

Frederick County Aquatics Master Plan 2021



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Executive Summary

The Parks and Recreation Commission of Frederick County has recognized the need for and actively pursued the development of an indoor aquatics' facility for decades. An indoor aquatics facility first appeared on the county Capital Improvements Plan (CIP) In 1994 when the county population was approximately 47,000 residents. A generation later the county population has doubled and is projected to climb even faster as Frederick County continues to demonstrate its attractiveness for both residential and commercial growth.

Community Surveys conducted in 2012 and 2017 show an increasing desire for an indoor aquatics facility to meet the needs of current and future residents. In both surveys Indoor Aquatics was listed as a top need, only behind Trails and Parks in its priority.

Purpose:

The purpose of this plan is to;

- Reiterate the long-standing need for and indoor aquatics facility based on multiple community factors
- Identify the optimal pool size and layout based on need and operational cost recovery
- Propose a funding mechanism that ensures broad public support

Demographics:

Frederick County has a population ideally suited for aquatics programming and facilities. A large section of the population, 43%, is between the ages of 20 and 54. This section of the population is more likely to have children, live in a household of more than 2 people, and is more likely to be employed. This section of the population is actively looking for recreation amenities and tends to have discretionary income to spend. Those age groups both younger and older than are more likely to engage in organized programs like swim lessons, swim teams, and water fitness programs. Also, the primary age group and younger are more likely to seek amenities and opportunities the entire family can enjoy (Councilman-Hunsaker Aquatics).

Statement of Need:

Currently, the Winchester City Pool at Jim Barnett Park is the only public indoor aquatics facility. It has historically served as a regional pool, serving Winchester, Frederick County, and other neighboring jurisdictions. Size and design limitations make the Winchester pool unable to meet current needs as demonstrated by a lack of available swim time and the facilities inability to host competition swim meets. Evaluating the suitability of the Winchester pool to meet Frederick County needs based on population and benchmark metrics further demonstrates that Frederick County residents are greatly underserved when it comes to indoor aquatic access. Additionally, local competitive user groups consistently express that if a modern facility were built it would be preferred over the existing indoor pool at Jim Barnett Park.

Public Input:

Community surveys, stakeholder interviews, and citizen input opportunities provided the basis of understanding, interest, and anticipated use of an indoor aquatics' facility. The theme of 'building for the future', was a common refrain as concern over capacity issues and the recognition we are living in a growing community were expressed. In a specific online survey conducted in 2019, 1,109 respondents (97%) indicated they would use an indoor swimming pool, and desired characteristics including 50-meter length, a separate warm water therapy/learning pool, and water park features.

Broadening the perspective to non-swimmers, national data collected by the Physical Activity Council in 2019 indicated when non-participants were asked what activity they would aspire to participate in, swimming for fitness or swimming on a team was the most common choice among all age groups and across income levels.

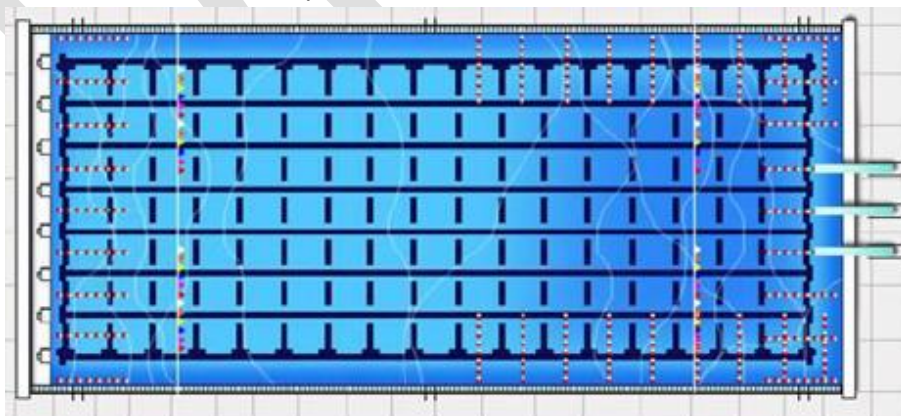
Optimal Pool:

Meeting needs of the primary pool uses of recreation, instruction, competition, and wellness and therapy, as well as considering the reality of continued community growth are all variables in determining optimal pool layout. Additionally, meeting the goal of generating revenue sufficient to meet operational costs informs the optimization of the pool design.

In consideration of the findings and need to address all user groups in a financially sustainable manner, the recommended aquatic facility is a two-pool model consisting of a 50-meter lap pool and a 3-lane instruction pool with a small family-oriented play area.

With approximately three acres of impervious surface required, a site of approximately 10 acres is recommended to accommodate setback requirements, stormwater management facilities, and site-specific limitations.

50-Meter by 25-Yards, 8-10 lanes or 17-22 lanes:



50-Meter with moveable bulkheads:



Instructional Pool in foreground, competitive pool with moveable bulkhead in background.




Instructional pool with play features



Estimate of Costs:

The estimate of costs provided below represents the total required to meet the identified aquatic facility need in Frederick County. As with any cost estimate actual costs may vary and are only as good as the underlying assumptions. Certain components of the estimate such as land cost and site work are included but may be significantly altered depending on the actual site selected. Other elements, such as moving Parks and Recreation central offices to the facility are not directly tied to community aquatics

needs, but rather to the departments general goal of becoming more accessible to the community and improving service.

