, and the limitations of the facility and the locker rooms.

4.1 Current Usage of the Community Pool

The Nantucket Community Pool hosts many programs. There is lap swimming for members, free Family Swim sessions every week, youth Learn-to-Swim (LTS) and Adult Learn-to-Swim (ALTS), Aquacise, and club swim teams grouped by age. The Nantucket Community Pool also rents the space to other organizations in the community. Some of the programs held at but not run by the Nantucket Community Pool are camps with Murray's Club, Nantucket S.T.A.R., and the Nantucket Boys and Girls Club. These organizations use the pool in the spring and the summer as a location for their youth programming. The Nantucket High School uses the facility for their swim team practice and to host swim meets. The swimming season runs from December to February, and the Whalers team practices for two hours Monday through Friday. Both the high school and the Cyrus Peirce Middle School use the pool throughout the school year for physical education classes. These classes run from March to June and require the entire pool facility for six hours a day, Monday through Friday.

Based on interviews with pool staff and survey results, there is a high demand for LTS programming that is not being met. The ALTS instructor and the three LTS instructors and coordinators we interviewed emphasized the importance and popularity of LTS programs on the island and claimed there was a strong demand for more sessions. The user survey underlined the popularity of LTS, as 45% of survey respondents indicated that they or their family members participated in LTS in the past three years. The survey also revealed the community's desire for classes to be offered more frequently. For example, 16% of survey respondents asked for the pool to have LTS classes on the weekends.

The demand for LTS and ALTS far outweighs the time slots available. The Nantucket Community Pool offers four types of swim lessons: classes for young children to gain early water exposure and water safety skills (*aquatots* and *minnow*), LTS; three levels of stroke development (*pollywogs*, *stingrays*, and *orcas*), ALTS, and private swimming lessons. Registration data from 2022 to 2024 revealed that the demand for youth swim lessons is especially high. For example, Figure 6 shows that LTS is very popular with almost 2000 registrants/year, but the waitlists (of about 500 people/year) reveal demand exceeds the available slots. Although the Nantucket Community Pool offers each course several times a year, demand exceeds supply. Furthermore, 12 out of 18 parents who commented on why their children have not participated in pool programs in the survey said that they struggled to successfully register their children for LTS classes. The slots reached capacity within minutes, and they often found themselves on the waitlist. Pool staff indicated there are several restrictions to adding additional LTS slots, including a lack of swim instructors and limited flexibility in the schedule.

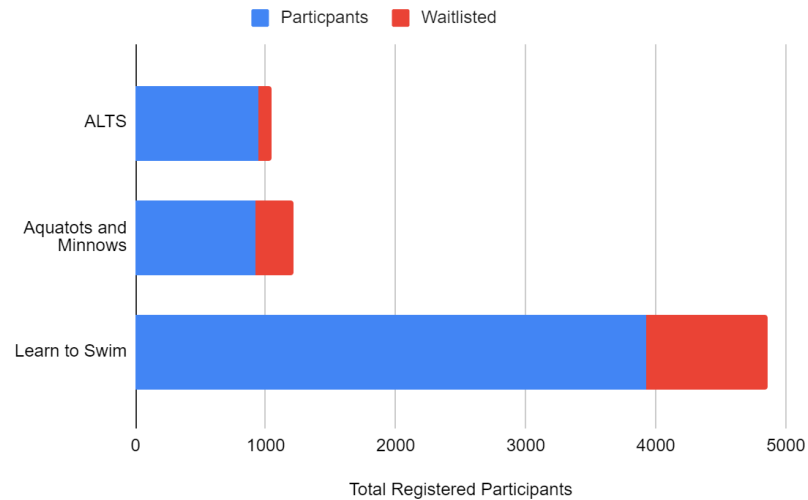


Figure 6 : Registration and Waitlist Numbers for Learn-to-Swim programs, 2023-24

Staff interviews and surveys with pool users show that lap swimming and Family Swim are in high demand. Around 46% of all respondents or their families have participated in Family Swim in the past three years and around 62% of all respondents or their families have used it for lap swimming. Furthermore, when asked what new programs respondents wanted to see, seven participants asked for more lap swimming (4), and Family Swim (3) rather than the incorporation of new programs. It is important to note, however, that pool members who use the pool mainly for lap swimming are over-represented in the sample of respondents [i.e., 86/197]. Staff interviews with two of the weekend lifeguards indicated the popularity of Family Swim. Saturday's Family Swim is capped at 25 people and requires families to pre-register online. According to the weekend lifeguards, registration for Family Swim fills every week. Class registration data revealed that 45 out of 52 Family Swim programs in 2023 and 2024 were completely full. The seven Family Swim events that were not filled are likely because of late cancellations and the inability to fill the slots on short notice.

The user survey and follow-up interviews demonstrated that the community wants extended pool hours on the weekend. Currently, the pool is open from 8 am to 3 pm on Saturdays and the schedule consists of lap swimming, club swim practice, and Family Swim. Many survey respondents and interviewees expressed a desire for the pool to be open on Sundays.

Many people expressed an interest in additional programming for lap swimming and Family Swim on Saturdays and Sundays. Figures 7 and 8 show that 64% of respondents who had previously participated in Family Swim would like to see Family Swim hours from 3-5 pm on Saturdays and hours from 10 am to 2 pm on Sundays. Similarly, Figures 7 and 8 show that 48% of respondents who had previously participated in lap swim would like to see more lap swimming opportunities between 6 and 8 am on Saturdays, and 57% would like to see lap swim hours from 10 am to 2 pm on Sundays. Several pool users in follow-up interviews expressed interest in having the option for lap swimming on Sunday, especially in the morning.

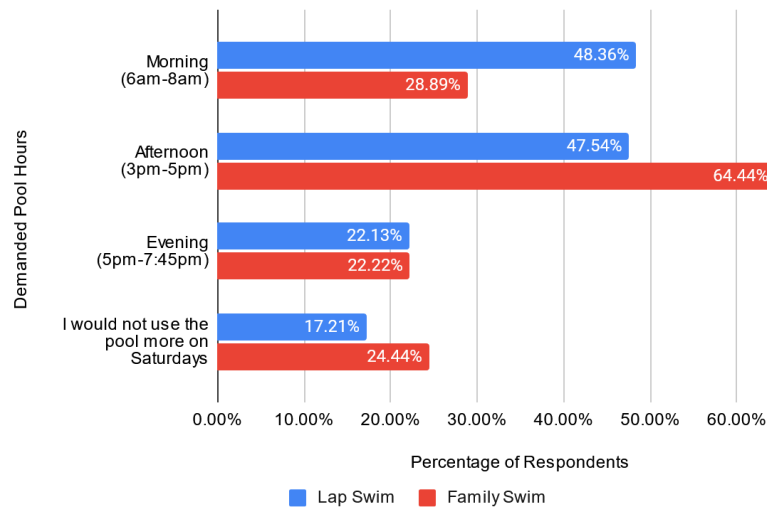


Figure 7 : Demand for Extended Hours for Lap Swim and Family Swim on Saturdays ($n1 = 122$, $n2 = 90$)

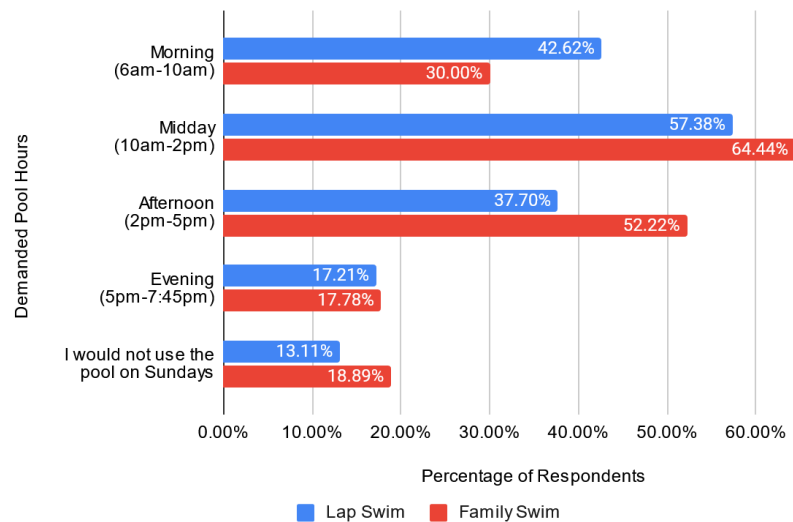


Figure 8 : Demand for Open Hours for Lap Swim and Family Swim on Sundays ($n1 = 122$, $n2 = 90$)

The hours of the Nantucket Community Pool are limited due to the operational hours of the high school. Interviews with two pool staff and the former Aquatics Director, Jim Pignato revealed that the pool had once been open on Sundays and had longer hours on Saturday. However, maintaining these operational hours comes with an extra expense for the Nantucket Community School as they must pay for a custodian to work overtime and a building supervisor. Interviews with weekend lifeguards also confirmed that limited staffing is another limitation to

extending hours on weekends. As discussed in the next section, the number of staff, especially instructors, is a limitation for the addition and expansion of any program, especially additional LTS classes. Many LTS instructors interviewed believed that if there were more instructors the pool would have the means to run additional classes; however, an interview with current Aquatics Director, James Voyages stated that staffing is just one of two issues with expanding offerings. The other restriction is the schedule itself; the pool is limited by its size and current operational hours.