Frederick County Parks & Rec Conceptual Estimate - 50M Pool							
Estimate Date: May 11, 2020 (rev 1-27-21)							
Facility Name: Future Frederick County Aquatics Center							
Client Name: Frederick County Parks and Recreation			Quantity	Description	Unit	Cost / unit	Total
50 Meter Pool							
1	Site Acquisition (10 acres)	EA	\$500,000.00	\$500,000.00			
1	Typical Site Cost (grading, utilities, 200 parking spaces)	EA	\$1,000,000.00	\$1,000,000			
4,756	Parks and Recreation Offices/Lobby	SF	\$220.00	\$1,046,320			
1,600	Party Rooms (2@ 600 SF with Kitchen)	SF	\$220.00	\$352,000			
140	First Aid/Lifeguard Office	SF	\$220.00	\$30,800			
14,248	50 M Pool w/ equipment room	SF	\$350.00	\$4,986,800			
6,600	Pool Deck	SF	\$175.00	\$1,155,000			
1,200	Bleachers (400 Capacity)	SF	\$175.00	\$210,000			
2,250	Instructional/Therapy/Leisure Pool	SF	\$279.00	\$627,750			
	Slide, Fountains, Sprayers, etc.	LS	\$180,000.00	\$0			
3,200	Mens & Womens Locker Rooms & Family Locker	SF	\$300.00	\$960,000			
11,898	Efficiency Factor (35%)	SF	\$261.00	\$3,105,378			
45,892	Sub-total		\$13,974,048.00	\$13,974,048			
	2020 Construction Cost Escalation (5%)		\$698,702.00	\$698,702			
	Owner Costs (Furniture/Fees/Contingency - 25%)	LS	\$3,668,188.00	\$3,668,188			
	Conceptual Cost Estimate Total (50M Pool)		\$18,340,938.00	\$18,340,938			
TOTAL FC P&R Aquatic Center				\$18,340,938			

Facility Operations and Cost Recovery:

A facility operation prospective is provided below and reflects anticipated revenue and expenditures associated with the aquatic facility for the first five years of operation. As shown, the facility is anticipated to break-even on operational costs by its 5th year of operation.

	Pre-Opening	Year 1	Year 2	Year 3	Year 4	Year 5
Projected Revenue						
Membership & Public Swim	\$ -	\$ 506,004	\$ 556,604	\$ 584,435	\$ 613,656	\$ 644,339
Swim Instruction	\$ -	\$ 48,384	\$ 58,061	\$ 69,673	\$ 80,124	\$ 88,136
Pool/Team Rental	\$ -	\$ 119,680	\$ 119,680	\$ 123,270	\$ 126,969	\$ 130,778
Competition Events	\$ -	\$ 25,000	\$ 27,500	\$ 30,250	\$ 33,275	\$ 36,603
Water Fitness/Programming	\$ -	\$ 15,000	\$ 18,000	\$ 20,700	\$ 22,770	\$ 25,047
Birthday/Private Rentals	\$ -	\$ 56,160	\$ 61,776	\$ 64,865	\$ 68,108	\$ 71,513
Sales	\$ -	\$ 6,000	\$ 6,180	\$ 6,365	\$ 6,556	\$ 6,753
Total Aquatic Revenue	\$ -	\$ 776,228	\$ 847,801	\$ 899,558	\$ 951,458	\$ 1,003,169
Full Time Staff						
Aquatics Manager R7	\$ 20,286	\$ 48,686	\$ 50,147	\$ 51,651	\$ 53,201	\$ 54,797
Lifeguards (3) R3	\$ 13,895	\$ 95,325	\$ 98,185	\$ 101,130	\$ 104,164	\$ 107,289
Custodian R2	\$ 11,957	\$ 27,790	\$ 28,624	\$ 29,482	\$ 30,367	\$ 31,278
Full-Time	\$ 46,138	\$ 171,801	\$ 176,955	\$ 182,264	\$ 187,732	\$ 193,364
Benefits	\$ 69,228	\$ 94,360	\$ 95,391	\$ 96,453	\$ 97,546	\$ 98,673
Total Full Time:	\$ 115,365	\$ 266,161	\$ 272,346	\$ 278,716	\$ 285,278	\$ 292,036
Part-time Personnel						
Lifeguards	\$ 5,500	\$ 155,625	\$ 160,294	\$ 165,103	\$ 170,056	\$ 175,157
Program Staff	\$ -	\$ 87,500	\$ 90,125	\$ 92,829	\$ 95,614	\$ 98,482
Front Desk	\$ 2,000	\$ 11,250	\$ 11,588	\$ 11,935	\$ 12,293	\$ 12,662
Weekend Cleaning	\$ -	\$ 5,200	\$ 5,356	\$ 5,517	\$ 5,682	\$ 5,853
Total Part-Time	\$ 7,500	\$ 259,575	\$ 267,362	\$ 275,383	\$ 283,645	\$ 292,154
Office Supplies	\$ 2,500	\$ 7,500	\$ 7,725	\$ 7,957	\$ 8,195	\$ 8,441
Rec Supplies	\$ 1,250	\$ 6,000	\$ 6,180	\$ 6,365	\$ 6,556	\$ 6,753
Postage	\$ 1,000	\$ 3,000	\$ 3,090	\$ 3,183	\$ 3,278	\$ 3,377
Printing/copies	\$ -	\$ 4,000	\$ 4,120	\$ 4,244	\$ 4,371	\$ 4,502
Uniforms	\$ -	\$ 8,500	\$ 8,755	\$ 9,018	\$ 9,288	\$ 9,567
Pool Chemicals	\$ -	\$ 40,000	\$ 41,200	\$ 42,436	\$ 43,709	\$ 45,020
Cleaning Supplies	\$ -	\$ 5,000	\$ 5,150	\$ 5,305	\$ 5,464	\$ 5,628
Service Contracts	\$ -	\$ 20,000	\$ 20,600	\$ 21,218	\$ 21,855	\$ 22,510
Repair/Maintenance	\$ -	\$ 15,000	\$ 15,450	\$ 15,914	\$ 16,391	\$ 16,883
Utilities	\$ -	\$ 247,000	\$ 254,410	\$ 262,042	\$ 269,904	\$ 278,001
Marketing	\$ 6,000	\$ 8,000	\$ 8,240	\$ 8,487	\$ 8,742	\$ 9,004
	Pre-Opening	Year 1	Year 2	Year 3	Year 4	Year 5
Net Operating	\$ (133,615)	\$ (113,508)	\$ (66,827)	\$ (40,709)	\$ (15,217)	\$ 9,294
Operating Revenue	\$ -	\$ 776,228	\$ 847,801	\$ 899,558	\$ 951,458	\$ 1,003,169
Total Operating Expenses	\$ 133,615	\$ 889,736	\$ 914,628	\$ 940,267	\$ 966,675	\$ 993,875

Financing:

Funding for an indoor aquatic facility has been the primary hurdle in moving an indoor aquatics facility from an identified need in planning documents to reality over the past three decades. Following a Board of Supervisors work session in early 2020 including discussion of putting the funding decision directly to voters in the form of a referendum, this plan recommends pursuing a ballot referendum. A recommendation from the Parks and Recreation commission to pursue a referendum would have to be approved by the Board of Supervisors, an action ideally completed in the spring of the target year to allow for adequate time to follow the steps needed to get an item on the ballot, and time to allow citizens to fully understand the issue prior to voting.

Frederick County Aquatics Master Plan 2021

Introduction:

Access and availability of pools and swimming is an important part of recreation and safety nationwide and is consistently identified as a leading recreation need for Frederick County residents. A strong aquatics program, derived from aquatic facilities, is vitally important for all children and adults to learn to swim and confidently navigate the world. Beyond learning the critical life skill of swimming, aquatics provides opportunity for all ages and abilities to enjoy a better life in many ways. This plan strives to achieve that end and puts together a recommended vision for Frederick County's aquatics future.

Background:

Aquatic facilities currently provided by Frederick County Parks and Recreation consists of two outdoor pools at county parks. These pools were constructed in 1988 & 1989 and are nearing a point in their lifecycle where significant investment will be required to ensure reliable use and meet the interests of today's resident. Even with the outdoor pools there has been a long-standing need for an indoor aquatics facility in order to provide year-round and weather independent community aquatics. An indoor aquatics facility has been on the county Capital Improvements Plan (CIP) since the first CIP in 1993 and continues to be a top desired facility as supported by the 2012 and 2017 Parks and Recreation Community Survey findings.

Purpose:

The near-term capital needs of the existing outdoor pools combined with increased demand for indoor aquatics presents an opportunity to use resources to maximize community benefit. The purpose of this plan is to provide a roadmap to most effectively provide an aquatics program to meet the current needs of Frederick County residents.

Existing Conditions:

Current Inventory:

Clearbrook Park Pool:



Sherando Park Pool:



Frederick County Parks and Recreation operates two outdoor 25-yard 6 lane pools with zero depth entry areas and diving wells. Opened in 1989, these pools are located at Clearbrook and Sherando Parks and operated through the summer season. Pool programming includes; swim lessons, water fitness classes, swim teams, kayak lessons, lap swim, and general public open swim. Attendance in 2019 totaled 26,675 visits; 15,240 visits at the Clearbrook pool, and 11,435 visits at the Sherando pool.

Based on their age, the two county outdoor pools and associated support facilities are nearing a point in their lifecycle where significant renovations are needed to maintain the pool complexes integrity. Industry guidelines recognize the typical life of an aquatic facility is 30-50 years. Major facility renovations are generally required every 10-15 years in order to keep up with changes in demographics and community expectations. With no significant renovations occurring at the Frederick County pools as they approach their 3rd decade, wide ranging renovation needs are needed. Renovation cost estimates approach \$250,000 per pool to address the variety of facility updates.

Other Area Providers:

Winchester Parks and Recreation

At Jim Barnett Park, the city operates both a seasonal outdoor pool and an indoor pool for competitive and recreational users at Jim Barnett Park. The indoor pool is a six lane 25-yard pool which currently serves a city high school team, three county high school teams, a private club team, and other aquatic activities. The outdoor pool is an eight lane, 50-yard pool with a water slide and a few spray-ground features.

Winchester County Club

The Winchester County Club operates a 6-lane, 25-yard pool with a zero-depth entry area and diving well. This is a member only pool used for recreational purposes and a summer club team.

Stonebrook County Club

The Stonebrook County Club operates a 6-lane, 25-yard pool with a shallow water area and diving well. This is a member only pool used for recreational purposes and a summer club team.

One-Life Fitness

The Kernstown location of this membership-based gym offers an indoor three lane 20-yard pool and offers open swimming times and water fitness classes.

Super Splasher Aquatics

This 4-lane 20 -yard pool is used to provide swim lessons, lifeguard training, water aerobics, and rentals.

Signal Knob Recreation Center in Strasburg, VA

This indoor 6 lane 25-yard pool serves as a training venue for a private club swim team and area high school teams and is not open to the public. The Signal Knob Center pool is located in Strasburg which is a significant drive for most Frederick County residents.

The Winchester Medical Center Therapy Pool

This indoor pool hosts warm water activities. The pool is not available for recreational use by the community and is of insufficient dimensions for competitive swimmers.