In the summer, the schedule is dominated by camp rentals. Learn-to-Swim classes, lap swimming, Family Swim, lifeguarding classes, and club team practices must be scheduled around rentals, leaving very little room in the schedule. In the fall and winter, there are significantly fewer rentals; however, the high school swim team, the club swim team, and the high school and middle school PE classes are all added to the schedule.

4.2 Scheduling Challenges for Programming

The Nantucket Community Pool faces severe scheduling constraints. These challenges arise from a shortage of staff, unbalanced program prioritization, and underutilized opportunities.

A common theme from interviews with the Aquatics Director and various pool staff was the lack of sufficient lifeguards and swim instructors. It is difficult to hire full-time lifeguards from off-island due to the high cost of housing on Nantucket so the majority of the staff currently working at the pool grew up on-island or moved here over a decade ago. This highlights the need for on-island lifeguard training; however, certification classes are only offered seasonally which limits the ability to onboard new staff. As a result, staff members work multiple roles at the pool which further limits the ability to expand current programs. The lack of additional lifeguards contributes to the Nantucket Community Pool's inability to run multiple programs simultaneously. Lastly, limited staffing is also an obstacle to expanding the class size of existing programs. Family Swim's swimmer cap of 25 comes from being the legal maximum number of swimmers a single lifeguard can oversee at once. If there was a second lifeguard available, this limit would double to 50 swimmers.

In the summer schedule, shown in Figure 9, there is significant competition for pool space between multiple camps. This is an obstacle for available community programming during this busy season. Camps such as ACKVenture, ACK Murray, and the Nantucket Boys and Girls Club are scheduled to take up all six lanes for large portions of the day. This leaves little room for lap swim, Family Swim, or additional LTS classes. However, these camps typically do not use every single lane, resulting in idle pool space. When the camps are running, the Nantucket Community Pool is closed to the public since pool space cannot be shared between children and adults outside of Family Swim for locker room safety. This is another contributing factor to the challenge of running multiple programs at once. College training groups combined with Aquacise take up all six lanes during early morning hours when the demand for lap swim is the greatest. The pool is closed on Saturdays during these early hours to prevent pool staff from working overtime. The combination of various camps and swimming groups creates a summer schedule that is very busy and difficult to balance all the needs of the community.

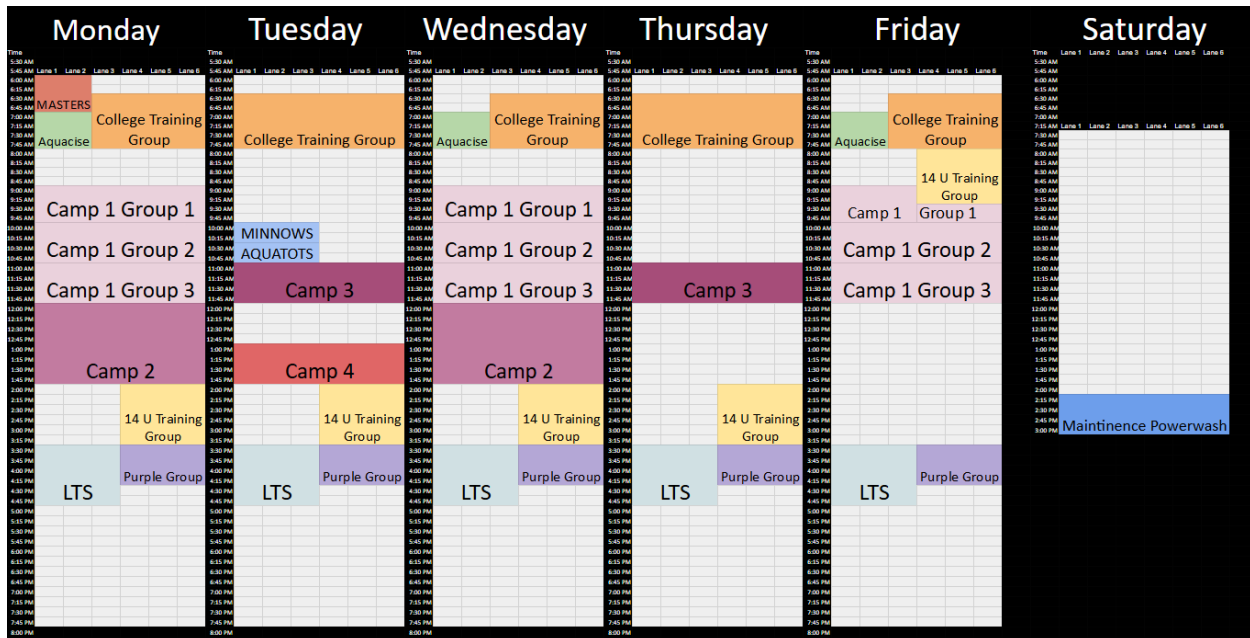


Figure 9 : Summer programs weekly schedule

Family Swim sessions are critical for fostering community bonding, according to pool staff. However, capacity and inadequate outreach have given this activity the sense of being under prioritized compared to other offerings. There are two types of Family Swim events. First, are complementary sessions sponsored by the Nantucket Athletics Club, which run twice for an hour each on Saturday afternoons year-round except for during the summer months (July-August). The second option for Family Swim is drop-ins, in which a family pays \$10 for adults and \$6 for children to swim during open times. These time slots are placed on early afternoons during the week for 1-2 hours, depending on the day. However, some community members at a Saturday Family Swim were not aware of these weekday times. This is because the Nantucket Community Pool Lane Availability monthly schedule does not advertise the drop-ins as well as the complementary sessions. As seen in Figure 10, Saturday's sessions are bolded and highlighted, while the drop-ins are abbreviated as FS. Frequently meeting swimmer capacity, infrequent time slots, and poor advertising create missed opportunities for families to use the facility and feel this important sense of community.

| | | | | | |
|---|---|---|--|---|---|
| 11/18 Lane Availability 6:00AM-7:00AM 6 Lns 7:00AM-8:00AM 3 Lns 8:00AM-10:00AM 6 Lns 10:00AM-11:00AM 4 Lns 11:00AM-12:00PM 6 Lns 12:00PM-2:00PM 4Lns+FS 6:00PM-7:45PM 6 Lns | 11/19 Lane Availability 6:00AM-7:00AM 6 Lns 7:00AM-8:00AM 3 Lns 8:00AM-11:00AM 6 Lns 12:00PM-2:45PM 4Lns+FS 6:00PM-7:45PM 6 Lns | 11/20 Lane Availability 6:00AM-7:00AM 6 Lns 7:00AM-8:00AM 3 Lns 8:00AM-10:00AM 6 Lns 10:00AM-11:00AM 4 Lns 11:00AM-12:00PM 6 Lns 12:00PM-1:00PM 3 Lns 1:00PM-2:00PM 4Lns+FS 6:00PM-7:45 PM 6 Lns | 11/21 Lane Availability 6:00AM - 11:00AM 6 Lns 12:00PM-2:45PM 4Lns+FS 6:00PM - 7:45 PM 6 Lns | 11/22 Lane Availability 6:00AM-7:00AM 6 Lns 7:00AM-8:00AM 3 Lns 8:00AM-12:00PM 6 Lns 12:00PM-2:00PM 4Lns+FS 5:00PM-7:45PM 6 Lns | 11/23 Lane Availability 8:00AM-10:00AM 6 Lns 12:00PM - 1:00PM 6 Lns 1:00PM-3:00PM Complimentary Family Swim Brought to you by Nantucket Athletic Club |
|---|---|---|--|---|---|

Figure 10 : Nantucket Community Pool Lane Availability. A typical November week

While weekday schedules are oversaturated, the pool's weekend hours are underutilized. On Saturdays, the pool closes at 3 pm, instead of 7:45 pm as on weekdays, which leaves little time for extended offerings. Expanding weekend hours would allow the facility to move high-demand programs, such as LTS, to Saturdays, creating more availability during the week for other community-driven programs such as open swim and ALTS. In the winter months (December-February), afternoon and evening hours are consistently booked by the club and high school swim teams. These time blocks prevent the pool from offering the usual programs during these months. The problem is that these activities cannot be moved earlier in the day due to school hours from 7:45 am to 2:30 pm since the athletes are in class during those times. In our interview with Mr. Voyages, he explained that the swim team holds priority in the pool schedule. This creates the challenge of balancing the high demand for swim programs and lap swimming while accommodating the swim team's dedicated time slots. In the spring months (March-June), the high school runs PE curriculum in the Nantucket Community Pool for a large portion of the day while taking up all 6 lanes. These blocks cannot be moved since they need to stay within the school day.

4.3 Adaptive and Therapeutic Programming

The Nantucket Community Pool serves a diverse population yet lacks adaptive and therapeutic swimming programs to meet everyone's needs. Older adults can participate in Aquacise and lap swimming, while those with disabilities do not have accessible programs at the pool. Our survey revealed that the community sees a lack of program offerings for these demographics.