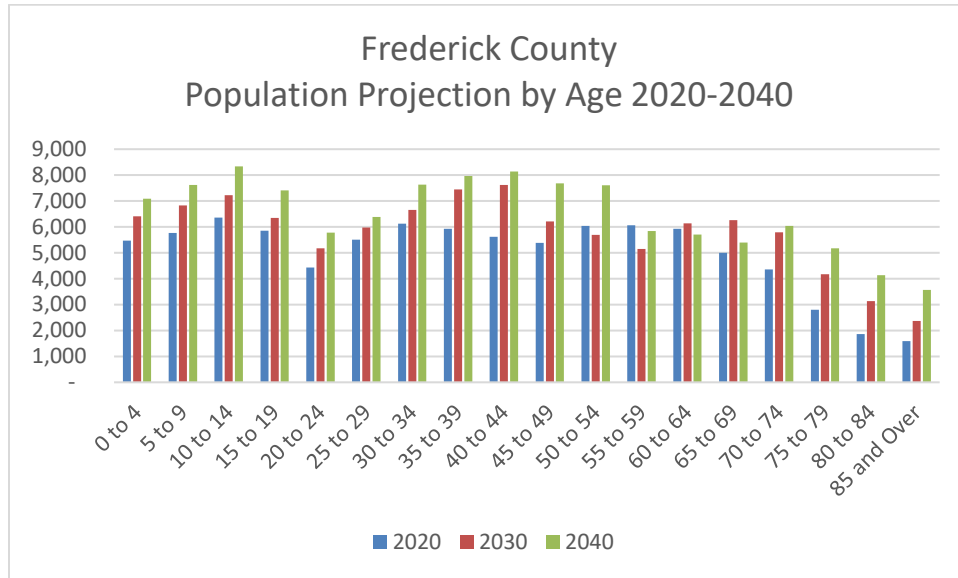
Valley Health System Wellness Center

The VHS Wellness Center houses a warm water therapy pool and a 5-lane lap pool. The design of the lap pool is of insufficient dimensions for competition swimming and is not currently available for use by any of the local high school swim teams for practices.

Demographic Background:

With a 2019 population of 89,313, Frederick County is the 13th (of 95) most populous county in the state of Virginia. The population is projected to increase to 90,115 by 2020, another 14% to 104,608 by 2030,

and then 11% to 117,450 by 2040 (Weldon Cooper). The county seat, Winchester City with a population of 28,804 (Weldon Cooper), is in the eastern portion of the county and is similarly projected to grow similarly over the coming decades.



Along racial lines, the county has a majority (91%) White population followed by (9%) Hispanic or Latino, (5%) Black or African American, 1% Asian, and (>1%) other (U.S. Census Bureau).

Frederick County has a population that shows a strong need for aquatics programming and facilities. A large section of the population, 43%, is between the ages of 20 and 54. This section of the population is more likely to have children, live in a household of more than 2 people, and is more likely to be employed. This section of the population is actively looking for recreation amenities and tends to have discretionary income to spend. Those age groups both younger and older than are more likely to engage in organized programs like swim lessons, swim teams, and water fitness programs. Also, the primary age group and younger are more likely to seek amenities and opportunities the entire family can enjoy (Councilman-Hunsaker Aquatics).

Statement of Need:

Based on the analysis of service approaches used throughout the country, there is high need for a new indoor aquatics’ facility in Frederick County and such a facility would have strong attendance/use when opened.

Level of Service (LOS) standards help communities determine needs for a wide variety of services and amenities. LOS in the parks and recreation industry have evolved from population-based determination to a combination of benchmark comparisons and individualized need assessments. Population-based LOS from the National Recreation and Parks Association (NRPA) stated a standard of 1 pool per 20,000

population. Current benchmark findings (Park Metrics Report) from NRPA show an average of 1 pool per 43,000 population in communities with similar demographic characteristics to Frederick County.

Individualized needs assessments recognize that unique characteristics of different communities often presents the most accurate means of determining what facilities should be pursued. Relevant factors including; capacity, quality, condition, location, convenience, and attractiveness all factor into a determination that is representative of the actual facility need within a community.

Frederick County Parks and Recreation, in its 2017 Master Plan LOS inventory, identifies the Winchester City indoor pool as the only public indoor pool for Frederick County residents. Listing the Winchester indoor pool in the Frederick County facility list was determined to be appropriate by the Parks and Recreation Commission, but recognizing the facility as a regional amenity even as it is owned and operated by a separate jurisdiction requires that the population of both Winchester and Frederick County be added together to compare the population served by the Winchester indoor pool. Doing so brings the current indoor pool facility LOS to 1 for a combined population of approximately 117,000, indicating that by the both LOS and benchmark perspectives Frederick County residents are currently underserved when it comes to indoor aquatic access.

Another way of determining the adequacy of the City of Winchester indoor pool to meet both city and county needs is done by looking at how well the facility can meet current demand. This approach also supports the need for a new indoor aquatic facility. Scheduling at the existing city pool is exceptionally high, with reservations extending from 5am to 10pm and little room for additional reservations or programming. The facility has served the community well over its lifespan and continues to serve as the only public indoor pool and practice facility for all local competitive teams. The facility is smaller than comparable community indoor pools, (6 lanes vs. 8-20), and is too small to host High School level competitive swim meets. Area teams compete only at other, larger facilities. The condition of the facility, while currently serviceable, has been showing its age for some time and issues in humidity control and acoustics continue to present condition and ambiance challenges. Local competitive user groups consistently express that if a modern facility were built it would be preferred over the existing indoor pool at Jim Barnett Park.

Public Input:

Stakeholder interviews and citizen input opportunities provided an understanding of community interest for, and anticipated use of an indoor aquatics space.