The Nantucket Community Pool lacks adaptive and inclusive swim lessons tailored for individuals with disabilities. Nantucket S.T.A.R. is the only organization on the island that offers adaptive swimming lessons and exposure for children. Introducing such programs to children and adults would teach essential water safety skills and provide a safe and supportive environment for them to thrive. A variety of programs are offered at the pool, but none are fully inclusive to individuals. While 1:1 lessons are provided, they do not accommodate the presence of an aid to additional support during the sessions. An aid is crucial for assisting individuals with disabilities, helping them perform activities they cannot do on their own. According to our survey, 11 people indicated they want to see more adaptive/S.T.A.R. swimming incorporated into the pool schedule. Respondents expressed their interest in more accessible programs through open-ended questions since we did not have a question specific to accessibility.

Older adults have few options for therapeutic swimming since much of this demographic is seen at just lap swimming and Aquacise. Older adults requested more lap swimming times, Aquacise sessions, and new therapeutic programs. Aquacise is a low-impact aerobics program that the pool offers, running five times a week for 45 minutes (*Pool Information & Resources*). This program is attended by adults and seniors seeking joint relief and improvement in strength and mobility. Although Aquacise is described as a program to relieve joints, our online survey revealed a strong interest from the community in expanding offerings to include aqua therapy. Seventy respondents indicated they wanted to see the pool add aqua therapy, which was the most frequently requested program offering. Figure 11 shows the other programs requested by

respondents (excluding write-in responses). According to Mr. Voyages, there has been a consistent demand for more physiotherapy programs, but the pool currently does not have an instructor qualified to lead such programs. The pool does, however, have the tools necessary for physiotherapy, such as floats and dumbbells, so some older adults have independently utilized them during open pool hours.

What other programs would you like the Nantucket Community Pool to offer? (Select all that apply)
197 responses

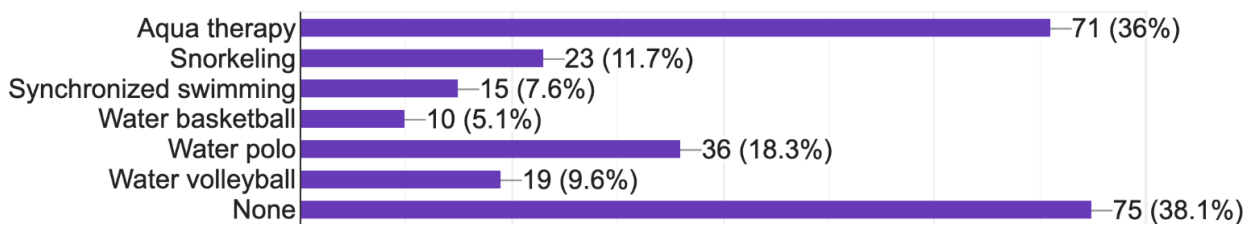


Figure 11 : Additional programming requested by respondents

4.4 Programming from Other Organizations

On Nantucket, the Nantucket Community Pool is the only public pool for organizations to utilize for their programs, making scheduling a significant challenge. With limited availability, organizations such as Nantucket S.T.A.R. (Sports & Therapeutic Accessible Recreation), Nantucket Boys and Girls Club, Nantucket High School, and various camps face the challenge of navigating a tight schedule to find a time slot that best suits them. While the pool does provide access to the facility and a lifeguard, organizations are responsible for bringing their own instructors and additional staff.

We interviewed Eliza Steadman who is the executive director of Nantucket. S.T.A.R., which offers recreational activities to support diverse strengths and abilities through the collaboration of families and community partnerships (*Nantucket S.T.A.R.*). The Nantucket Community Pool collaborates with organizations such as S.T.A.R. by granting them access to the facility for their own Learn-to-Swim programs. S.T.A.R. uses the facility to run two sessions of six classes each in the winter and spring. Recently, the pool has faced challenges accommodating S.T.A.R. into its schedule due to high demand, limited space, and time availability. For instance, Ms. Steadman explained that they often must settle for the last available time slots, which limits their ability to effectively use the space. This limitation makes it difficult to secure staff and schedule programs at times that are convenient for parents. Without the necessary staff and participation from children who can attend, the organization struggles to run its programs efficiently. On some occasions, there has been a program scheduled for right after S.T.A.R. causing them to rush out of the pool. This is particularly challenging because some of S.T.A.R.'s participants need physical support and extra time when exiting the pool and changing.



Figure 12 : The Nantucket S.T.A.R. organization logo

The Nantucket Boys and Girls Club is an organization that serves kids from 1st to 12th grade year-round and offers support and resources to kids and families all over the island. The Boys and Girls Club uses the Nantucket Community Pool to host summer programs and camps accommodating up to 20 members per session for one-hour intervals. The club wants to include more members in their programs, but limited pool staff reduce the capacity of participants. Due to this limitation, the Boys and Girls Club had to create a rotation schedule to give equal access and time for members to use the pool. However, some parents have expressed concern about why their child did not make the rotation list (J. Foster, personal communication, [11/6/2024]). Similarly, to Nantucket S.T.A.R., The Boys and Girls Club struggles to find slots that work well for their members. Mr. Foster did express interest in running programs at the pool during the school year but understands the pool is not able to allocate time due to school hours, swim programs, and team needs. This poses a challenge for the Boys and Girls Club because there is a high demand for swim lessons but only one pool to be rented.



Figure 13 : The Nantucket Boys and Girls Club organization logo

Based on our findings from the survey and our interview with Ms. Steadman, there is a demand for the Nantucket Community Pool to prioritize current adaptive programming and to add more adaptive and inclusive options. Our interview with Mr. Foster, combined with Eliza Steadman's input, revealed that the pool's schedule does not provide enough time to meet the needs of other organizations.

4.5 Registration Challenges for Programming

With the limited number of sessions per program offered, many people are unable to join the programs they want. The user survey emphasized how difficult it is for the community to register for programs. As shown in Figure 14, 38% of respondents indicated that programs were no longer available for sign-up during registration. According to survey respondents and staff members, programs fill within minutes when registration opens, with LTS and Family Swim programs being the two most popular options. This time frame is too short for the community with 40% of survey respondents stating that they did not have enough time to sign up before the programs filled up. To have a chance at getting into programs, some respondents stated that they must open multiple tabs or rapidly refresh the page minutes before registration.

Programs are Available When I Try to Sign Up

Percentages of Respondent's Ratings

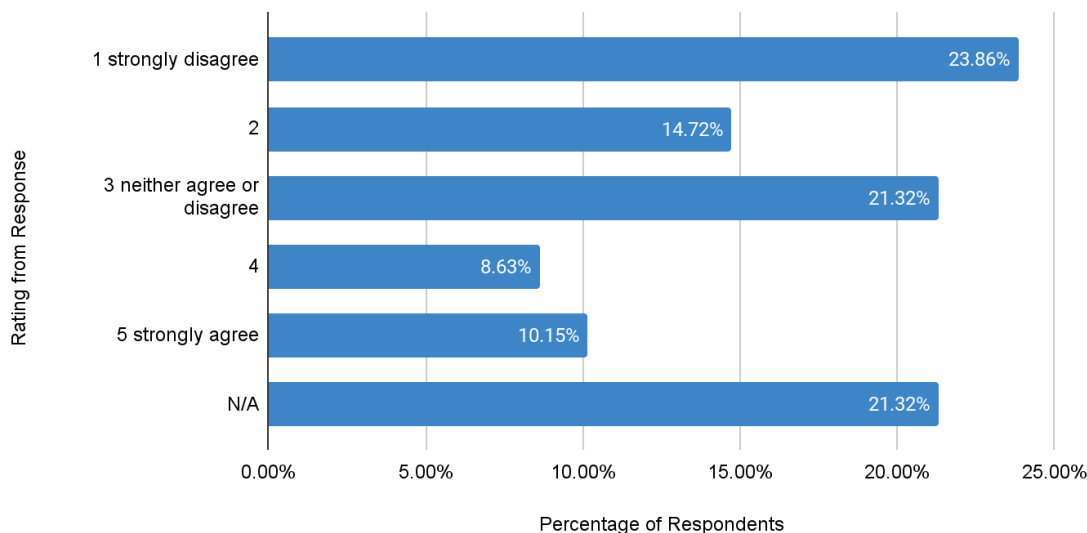


Figure 14 : Survey responses to the question of program availability (n = 197)