Stakeholder Meetings:

Stakeholder input was solicited from a broad range of groups associated with aquatics in the Frederick County community. Stakeholder input was received from Frederick County Public School staff; Shenandoah University staff, disability service groups, Swim Team groups and the Winchester Parks and Recreation department. Not surprisingly, all current aquatics user groups agreed on the need for more

indoor aquatics space and more appropriate scheduling times. The theme of 'building for the future', was a common refrain as concern over capacity issues and the recognition we are living in a growing community were expressed. Scheduling also presented itself as a common issue with over-subscription to the existing indoor pool at Jim Barnett Park leading to very late or early practice times for local high school and club teams. The current norm of inconsistent scheduling times was identified as a barrier to program development for disability service groups.

Public Input Meetings:

Individual input was solicited through an on-line survey that asked specific questions and allowed for general comments. The survey period was open for four weeks from early November to early December 2019 and was advertised in various social media and internet venues as well as being promoted in a Winchester Star article. Over 1,100 responses were obtained in this method allowing for a valuable perspective into the anticipated use of an indoor facility.

The community input survey asked several questions about anticipated use and desired amenities of an indoor pool facility, and asked about the implications an indoor pool facility would have on programming and/or design of the existing outdoor pools. Results of the survey are included as an appendix and show; 1,109 respondents (97%) indicating they would use an indoor swimming pool, and desired characteristics including; 50-meter length, a separate warm water therapy/learning pool, and water park features. Results are provided in **Appendix A**.

Parks and Recreation Commission Oversight:

In 2018 the Parks and Recreation commission formed an Aquatics Master Plan committee to oversee the development of the Aquatics Master Plan. With the onset of Covid 19 in March of 2020, the Commission provided guidance to staff to hold the Aquatics Master Plan and its recommendations for the 2021 year. Throughout the process the committee has reviewed work provided by staff, attended public input opportunities, and ultimately recommended the final plan draft to the Parks and Recreation Commission for adoption.

Developing A Recommendation:

Trends:

Designed and built in the late 1980's the existing outdoor pools at Clearbrook and Sherando Park utilized the design standards popularized in the period from 1950-1990; to include lap lanes, diving board, and wading area with the intended user being children and lap swimmers. Beginning in the early 1990's, an

emphasis on broadening the scope of aquatic centers to include something for everyone, designing for a demographic appeal to additionally include; tots, teens, young adults, and seniors.

Each age and user group have different preferences for water depth and temperature. Competitive swimmers require colder and deeper water, seniors typically want shallower water with slightly warmer temperatures, tots are attracted by play features and shallow water areas, while teens (not in swimming programs) look for exciting features such as climbing walls or water basketball goals.

Viewing U.S. physical activity trends as reported in the 2019 Physical Activity Council Participation Report, swimming is categorized with Fitness Sports and consistently rated as the most participated in category overall and continues to grow in year over year comparison. Additionally, when non-participants were asked what activity they would aspire to participate in, swimming for fitness or swimming on a team was the most common choice among all age groups and across income levels.

Meeting the broad range of interests has led to a trend of building a dual pool model, and in the larger pool the possibility of separating different users, (teams, activities, etc.), with moveable bulkheads. There are several models to follow in facility design that address broad user needs and allow maximization of limited pool time, a dual pool model appears to be the best fit to meet the needs of Frederick County today while anticipating future growth.

Aquatic Usage:

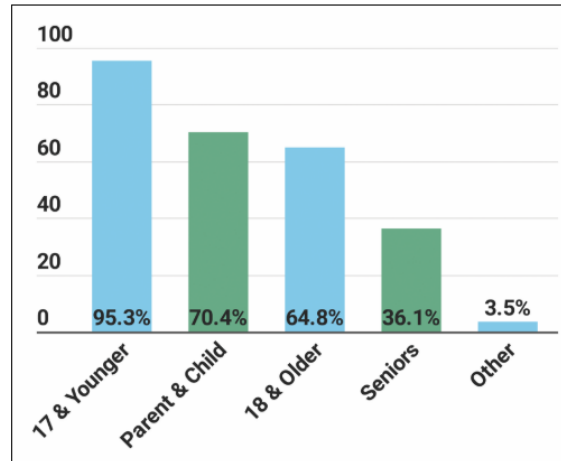
For both indoor and outdoor pools, usage falls into the categories of; recreation, Instruction, competition, and wellness and therapy. Age is the largest factor in determining the typical use categories and this in turn informs the desired pool layout and programming schedules.

The recreational user typically consists of tots, families, and teens. Teen parties, adult parties, birthday party rentals are examples of programming opportunities. For tots and younger users, warmer temperature water is best and providing wide staircase or zero depth entry facilitates comfort and use with the pool environment. This age group and the parents that accompany them are attracted to water features, small slides, and play zones. For teens, cooler water and more dynamic pool features such as drop slides, climbing walls, and water basketball nets are examples of activities that provide interest and programming opportunities. Providing something for these age groups encourages 'family use' which in turn supports additional items such as food concessions, eating areas, and/or rentable party gathering rooms.

Instruction provides a key benefit for the user and community. Additionally, instruction represents a large programming opportunity with associated user revenue. Traditional instruction programming includes all age and ability swim lessons, lifeguard certification, and water safety instruction. Other creative aquatic instruction programs include; snorkeling, scuba diving, and water aerobics among

others. A broad diversity of programming topics provides the opportunity to offset operating expenses and fill otherwise underutilized pool times.

Learn to swim participants in the US:



*Recreation Management, Aquatic Trend Report 2019

Wellness and Therapy is the fastest growing aquatic user group nationally. This area of usage typically requires warmer water temperatures in a range that overlaps with that of younger recreational users. Among disciplines of aquatic therapy are; athletic trainers, fitness classes, massage therapists, physical therapists, occupation therapists, and adapted aquatics. An additional benefit of wellness and therapy programming is the use of non-peak pool times for greater overall utilization.

Competition use of a public aquatic facility is a given and plays a large role in design considerations. Swim teams at the high school level, Special Olympics, local teams, and master's swim teams are large and consistent users of indoor pools for both practice and competition events. Currently Frederick County High School and club teams have limited swim time and sub-optimal practice schedules leading to lower participation than otherwise would exist. When compared to localities with indoor aquatic facilities, the combination of inconsistent scheduling and limited pool time has limited local participation in what would otherwise be a strong and growing area of youth sport participation.

Indoor pools and outdoor pools have very different functions in most communities. Indoor pools tend to be programmed with classes and are more likely used for fitness and competitions. Outdoor pools tend to be used more for recreation, although crossover does occur and should be anticipated. Characteristically, outdoor pools have high recreation and entertainment features spread out over acres, whereas indoor pools offer fitness and competitive swimming year-round in more compact indoor spaces. These dynamics help inform the perspective on providing aquatic facilities moving forward.

Types of Aquatic Facilities:

Elements of aquatic facilities have developed more age and programmatic specialization requiring different elements. Water temperature is important for the program areas of interest for users.

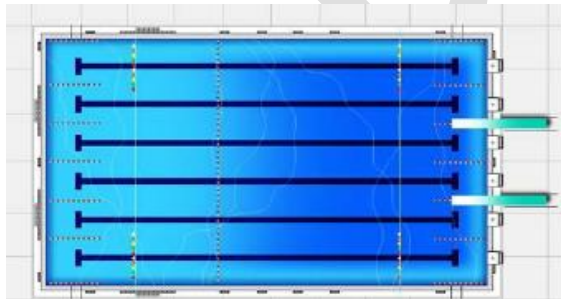
Temperatures are specific for each activity. Competition swimming prefers water at 78-82 degrees F. Athletes cannot perform well or as safely in warm water. Recreation and exercise class patrons prefer water temperatures from 84-90 degrees F. Therapy activities require even warmer water at 90-95 degrees F. What different water temperatures mean for pool planning is the need for separate pools and has resulted in the rise of multi-pool facilities. Although temperature can be increased and decreased for different programs, the time and energy it takes to do so is not be practical for a wide range of programs. Entry level swim lesson participants may be able to adapt to cooler water, but younger patrons will experience discomfort resulting in less learning as an example.

Water depth is another area where specific activities have specific requirements. Diving requires 12.5 feet for one-meter springboards. Swim lessons need 18-42 inches of water. Competitive swimming requires a minimum of 4 feet of water at turns and 6 or more feet for racing starts. Recreation water depths range from 0 to 42 inches, therapy ideally from 42-66 inches, depending on the program. As with temperature the result is that multiple pools are needed for the widest range of activities and broadest user appeal.

Competitive Pool Discussion:

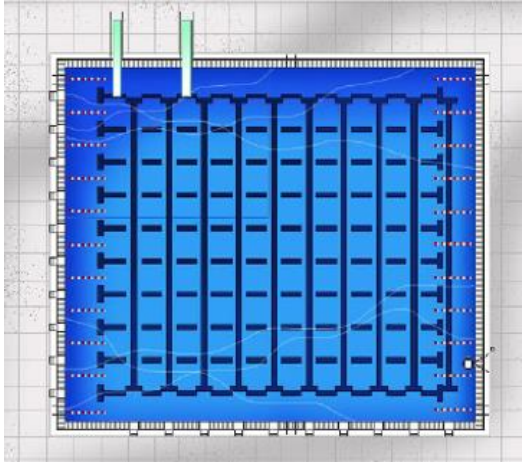
Several common competitive pool layouts are presented below. The 25-yard, 6 lane pool is comparable to the current indoor pool at Jim Barnett Park in Winchester. The 50 meter pool example shows moveable bulkhead which allow for different users and/or activities to occur at the same time.

25-yard, 6 lanes:

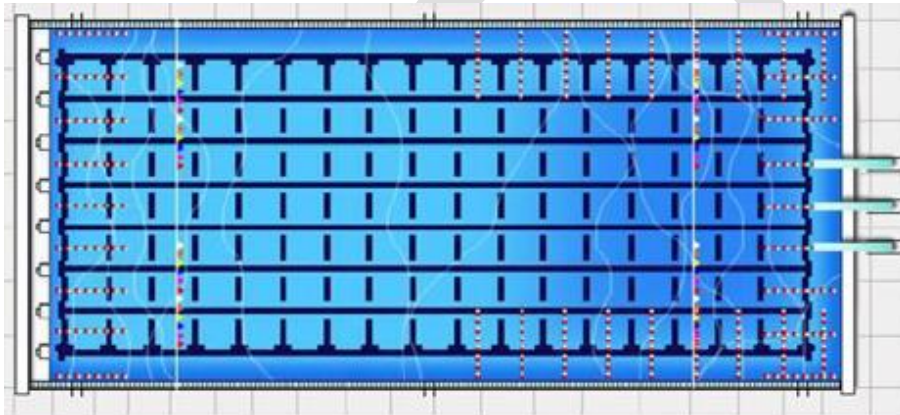


25-Yard by 25-Meter, 10-11 lanes:

photo w/ warm water pool in background:



50-Meter by 25-Yards, 8-10 lanes or 17-22 lanes:



*photo shown with moveable bulkhead separators

Instructional/Play Pool Discussion:



Instructional Pool in foreground, competitive pool with moveable bulkhead in background.

The 30-yard by 25-yard instructional/therapy/play pool provides the opportunity to meet the needs of non-competitive user groups and broaden demographic value of the facility. Typically these pools are designed with a zero-depth entry and transition to a 3-foot depth instructional area. This pool is to be maintained at a warmer water temperature to meet the needs of non-competitive and therapy users. Family play features include a water playground and tunnel slide. Birthday Party/Wet Rooms adjacent to the instructional pool allow for rentals and aquatic related training space.