There is Ample Time to Register for Programs Before They Are Filled Up

Percentages of Respondent's Ratings

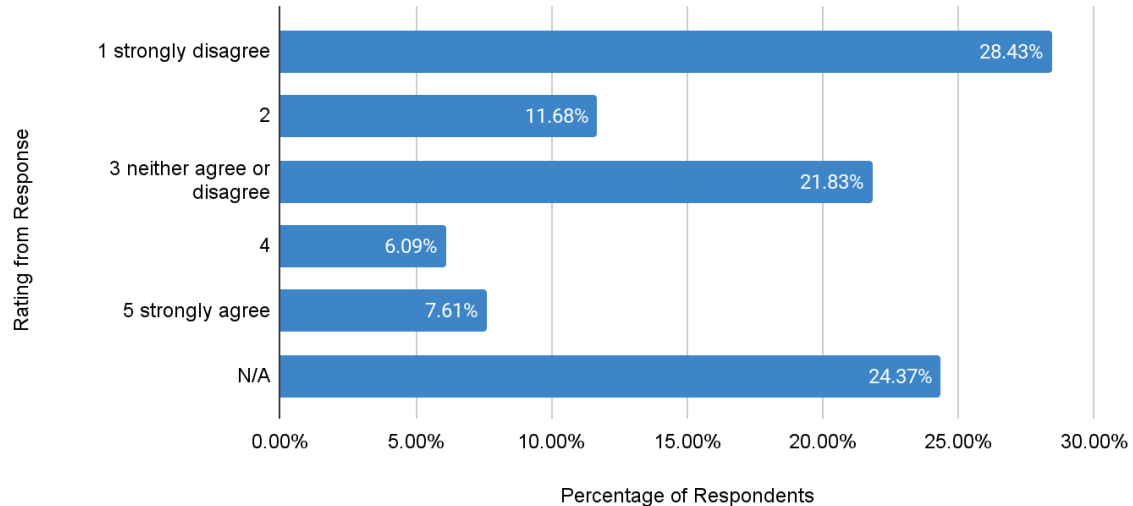


Figure 15 : Survey responses to the question of whether the registration window is long enough (n = 197)

The user survey indicates additional problems with the registration system. The registrations for LTS and Family Swim occur at 9 AM on a weekday. For many adults and parents, they are unable to register for these programs because the registration times are during their working hours. Navigating the webpage can also be difficult as some respondents reported the current method of picking classes and adding them to the cart as being too inefficient. This makes registration significantly more difficult for families with multiple kids because they are unable to sign up multiple kids at once. Furthermore, many respondents hastily sign up for the first available session of LTS they can find, but that may not work well for their schedule. Some adults must put their children into lower skill level swim lessons due to availability, which is not beneficial for teaching them and takes space away from other kids. According to those respondents, they feel like the issue of picking times that align with their schedule would not be as much of a problem if available LTS time slots were listed before the registration date.

Much of the frustration from the community on program registration comes from the overall unavailability of spots. Having more spots would allow more children to be signed up and could increase the window of time programs hit capacity and become unavailable. However, scheduling new slots for programming is difficult due to the many limitations of the facility.

4.6 Facilities and Locker Room

Program scheduling is further complicated by the size and nature of the locker room from the fact that it is physically connected to the school and the need to separate children and adult programming. The layout of the locker room facility is not efficient and causes inconvenience to pool users. A picture of the men's locker room can be seen in Figure 16. Interviews with staff revealed the most common complaint they receive is about the locker room's cleanliness, size, and layout. In the men's and women's locker rooms, there is currently one shower and one bathroom stall. The survey results confirmed that the locker room is a major inconvenience for pool users as the lack of adequate space creates a bottleneck, especially during large or overlapping programs. Some pool users explained that they leave their program a few minutes early to use the locker room before the rush. The survey also yielded complaints about the lack of a dedicated locker room for families with small children. Director of Facilities, Chip Clunie, explains that users understand that the locker room is a “utilitarian thing” and do not expect luxury and still find it suboptimal.

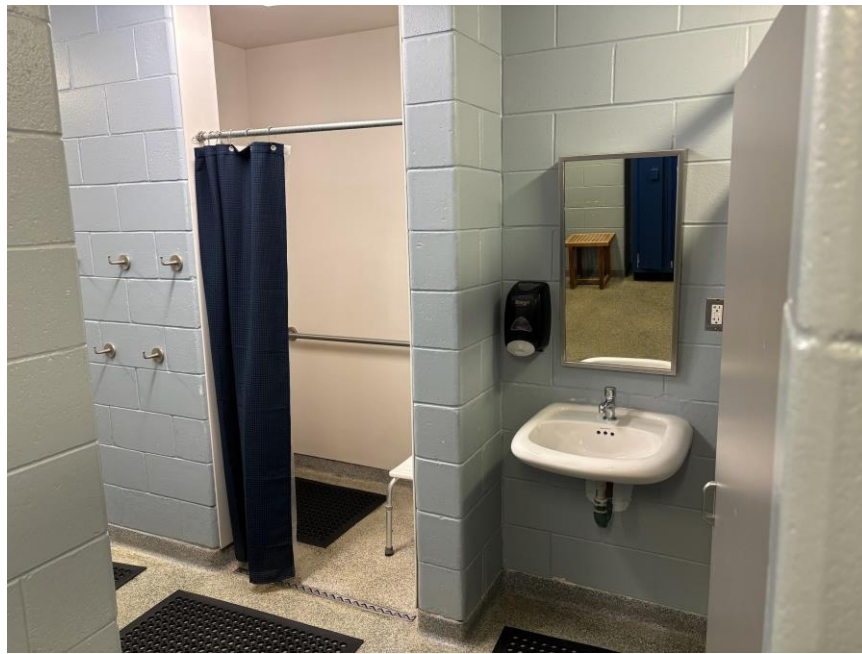


Figure 16 : Picture of men's locker room

The locker room also presents security concerns since the public could accidentally access the school through the pool entrance. This requires additional staffing to ensure both areas remain secure during times when the school is closed but the pool is open. The shared connection between the pool and the school also complicates operations on weekends and holidays. Staff must be allocated to open the building, clean the facilities, and manage security around the school. This allocation is a significant barrier to opening the pool on Sundays or during other non-school days.

The locker room is limited by its available space, and any alterations to the locker rooms would fall under the auspices of NPS and facilities management team rather than the Community School. Chip Clunie indicated that finding contractors to do various jobs in the NPS facilities can be difficult since there are few specialized, on-island contractors. Even when local workers are available, liability concerns complicate hiring for specific tasks like installing starting blocks if it is not from a licensed contractor. The starting blocks also had to be installed by a licensed contractor so that they were compliant with MIAA standards. This means that they must hire someone off the island who is willing to travel to Nantucket to do the job which may increase costs and delay completion.

5.0 Conclusions and Recommendations

This section describes our recommendations to the Nantucket Community School (NCS) about improvements that can be made to the operations and programs at the Nantucket Community Pool. The Nantucket Community School staff understands there is a demand for pool programs but has a difficult time finding more staff to teach at and run the pool to increase offerings. Furthermore, there is limited space at the pool. NCS has been exploring how to add programs for children and adults but lacks the needed budget and staff. The survey data shows that some programs are not accessible for parents to participate/bring their kids in due to work hours. NCS has been offering Family Swim on Saturdays and other programs after school hours to make it more accessible. The size, location, and operational constraints of the locker rooms as integral parts of the school present substantial obstacles to improving the provision of programs to meet community demands. The cleanliness of the pool, pool deck, and locker rooms are ongoing concerns the NCS strives continually to address.

Conclusion 1: The scheduling of pool hours and programming is inefficient

The current schedule does not effectively optimize the hours between pool programming, open swim hours, and programs for other organizations. There is an insufficient amount of time for pool offerings, such as LTS and adaptive swim programs. Additionally, there are many hours and lanes at the pool going unutilized for any activity. Recommendations 1, 2, and 3 refer to this issue.

Conclusion 2: The capacity of programs is insufficient

In addition to the inefficient scheduling at the Nantucket Community Pool, we conclude that programs at the pool, like LTS and Family Swim, do not have the capacity to meet the demands of the community. The lack of available slots impedes many community members from attending programs at the pool. Recommendations 1 and 6 address this issue.

Conclusion 3: Registering for programming online is difficult

Our survey data indicates that members of the community have difficulties registering for programs online. Apart from programs having low capacity and high demand, registration times are inconvenient, and navigating the website is difficult. Recommendations 4 and 5 address this issue.

Conclusion 4: The quality of the facilities needs to be improved

According to our survey, we conclude that many community members believe that the overall facilities, particularly the locker rooms, lack both quantity and quality to satisfy the community. Currently, the public can only use one male's locker room and one female's locker room, with each having only one shower and toilet. Many survey respondents stated that the locker rooms are too small, inconvenient, and unsanitary. Recommendations 7 and 8 address this issue.

Conclusion 5: The facility's connection with the high school creates operational limitations

Currently, the Nantucket Community Pool is directly connected to the high school. From our interviews with James Voyages, Chip Clunie, and other staff members, we have concluded that the physical and operational connection to the high school makes it difficult for the Nantucket Community Pool to operate independently from the high school. Because of the direct connection, the pool cannot be open to the public as often or at all when the high school is closed on the weekends or holidays. Recommendation 9 addresses this issue.

Based on our findings and conclusions, we have developed two types of recommendations: a list of feasible recommendations (1-5) that can be readily implemented by the Nantucket Community School and a "wish list" of recommendations (6-9) that will be more difficult to implement given budgetary constraints and the fact that NCS has limited control over the physical facilities of the pool and locker rooms.

Recommendation 1: We recommend the NCS optimizes the current scheduling to better suit the community's demands

Based on the community's opinions from the survey, there are some people that prefer to have programs available at different times of day. For instance, there are members of the lap swimming community that would like hours in the early morning to get their exercise done. There are Aquacise goers who would like to see this program closer to midday or the afternoon. Furthermore, LTS is currently in the middle of the day making it difficult for parents to attend them due to work. Thus, there are parents that would like to see more Learn-to-Swim in the afternoon after work instead.

Another change that could be implemented is overlapping programs of similar age groups to maximize the pool's use. For example, if a summer camp or a swim team occupies half of the pool's lanes, another summer camp or swim team could occupy the other half. This would help reduce the number of lanes that go unused due to program age separation while also condensing the schedule to allow for more open swim hours and program windows. It has been noted in interviews that managing high occupancy programs like Family Swim can be difficult due to a lack of lifeguards. Therefore, more lifeguards would have to be hired to merge larger programs, but it is possible for smaller size programs.

Recommendation 2: We recommend adding more physiotherapy & adaptive swimming programs

Currently, there is little time for Nantucket S.T.A.R. to run adaptive swimming programs at the pool despite their desire to run more programs there. Collaborating more with Nantucket S.T.A.R would help the Nantucket Community Pool become more inclusive for community members who have disabilities.

Furthermore, we have learned from interviews with staff and from our survey responses that there is a strong demand for aqua therapy and physiotherapy with 36% of survey respondents (n=197) wanting to see those types of programs offered at the pool. Therefore, adding physiotherapy programs to the pool would be both a popular addition and a beneficial resource to improve the community's health. Apart from finding a therapist to perform specialized aqua therapy classes, more Aquacise classes and lap swimming hours could also be allotted to help meet demand. Another method that could be explored is to utilize more types of equipment, new and current, to improve the quality of aquacise on other parts of the body. For instance, short rubber resistance bands further help provide a low-impact workout.

Recommendation 3: We recommend NCS extend hours on Saturdays and open the pool on Sundays

Through our survey responses and interviews with pool staff, we conclude that it would be beneficial to have the pool extend its hours of operation on the weekends. Furthermore, some survey respondents indicated they have Sunday off and would use the pool if it were open on that day. Therefore, having more weekend hours for open swim would provide availability for community-wide use, like early mornings on Saturdays and midday on Sundays. However, there will be limitations with how long the pool can be open on the weekends depending on the available staff, including lifeguards for the pool, janitors for the facilities, and security for the school building. We also recommend that pool staff be trained as building managers so that they can open and close the pool on weekends themselves to limit the number of extra staff needed. For a smaller scale extension to operational times, NCS could start by adding an additional hour at 7AM for open swim on Saturdays.

Recommendation 4: We recommend improving the functionality and fairness of the registration process

According to survey respondents, people have trouble registering kids for Learn-to-Swim and Family Swim programs. The registration times for these programs occur in the middle of the workday, so many are unable to easily register. To improve equity in the registration process, one recommendation we have is to change the registration times. Having the registration window in the afternoon or evening after work hours or on Sunday would improve the accessibility of registration for many working adults.

Another problem stated in the survey is that it is nearly impossible to register multiple children at once, because all the spots are filled up by the time you register the first child. To help mitigate this issue, we recommend that registration times are staggered among programs instead of all occurring at the same time. This would allow parents with multiple children to register one child at a designated time and another child at a different designated time instead of having to choose between them when registering. However, this is not a perfect solution, because if a parent wants to register multiple children for the same class, they would be unable to register both children at once.

Recommendation 5: We recommend improving the website and registration system's navigability

According to our survey results, respondent's opinions were mixed on how easy the website is to navigate with 34% of survey respondents believing navigation was difficult and another 34% believing navigation was easy (n=197). Unfortunately, we do not have enough feedback on how the website can be improved. Some complaints include the inability to find information about programs and payment or difficulty and frustration navigating between pages. Therefore, we recommend reviewing the website with an expert in human-computer interaction to see how the website could be optimized to improve user experience and comprehensibility. Alternatively, NCS could host an in-person think aloud test with a sample audience to identify difficulties in navigating the website.

Recommendation 6: We recommend NCS recruits more staff members

Having more staff to teach programs would improve the overall capacity and allow for new programs to be added and current ones to be expanded. Additionally, the increase in staff makes Recommendation 3 easier to implement by having more staff members that can manage the pool's operations. From interviews with the coaches of the club swim teams, in the past, NCS have encouraged high school athletes on the club team to get lifeguard certified to mitigate this problem. Thus, we recommend that NCS promote this opportunity directly. Along with that, it is important that the pool increases the number and frequency of lifeguard certification classes throughout the various seasons. Increasing the advertising on the benefits of being a staff member for an incentive, such as free pool membership, could also help convince students to work at the pool.

Recommendation 7: We recommend that facilities and maintenance improved

The locker rooms are high traffic areas with every swimmer using the same showers, toilets, and changing space which can quickly create an unclean space. According to various survey respondents and staff members, the drainage system in the locker room clogs easily and can take a while to repair. This results in the facility becoming wet and moldy for the community. Therefore, we recommend that more cleaning should be performed in the locker rooms. The drainage system should also be upgraded to reduce the chance of clogging, flooding, and mold. However, maintenance is performed by Nantucket Public Schools and is outside NCS's scope. Furthermore, locker room upgrades can be costly depending on their scale and would result in them being closed for implementation. While the upgrades and additional cleaning may be disruptive to the pool's operation, it will help to ensure the facility stays safe and clean.

Recommendation 8: We recommend expanding the locker room and shower facilities

According to the survey, overcrowding is a concern in the locker rooms and expanding the space can help reduce this problem. Having more locker rooms can increase flexibility of pool programs and help multiple programs to be run at the same time. More locker rooms will also help solve the overall sanitation of the facilities by distributing the number of people that use the same space. Although, expanding the facilities would be difficult because infrastructure maintenance and management falls under NCP authority and is not under the control of NCS. Furthermore, it would be expensive and time-consuming to expand the building. Additionally, projects are difficult to perform as they may require workers to be brought on-island. Regardless, the locker rooms create concerns in sanitation, capacity, and program scheduling. Even if the facility changes in Wishlist Recommendations 2 & 3 are impossible, it should still be a priority going forwards to find an alternative solution, because it already imposes notable risk to the safety of the community and its children.

Recommendation 9: We recommend building a second pool

The construction of another pool that operates fully independently from the high school would help solve many of the problems laid out in Conclusions 2 and 4. Having a second pool would allow for more programs and open swim hours. This would also fulfill the unmet needs for program time from other organizations in Nantucket, such as S.T.A.R. and the Boys and Girls Club, to be able to operate more of their own pool programs. Additionally, the construction of a new facility means that larger locker rooms and more modernized pool cleaning technology can be installed. However, this recommendation would require an enormous number of resources, staff, time, and space to construct and maintain an entire new pool.

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Appendices

Appendix A. Sponsor Description

The Nantucket Community School, or NCS, is an educational organization located on Nantucket Island dedicated to encouraging lifelong personal growth and community engagement. Established by the town of Nantucket in 1989 by vote, it aims to maximize the use of newly renovated public-school facilities outside of regular school hours. The Nantucket Community School has evolved over the past 30 years to meet the diverse needs of the community. NCS offers areas designed for every age group. These include Adult Education and Enrichment, Early Childhood Education and Enrichment, Extended Day Childcare, Camps and Sports Clinics, DanceWorks, Driver's Ed, and the Nantucket Community Pool.



Figure 17 : Nantucket Community School Logo

There are several options for Adult Education and Enrichment. NCS offers a GED preparation course and many testing opportunities, from operating a Professional Service Industries (PSI) and Pearson Vue Test Center to Accuplacer and ServSafe proctored exams. “NCS is also authorized to deliver a variety of MTEL exams” (Nantucket Community School, 2024). PSI and Pearson Testing provide certifications for almost every industry. Accuplacer is a powerful tool that helps universities assess student readiness for their first year of college. NCS has registered SafeServ proctors to oversee both written and online exams so individuals in the

food industry can complete their Food Protection Manager Certification. The online version is available in English, Spanish, and Chinese, while the print version is available in several additional languages. NCS also offers proctoring services for any college exam as long as the institution approves the school as an examination site. English for Speakers of Other Languages (ESOL) focuses on verbal communication to help adults continue their education with possible language barriers. There are four classes from Basic English for Non-Speakers to Conversational English, providing opportunities for individuals with different levels of English communication.

Early Childhood Education and Enrichment provides young children with foundational skills through activities that promote cognitive and social development. For example, art and music classes stimulate creativity and enhance educational experiences. These enrichment programs are available for children from birth to eight years of age in different playgroups. For Extended Day Childcare, NCS offers a safe and structured environment for kindergarten students which runs every school day from 2:20 to 5:00 pm. There is Parent/Caregiver Education and Support which has Childbirth Education and Circle of Moms where parents can discuss ideas about motherhood.

Day camps are offered from the end of June to mid-August, and there are three options: Full Day, Junior, and Early Bird. Full Day and Early Bird are for ages five to eight while Junior is for ages three and a half to five. These day camps utilize the indoor pool, gymnasium, and fields. There are also multiple sports clinics for young athletes including basketball, football, tennis, and gymnastics.

“DanceWorks has been an integral part of the Nantucket Community School’s programming since 2001” (Nantucket Community School, 2024). Every season, students get to showcase the skills they learned through a specially choreographed recital. DanceWorks has offers many different dance classes like Ballet, Irish Step, Tap, and Jazz. There are two age groups for these classes which are three to six and seven and up. Adults can participate in Tap, Line Dancing, and Zumba.