Instructional pool with play features

Future Aquatics in Frederick County:

Taking into consideration population and demographic projections, industry trends, and the expressed interests of residents, an Aquatics vision for Frederick County emerges. The population relative to comparative standards supports the need for an indoor aquatic facility, and the expressed interests of the community supports diversification in the offerings of the outdoor pool facilities. Identified needs amongst all age groups and user types supports the pursuit of a broad aquatics vision provided by the public sector.

Recommendations:

Facility Recommendation:

In consideration of the findings and the need to address all user groups in a financially sustainable manner, the recommended aquatic facility is a two-pool model consisting of a 50-meter lap pool and a 3-lane instructional pool with a small family-oriented play area.

The envisioned indoor aquatics facility houses an indoor 25-yard by 50-meter competition/lap pool. This pool would serve the current competitive needs of Frederick County's swim population with the ability host local swim meets and to anticipate growth over the ensuing decade. This pool provides both short course and long course lengths for training and swim meets and with moveable bulkheads, (pool section separation), allows for multiple practices to occur simultaneously. Spectator seating accommodates up to 400 viewers.

Adequate space for locker rooms and accessory offices are necessary to include in the facility plan. Adding space for Parks and Recreation offices provides the opportunity to connect the department with the community it serves and ultimately provide a better recreation experience for users.

Site Selection:

Central to site selection is the ability for the site to accommodate the recommended facility plan. Total building size of 31,744 square feet and a 11,110 square foot efficiency factor for walkways and required green spaces make for a 43,000 square foot building site. 200 parking spaces provides for parking sufficient to serve users and staff, and an internal road layout allowing for easy drop-off and pickup should be anticipated. Additionally, vehicle access to mechanical areas will need to be provided.


With approximately three acres of impervious surface required, a site of approximately 10 acres is recommended to accommodate setback requirements, stormwater management facilities, and site-specific limitations.

Implementation

Frederick County has a long-standing need for an indoor aquatic facility. The proposed facility responds to a wide variety of community input and strives to balance current needs with the anticipated population growth of the area.

Estimate of Costs:

The estimate of costs provided below represents the total required to meet the identified aquatic facility need in Frederick County. As with any cost estimate actual costs may vary and are only as good as the underlying assumptions. Certain components of the estimate such as land cost and site work are included but may be significantly altered depending on the actual site selected. Other elements, such as moving Parks and Recreation central offices to the facility are not directly tied to community aquatics needs, but rather to the departments general goal of becoming more accessible to the community and improving service.

Frederick County Parks & Rec Conceptual Estimate - 50M Pool				
Estimate Date: May 11, 2020 (rev 1-27-21)				
Facility Name: Future Frederick County Aquatics Center				
Client Name: Frederick County Parks and Recreation				
Quantity	Description	Unit	Cost / unit	Total
50 Meter Pool				
1	Site Acquisition (10 acres)	EA	\$500,000.00	\$500,000.00
1	Typical Site Cost (grading, utilities, 200 parking spaces)	EA	\$1,000,000.00	\$1,000,000
4,756	Parks and Recreation Offices/Lobby	SF	\$220.00	\$1,046,320
1,600	Party Rooms (2@ 600 SF with Kitchen)	SF	\$220.00	\$352,000
140	First Aid/Lifeguard Office	SF	\$220.00	\$30,800
14,248	50 M Pool w/ equipment room	SF	\$350.00	\$4,986,800
6,600	Pool Deck	SF	\$175.00	\$1,155,000
1,200	Bleachers (400 Capacity)	SF	\$175.00	\$210,000
2,250	Instructional/Therapy/Leisure Pool	SF	\$279.00	\$627,750
	Slide, Fountains, Sprayers, etc.	LS	\$180,000.00	\$0
3,200	Mens & Womens Locker Rooms & Family Locker	SF	\$300.00	\$960,000
11,898	Efficiency Factor (35%)	SF	\$261.00	\$3,105,378
45,892	Sub-total		\$13,974,048.00	\$13,974,048
	2020 Construction Cost Escalation (5%)		\$698,702.00	\$698,702
	Owner Costs (Furniture/Fees/Contingency - 25%)	LS	\$3,668,188.00	\$3,668,188
	Conceptual Cost Estimate Total (50M Pool)		\$18,340,938.00	\$18,340,938
TOTAL FC P&R Aquatic Center				\$18,340,938

Facility Operations:

A facility operation prospective is provided below and reflects anticipated revenue and expenditures associated with the aquatic facility for the first five years of operation.

Revenue:

The goal of the revenue structure is to provide for a self-supported aquatic facility. Facility design is directly linked to revenue generation potential from the broadest array of user groups. Programs and the facility are designed and projected to operate with positive cash flow by the fifth year of operation. While capital funds are required to create the facility, operational funds generated from the user provide the long-term sustainability of the aquatic's amenity.

The bulk of anticipated revenue is projected to come from membership and public swim. Participation figures from the Sports and Fitness Industry Association were combined with an anticipated capture rate of 50% to determine the type (pass holder vs. day use) of users in this category. Rates were determined through market and comparable facility analysis. Other significant revenue streams include pool rental for public and private teams and competitive events. Need was determined through feedback from school swim coaches and private team representatives. Birthday party room rental revenue is based on discussions with other facility operators and is directly connected to the family/play features programmed as part of the instructional pool area.

Expenditures:

The model of probable expenses covers the main areas of; labor, utilities, contractual services, and commodities. Expenses are estimated considering; hours of operation, attendance projections, utility rates, and other factors. Operating data from comparable facilities was reviewed and utilized in the expenditure model. Staff costs are the primary factor in operating expenditure followed by utility costs; pool chemicals, and service contracts.