Driver's Ed is offered mainly in January and there are 18 spots in each class. The number of hours a student can schedule depends on instructor availability resulting in students typically acquiring just one hour of driving per week. There are separate sessions for adult driving lessons which work slightly differently. Instead of completing a set number of hours of driving, observation, and classroom time, they can take the road test once the instructor deems the student is ready.

The Nantucket Community Pool has program options for all ages. There are both youths Learn-To-Swim (LTS), Adult Learn-To-Swim (ALTS), and swim groups for children, college students, and older adults called Masters. During the winter months, the pool is used by the high school varsity swim team and by the school's Physical Education curriculum in the Spring. Aquacise serves as an important resource for adults and seniors by providing them with an impact-free exercise program. Lastly, families can enjoy a complimentary Family Swim session on Saturday afternoons (Nantucket Community School, 2024).

Appendix B. Preliminary Interview Scripts: Aquatic and Athletic Directors

Directors Preamble

Thank you for taking the time to meet with us today. As you know, we are a group of Worcester Polytechnic Institute (WPI) students working on a project in collaboration with the Nantucket Community School to evaluate the Nantucket Community Pool. Since we will be meeting regularly, today we would like to take about 30-40 minutes to ask a few questions about the pool, its programs, and your perspective on how things are going. In future meetings, the length may vary depending on what we uncover as we analyze the information you share.

Your input is really valuable, and we will be taking notes during our conversations. We may also want to quote you in our final report, so just let us know if you would prefer to remain anonymous or if you are okay with us using your name. Before we publish anything, we will give you a chance to review any quotes we would like to use. Do you mind if we record this conversation?

If you ever have any questions or feedback about the process, do not hesitate to contact us at gr-ACK24Pool@wpi.edu or our faculty advisors, Dominic Golding, at golding@wpi.edu, and Melissa Belz, at mbelz@wpi.edu. Thank you for your support in this research. Do you have any questions before we begin?

Questions for James Voyages (Aquatics Director)

1. Can you please tell us again about your role at the pool and which aspects are your primary responsibility? What responsibilities does NCS vs NPS have over the pool?
2. You mentioned that the guard at the front desk will help oversee the pool when it gets crowded. What do you do if there happens to be more than 50 swimmers in the area?
3. With minimal staff, how do you balance the needs of different swim groups while maintaining a safe and organized environment?
4. How often do you communicate with the Athletics Department about pool scheduling?

5. What topics do you discuss during these meetings and how have they helped?
6. How are these meetings organized?
7. Can you describe any instances where you had to resolve conflicts between swim programs and athletic events?
8. What factors do you consider when deciding to add new swim programs or expand current ones?
9. Do you know anyone facing similar situations with indoor pools? Do you think we would benefit from interviewing them?
10. Would you like to see any changes in the pool mechanical room?
11. Why have you not tried a chemical solution for cleaning the calcium off the tile floor?
12. How many full-time, part-time, and seasonal staff are there for the pool?
13. What major issues with the pool facility and the building reduce the efficiency of the operation of the pool?
14. What improvements do you believe would be beneficial for the pool to make?
 - a. Any ideas for security for the locker rooms?
15. Is there anything else you would like to elaborate on that we have not covered?
16. Is there a good time that we could come in and interview the staff?
 - a. Maybe mornings for the lifeguards and before/after programs for instructors?
17. When you are available, could you please send us the Google Calendar for the program schedule? What is your progress in gathering the participation data?
18. Do you need another lifeguard/staff from now to December 14th? Aidan is certified

Questions for Jim Pignato (Former Aquatics Director)

- 1.) How long were you the Aquatics Director and when?
- 2.) Can you describe your role and responsibilities as the Aquatics Director?
- 3.) How would you describe the pool environment?
- 4.) What was your philosophy for running the pool?
 - a.) How did you manage to run the pool with the limited amount of staffing and resources you had?

- b.) How did you manage the schedule to include programs and other organizations such as STAR?
- c.) Did the programs also run with a small number of kids?
- 5.) Were there other organizations that were using the pool other than STAR to run their programs?
- 6.) What were the biggest issues the Nantucket Community Pool faced while you were the director?
- 7.) We have heard that school security is a potential issue in the locker rooms, did you run into any security issues while director?
- 8.) What were the most common complaints that you received?
- 9.) Was the pool open on Sundays? If so, what was being offered and why?
- 10.) How did programming change with the COVID-19 pandemic?
- 11.) What were the most successful (profitable and popular) programs when you were director?
- 12.) What was the process of creating and implementing new programming?
- 13.) Were there any (other) programs in the past that were discontinued for a lack of popularity or other reasons?
- 14.) Are there any programs that you would like to see added to the pool?
- 15.) Is there anything else you would like to elaborate on that we have not covered?
- 16.) Is there anyone that you think we should talk to learn more about the pool and its operations?

Questions for Travis Lombardi (Athletics Director)

- 1. Are there any schedules that are more difficult to manage or adjust? If so, why do you think that is?
- 2. How do you schedule swim team practices and meets in coordination with other uses of the pool?

3. Have there been scheduling conflicts between swim team events and other pool programs or users? If so, how are they typically solved, and do they often lead to cancellations or rescheduling?
4. Are there any specific days or times that are particularly challenging for managing swim team activities without disrupting other programs?
5. How do you currently collaborate with James Voyages to avoid scheduling conflicts? Do you have regular meetings or use any particular communication tools to coordinate?
6. Have you noticed changes in how the swim team operates since COVID-19 (e.g., changes in practice times, number of meets, participation rates)?
7. How did the Athletics Department adapt to the pool's usage restrictions during the pandemic, and how have things changed since?
8. From your perspective, are there any areas of pool management or scheduling that could be improved to better accommodate both athletic and recreational program
9. Is there anything else you would like to elaborate on that we have not covered?

Appendix C. Preliminary Interview Scripts: Stakeholders

Stakeholders Preamble

We are a group of students from Worcester Polytechnic Institute (WPI) conducting a research project in collaboration with the Nantucket Community School to evaluate their community pool. We would like to interview you to learn more about the operations of the Nantucket Community Pool when you were the director.

We are delighted that you have taken time out of your day to do this interview. The interview will take 20-30 minutes. Your participation in this interview is completely voluntary and you may stop at any time. We shall be taking notes during our conversation and may wish to quote you in our final report. Do you mind if we record this conversation? Do you mind if we quote you by name, or would you prefer we anonymize your responses? We will, of course, give you an opportunity to review any quotations before publication. We will also happily provide you with a copy of our final report when it is completed.

If you have any concerns or questions after the interview, you can contact us at gr-ACK24Pool@wpi.edu or our faculty advisors, Dominic Golding, at golding@wpi.edu, and Melissa Belz, at mbelz@wpi.edu. Thank you for your support in this research. Do you have any questions before we begin?

Questions for Chip Clunie (NPS Director of Facilities)

1. What role does NPS have in managing the high school's pool?
2. What goes into maintaining the pool facility?
3. What changes to the facility have been made in the past several years?
4. We learned from James Voyages that the pool is working on installing new diving blocks. Are there any other upcoming changes to the facility?
 - a. Can you explain the steps in completing a large task like this one?
 - b. How long did it take for this project to get in motion?
5. What kind of changes or improvements would you want to see made to the facility?

6. What are some issues that you come across when maintaining the pool facility?
7. How has communication been between your department and the Nantucket Community Pool? Is there any way that communication could be improved?
8. We have heard that locker room security has been an issue. Do you have any concerns about locker room security (i.e., people being able to access the high school from the pool's varsity locker rooms)?
9. Are there any aspects of the facility that you believe could be improved?
10. Who else has a major stake in the success and daily operations of the Nantucket Community Pool?

Questions for Eliza Steadman (Executive Director, S.T.A.R. Nantucket)

- 1.) We understand that you run "STAR Family Swim" at the Nantucket Community Pool. Are there any other programs that you run at the Nantucket Community Pool?
 - a.) Which ones have been especially impactful for your participants?
 - b.) Are there any programs you would like to see done with NCS?
 - c.) What do the overall camps look like in terms of participation? How many attendees?
 - d.) What limitations do you feel you have with the time and resources given by NCS during the duration of the summer camps?
 - e.) Do you wish you had more time with the Nantucket Community Pool to operate more camps or programs?
 - f.) Have there been any issues in the past? If so, how were they addressed
- 2.) Have you noticed any seasonal trends in attendance or program popularity?
- 3.) What unique challenges or benefits do you find when hosting aquatics programs in the Nantucket Community Pool?
- 4.) How would you describe your experience coordinating with the Nantucket Community Pool?
- 5.) How do participants and their families describe their experience in the aquatics programs?

- a.) Are there any specific stories or feedback that stand out?
- 6.) Are there enough resources and staff for the programs you run?
- 7.) Can you request extra equipment or staff from the pool for any programs?
- 8.) How do you communicate with the Aquatics Director for scheduling?
- 9.) Have you gotten any complaints about the programs you run at the pool or about the facility?
 - a.) If so, how have you addressed the complaints?
- 10.) What improvements do you think could be made to the pool facility, the programming, or the scheduling?
- 11.) What are some programs you would like to see the Nantucket Community Pool add and why?

Questions for Jamie Foster (CEO, Nantucket Boys and Girls Club)

- 1.) We understand that you have rented out the pool during the summer for camps.
 - a.) What kinds of other collaborations have you done with NCS?
 - b.) Any learn to swim programs?
 - c.) Who do your programs serve?
 - d.) Are there any programs you would like to see done with NCS?
 - e.) What do the overall camps look like in terms of participation? How many attendees?
 - f.) How monetarily successful do you feel the summer camps at the pool are for their costs?
 - g.) What limitations do you feel you have with the time and resources given by NCS during the duration of the summer camps?
 - h.) Do you wish you had more time with the Nantucket Community Pool to operate more camps or programs?
 - i.) Have there been any issues in the past? If so, how were they addressed
- 2.) We learned that the Nantucket Community Pool has seen a drop in program participation for 7th-9th graders. Have you seen a drop in participation from this age group?

- a.) Do you have any strategies to retain participation from this age group?
- 3.) How do you communicate with the Aquatics Director for scheduling?
- 4.) Have you gotten any complaints about the programs you run at the pool or about the facility?
 - a.) If so, how have you addressed the complaints?
- 5.) What improvements do you think could be made to the pool facility, the programming, or the scheduling?
- 6.) What are some programs you would like to see the Nantucket Community Pool add and why?

Questions for Beth Hallet (NPS Superintendent)

- 1.) How long have you been the superintendent of NPS?
- 2.) What role does your position play in the operations of the Nantucket Community Pool?
- 3.) How many security guards and custodial staff do you have working at the school full-time?
- 4.) How would you describe the experience of having students use the pool during gym?
- 5.) Have there been any complaints?
- 6.) Is it profitable to run gym classes at the pool?
- 7.) What challenges or benefits have you faced by having the pool connected to the school?
- 8.) How would you describe your experience working with the pool staff?
- 9.) Have you received any complaints from the parents about the pool?
- 10.) Have there been any for security?
- 11.) In your opinion, would it be profitable/beneficial to have the pool open on Sundays?
- 12.) Is there anything you want to discuss useful for our project?
- 13.) Is there anyone else we should talk to?

Questions for Olivia Gallugi (Cyrus Peirce Middle School Gym Teacher)

- 1.) How long have you been a gym teacher at the middle school?

- 2.) How would you describe your experience with the pool staff?
- 3.) Are you the one who runs the classes at the pool or does a staff member lead them?
- 4.) How many students do you typically have for each gym class?
- 5.) Do you make your own gym curriculum or does someone else?
- 6.) What kinds of swim lessons do you teach the students?
- 7.) How would you describe the experiences of the students participating in the pool for PE?
 - a.) Does it seem like they enjoy it?
 - b.) Are students required to swim to get credit?
- 8.) What does the school require the pool to provide to ensure it is safe to run classes?
- 9.) What happens if some kids in the class do not know how to swim and others do?
- 10.) What challenges have you faced hosting some gym classes in the pool?
- 11.) Have you found it beneficial to teach students to swim?
- 12.) Have you received any complaints or concerns about running classes at the pool?
 - a.) Any complaints about the locker room and showers?
- 13.) Are the classes you run in the pool accessible to every individual?
- 14.) Do you think the elementary school would ever reincorporate swimming into their PE curriculum? Why or why not?
- 15.) Is there anything we have not touched upon that you believe would be useful for our project?

Appendix D. Preliminary Interview Scripts: Pool Staff

Staff Preamble

We are a group of students from Worcester Polytechnic Institute (WPI) conducting a research project in collaboration with the Nantucket Community School to evaluate their community pool. We would like to interview you about the operations of the pool as well as programming from the staff point of view.

We are delighted that you have taken time out of your day to do this interview. The interview will take 20-30 minutes. Your participation in this interview is completely voluntary and you may stop at any time. We shall be taking notes during our conversation and may wish to quote you in our final report. Do you mind if we record this conversation? Do you mind if we quote you by name, or would you prefer we anonymize your responses? We will, of course, give you an opportunity to review any quotations before publication. We will also happily provide you with a copy of our final report when it is completed.

If you have any concerns or questions after the interview, you can contact us at gr-ACK24Pool@wpi.edu or our faculty advisors, Dominic Golding, at golding@wpi.edu, and Melissa Belz, at mbelz@wpi.edu. Thank you for your support in this research. Do you have any questions before we begin?

Questions for Lifeguards

1. How long have you been a lifeguard?
 - a. How long at the Nantucket Community Pool?
 - b. What made you come here to work?
 - c. What do you like about working here?
2. We understand that many of the programs are filled every time they are offered. Have you seen any programs that were underbooked in the number of attendees or popularity?
3. With full classes, do you feel like you can effectively oversee the entire pool and all swimmers?

4. Can you estimate the largest number of swimmers you have seen in the pool at once?
5. Were you working here during the pandemic?
 - a. If yes, have you noticed any changes in programming?
 - b. Any changes in participation?
6. We learned that the Boys and Girls Club runs swim programs during the summer and that you seasonally run lifeguard training and private swim lessons. Are there any other programming changes in the summer versus in the off-season?
7. Can you think of any new programs that would be feasible for the pool to add?
8. What major obstacles do you feel are preventing the permanent inclusion of new programs?
9. Have you received feedback or complaints about the classes such as the water temperature? Feedback about program schedules?
10. Has there been feedback on what future programs should be added?
 - a. What other feedback have you received?

Questions for Instructors and Coaches

1. I understand that you are a (role at the pool) How long have you been doing that?
 - a. How long have you been doing so on Nantucket?
 - b. What brought you to the Nantucket Community Pool in the first place?
 - c. What have you liked about teaching there?
2. Did you get lifeguard certified on island?
 - a. Have you done any recertification? On island?
 - b. I know that the pool offers seasonal lifeguard certification classes. If they were available around when your 2-year certification ended, would you complete the classes here?
3. How would you describe the dynamic of your classes?
4. Are there multiple instructors per class?
5. How many kids are in each group?
 - a. How would you describe the benefit of having smaller classes for kids?

6. What sort of equipment do you use the most? Are they in good condition?
7. Is there any equipment that you feel that the pool does not have that could help improve teaching your classes?
8. What programs would you like to see or teach at the pool?
9. What major obstacles do you feel are preventing the permanent inclusion of new programs?
10. Have you received feedback or complaints about the classes such as the water temperature? Feedback about program schedules?
11. Has there been feedback on what future programs should be added?
 - a. What other feedback have you received?

Appendix E. Preliminary Survey Questions

Survey Preamble

We are a group of students from Worcester Polytechnic Institute (WPI) conducting a research project in collaboration with the Nantucket Community School to evaluate opinions about the Nantucket Community Pool. The survey should take about 5 minutes of your time. Your participation is voluntary, and your responses will remain anonymous. As a thank you for taking the time to fill out the survey, the Nantucket Community School is offering any survey participants the chance to win a FREE 1-month adult pool membership in a raffle. Sign up for the raffle at the end of the survey!

If you have any concerns or questions, feel free to contact us at gr-ACK24Pool@wpi.edu or our sponsor Lindsay Pykosz at pykoszl@npsk.org

Survey Questions

These questions are designed to gain a deeper understanding of the community's opinions on the Nantucket Community Pool.

Membership Status

1. *What is your membership status for Nantucket Community Pool?

- ☐ Current member
- ☐ Former member
- ☐ Not a member

If they are a current member they will continue onto questions on Membership

If they are a former member they will continue to questions about Former Membership

If they are not a member, they will continue to Questions on Pool Facilities and General Programming

Questions on Membership

2. *Which type of membership do you hold? (Checkbox Grid)
 - ☐ Options
 - ☐ 1 month
 - ☐ 3 months
 - ☐ 1 year
 - ☐ N/A
 - ☐ Adult (18-59)
 - ☐ Youth (6-17)
 - ☐ Senior (60+)
 - ☐ Family
3. *How long have you held a membership?
 - ☐ Less than 6 months
 - ☐ 6 months
 - ☐ 1 year
 - ☐ 2 years
 - ☐ 3+ years
4. *Why did you decide to become a member? (Select all that apply)
 - ☐ Fitness/Exercise
 - ☐ Recreational swimming
 - ☐ Social or community events
 - ☐ Recommendations from friends or family
 - ☐ Other (please specify): (Long Response)
5. *Please indicate if you feel the **membership** is
 - ☐ Poor value
 - ☐ Neither good/nor poor
 - ☐ Good value

Questions on Former Membership

1. *Which type of membership did you hold? (Checkbox Grid)

- ☐ Options
 - ☐ 1 month
 - ☐ 3 months
 - ☐ 1 year
 - ☐ N/A
- ☐ Adult (18-59)
- ☐ Youth (6-17)
- ☐ Senior (60+)
- ☐ Family

2. *When did you stop being a member?

- ☐ Less than a year ago
- ☐ 1 year ago
- ☐ 2-3 years ago
- ☐ 4-5 years ago
- ☐ 6+ years ago

3. *Why did you stop being a member? (Select all that apply)

- ☐ Memberships are too expensive
- ☐ Pool hours are inconvenient
- ☐ Facility cleanliness and maintenance issues
- ☐ The location is inconvenient
- ☐ Parking is inconvenient
- ☐ Neither I nor my family have much interest in swimming

- Pool is too crowded during peak hours
- Concerns about health and safety
- Other (please specify): (Long Response)

Questions on Pool Facilities and General Programming

This section will follow all branches sections from #3

6. *Please rate how satisfied you are with the quality of facilities during swim programs
 - Likert Scale: (1 very dissatisfied to 4 very satisfied, or N/A)
 - (Radio Button Grid)
 - Pool temperature
 - Pool equipment (such as flotation devices, life preservers, etc.)
 - Efficiency of indoor facility layout (such as pool deck, locker room, observation deck, etc.)
 - Cleanliness of pool water
 - Cleanliness of pool tiles
 - Cleanliness of locker rooms
7. What other comments do you have on the quality of the facilities?
 - (Long Response)
8. *What programs have you or your family participated in in the past years? (Select all that apply)
 - Family Swim
 - Lap Swim
 - Adult Learn to Swim
 - Youth Learn to Swim
 - Aquacise
 - Diving/Swim Team
 - None
 - Other (please specify): (Short Response)
9. *How often do you or a family member attend pool programs or lap swimming?

- Frequently (3-4 times a week)
 - Often (1-2 times a week)
 - Occasionally (1-3 times a month)
 - Rarely (less than once a month)
 - Never
10. *How likely would you be to participate in these programs again?
- Likert Scale: (1 not at all likely to 5 extremely likely)
11. *How would you rate the variety of **adult** programs offered at the pool?
- Likert Scale: (1 very low to 5 very high)
12. *How would you rate the quality of **adult** programs offered at the pool?
- Likert Scale: (1 very low to 5 very high)
13. *What other programs would you like the Nantucket Community Pool to offer? (Select all that apply)
- Aqua therapy
 - Snorkeling
 - Synchronized swimming
 - Water basketball
 - Water polo
 - Water volleyball
 - None
 - Other (please specify): (short response)
14. *Please indicate how convenient you find the scheduling of programs.
- (Radio Button Grid for every program)
 - Family Swim
 - Lap Swim
 - Learn-to-Swim
 - Aquacise
 - Club Swim
 - Options

- Inconvenient
- Convenient
- I do not participate in this program

15. Are there any specific comments you have on any of the programs you believe are inconvenient?

- (Long Response, Optional)

16. *Please indicate how strongly you agree/disagree with the following statements.

- Likert Scale:
 - (1 strongly disagree to 5 strongly agree, N/A)
- The registration site is easy to navigate
- Pool programming information is easy to find on the website
- Programs are available when I try to sign up
- There is ample time to register for programs before they are filled up
- The time of day to register is convenient
- The payment process is easy
- Communication from pool staff is clear and efficient
- The method of communication works well

17. Are there any specific comments you have on any of the statements you disagreed with?

- (Long Response, Optional)

18. *How would you rate the value of the programs considering their cost?

- Poor value
- Neither good/nor poor
- Good value

19. Are there any specific comments you have on the value of programs?

- (Long Response, Optional)

20. *If the pool hours were to be extended on Saturdays, when would you most likely use the facility? (select all that apply)

- Checkbox Grid
 - Lap swim

■ Programs

- Morning (6am-8am)
- Afternoon (3pm-5pm)
- Evening (5pm-7:45pm)
- I would not use the pool more on Saturdays

21. *If the pool were to be open on Sundays, what would you most likely use the facility for and when?

(select all that apply)

- ☐ Checkbox Grid

■ Lap swim

■ Programs

- Morning (6am-10am)
- Midday (10am-2pm)
- Afternoon (2pm-5pm)
- Evening (5pm-7:45pm)
- I would not use the pool on Sundays

22. For the previous two questions, please indicate what kind of programs you would like to see, if any.

- ☐ (Long Response, Optional)

23. *Do you have children who have participated in programming at the Nantucket Community Pool in the past 2-3 years?

- ☐ Yes
- ☐ No

If yes on #22 direct to youth programming section, if no, submit form

Youth Programming

24. *In the past 2-3 years, which of the following programs have your children participated in? (Select all that apply)

- Family Swim
- Learn-to-Swim (any level)
- Club Swim Team
- Diving
- None (please explain below)
- Other (please specify): (Short Response)

25. If you selected “None” in the previous question, please indicate why your child(ren) has not participated in any programs. (Select all that apply)

The programs are too expensive

The program schedules do not fit our availability

We were not aware of the available programs

Concerns about pool safety or supervision

The programs are often full or hard to register for

My children had a negative experience previously

Other (please specify, long response)

26. *Please indicate how strongly you agree/disagree with the following statements.

- (Radio Button Grid)
- (1 strongly disagree to 4 strongly agree)
 - There is a wide variety of youth programs
 - There is a high quality of instruction in the youth programs

27. *How likely would you be to register your child/children in the youth programs again?

- Likert Scale: (1 not at all likely to 4 extremely likely)

Submit form

Shown after the form is submitted

Your response has been recorded.

Thank you for answering our survey! With the help of the Nantucket Community School, everyone who participates in this survey has the option to be entered into a raffle to win a free 1-month adult membership to the Nantucket Community Pool!

We are also conducting follow-up interviews to gain a more in-depth understanding of the community's opinion regarding the Nantucket Community Pool. We would highly appreciate it if you could help us collect more information.

Please fill out this separate Google Forms if you wish to enter the raffle and/or be contacted in the future for a follow-up interview: [link](#)

Thank you for your time!

Raffle Participation

The optional, separate form if the user wishes to enter the raffle

- 1.) We are conducting follow-up interviews to gain a more in-depth understanding of the community's opinion regarding the Nantucket Community Pool. Are you interested in participating in a follow-up interview?
 - ☐ Yes
 - ☐ No
- 2.) Would you like to be entered into a raffle to win a free 1-month adult pool membership?
 - ☐ Yes
 - ☐ No
- 3.) If you want to be contacted later for a follow-up interview and/or wish to be entered into a raffle to win a free 1-month adult pool membership, please include your email or phone number here:
 - ☐ Short Response

Appendix F. Preliminary Interview Scripts: Follow up Interviews from Surveys

Email Template for Follow-Ups

Subject title: Follow-Up on Nantucket Community Pool Survey

Hello,

We are a group of students from Worcester Polytechnic Institute (WPI) conducting a research project in collaboration with the Nantucket Community School to evaluate the Nantucket Community Pool. As part of our research, we are conducting follow-up interviews with pool users to learn more about the community's opinion on the Nantucket Community Pool.

Thank you so much for filling out our survey and expressing interest in participating in a follow-up interview. We will be conducting these interviews on Monday and Tuesday of next week, between 10 am and 6 pm and they can either be conducted in person at the Nantucket Community Pool or over the phone. If you are still interested in participating in a follow-up interview, please let us know what times work best for you. If none of these times work, please reach out and we can find another time to meet. Thank you in advance and we strongly value your opinion!

We look forward to hearing from you!

Thank you,

Aidan Carter-Frem, Lillian Hanly, Elizaveta Tcherniaeva, Justin Yip

Follow-Up Interview Preamble

We are a group of students from Worcester Polytechnic Institute (WPI) conducting a research project in collaboration with the Nantucket Community School to evaluate their community pool. We would like to interview you about your opinion on the Nantucket Community Pool.

We are delighted that you have taken time out of your day to do this interview. The interview will take 10-15 minutes. Your participation in this interview is completely voluntary and you may stop at any time. We shall be taking notes during our conversation and may wish to quote you in our final report. Do you mind if we record this conversation? Do you mind if we quote you by name, or would you prefer we anonymize your responses? We will, of course, give you an opportunity to review any quotations before publication. We will also happily provide you with a copy of our final report when it is completed.

If you have any concerns or questions after the interview, you can contact us at gr-ACK24Pool@wpi.edu or our faculty advisors, Dominic Golding, at golding@wpi.edu, and Melissa Belz, at mbelz@wpi.edu. Thank you for your support in this research. Do you have any questions before we begin?

- 1.) Are you a year-round resident?
- 2.) Are you a member of the Nantucket Community Pool?
 - a.) If yes, what membership do you hold and for how long
 - b.) Do you believe the cost of membership matches the value of the membership?
- 3.) What programs (Learn-to-Swim, Lap Swim, Family Swim etc.) have you or your family participated in in the past three years?
 - a.) (Lap Swim) How often do you use the pool for lap swimming?
- 4.) Do you have any children who have participated in programs at the Nantucket Community Pool in the past three years?
 - a.) If yes, how many children?
 - i.) What did they participate in?
 - ii.) If learn to swim, how was your experience registering for classes on the NCS website?
 - iii.) How would you describe your children's experience using the locker room?

- 5.) What do you believe the pool is doing well in regard to scheduling, programming, and operations?
- 6.) What could the pool be doing better? Why?
- 7.) Are there any additional programs that you would like to see added to the pool?
- 8.) Have you had any difficulties using the website?
- 9.) What do you like about the pool facility?
- 10.) What improvements could be made to the pool facility?
- 11.) Is there any other feedback you have about the Nantucket Community Pool?