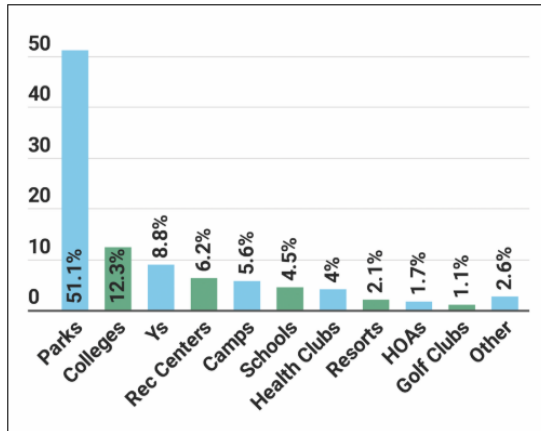
	Pre-Opening	Year 1	Year 2	Year 3	Year 4	Year 5
Projected Revenue						
Membership & Public Swim	\$ -	\$ 506,004	\$ 556,604	\$ 584,435	\$ 613,656	\$ 644,339
Swim Instruction	\$ -	\$ 48,384	\$ 58,061	\$ 69,673	\$ 80,124	\$ 88,136
Pool/Team Rental	\$ -	\$ 119,680	\$ 119,680	\$ 123,270	\$ 126,969	\$ 130,778
Competition Events	\$ -	\$ 25,000	\$ 27,500	\$ 30,250	\$ 33,275	\$ 36,603
Water Fitness/Programmir	\$ -	\$ 15,000	\$ 18,000	\$ 20,700	\$ 22,770	\$ 25,047
Birthday/Private Rentals	\$ -	\$ 56,160	\$ 61,776	\$ 64,865	\$ 68,108	\$ 71,513
Sales	\$ -	\$ 6,000	\$ 6,180	\$ 6,365	\$ 6,556	\$ 6,753
Total Aquatic Revenue	\$ -	\$ 776,228	\$ 847,801	\$ 899,558	\$ 951,458	\$ 1,003,169
Full Time Staff						
Aquatics Manager R7	\$ 20,286	\$ 48,686	\$ 50,147	\$ 51,651	\$ 53,201	\$ 54,797
Lifeguards (3) R3	\$ 13,895	\$ 95,325	\$ 98,185	\$ 101,130	\$ 104,164	\$ 107,289
Custodian R2	\$ 11,957	\$ 27,790	\$ 28,624	\$ 29,482	\$ 30,367	\$ 31,278
Full-Time	\$ 46,138	\$ 171,801	\$ 176,955	\$ 182,264	\$ 187,732	\$ 193,364
Benefits	\$ 69,228	\$ 94,360	\$ 95,391	\$ 96,453	\$ 97,546	\$ 98,673
Total Full Time:	\$ 115,365	\$ 266,161	\$ 272,346	\$ 278,716	\$ 285,278	\$ 292,036
Part-time Personnel						
Lifeguards	\$ 5,500	\$ 155,625	\$ 160,294	\$ 165,103	\$ 170,056	\$ 175,157
Program Staff	\$ -	\$ 87,500	\$ 90,125	\$ 92,829	\$ 95,614	\$ 98,482
Front Desk	\$ 2,000	\$ 11,250	\$ 11,588	\$ 11,935	\$ 12,293	\$ 12,662
Weekend Cleaning	\$ -	\$ 5,200	\$ 5,356	\$ 5,517	\$ 5,682	\$ 5,853
Total Part-Time	\$ 7,500	\$ 259,575	\$ 267,362	\$ 275,383	\$ 283,645	\$ 292,154
Office Supplies	\$ 2,500	\$ 7,500	\$ 7,725	\$ 7,957	\$ 8,195	\$ 8,441
Rec Supplies	\$ 1,250	\$ 6,000	\$ 6,180	\$ 6,365	\$ 6,556	\$ 6,753
Postage	\$ 1,000	\$ 3,000	\$ 3,090	\$ 3,183	\$ 3,278	\$ 3,377
Printing/copies	\$ -	\$ 4,000	\$ 4,120	\$ 4,244	\$ 4,371	\$ 4,502
Uniforms	\$ -	\$ 8,500	\$ 8,755	\$ 9,018	\$ 9,288	\$ 9,567
Pool Chemicals	\$ -	\$ 40,000	\$ 41,200	\$ 42,436	\$ 43,709	\$ 45,020
Cleaning Supplies	\$ -	\$ 5,000	\$ 5,150	\$ 5,305	\$ 5,464	\$ 5,628
Service Contracts	\$ -	\$ 20,000	\$ 20,600	\$ 21,218	\$ 21,855	\$ 22,510
Repair/Maintenance	\$ -	\$ 15,000	\$ 15,450	\$ 15,914	\$ 16,391	\$ 16,883
Utilities	\$ -	\$ 247,000	\$ 254,410	\$ 262,042	\$ 269,904	\$ 278,001
Marketing	\$ 6,000	\$ 8,000	\$ 8,240	\$ 8,487	\$ 8,742	\$ 9,004
	Pre-Opening	Year 1	Year 2	Year 3	Year 4	Year 5
Net Operating	\$ (133,615)	\$ (113,508)	\$ (66,827)	\$ (40,709)	\$ (15,217)	\$ 9,294
Operating Revenue	\$ -	\$ 776,228	\$ 847,801	\$ 899,558	\$ 951,458	\$ 1,003,169
Total Operating Expenses	\$ 133,615	\$ 889,736	\$ 914,628	\$ 940,267	\$ 966,675	\$ 993,875

Capital Financing:

Private or Public Sector Financing?

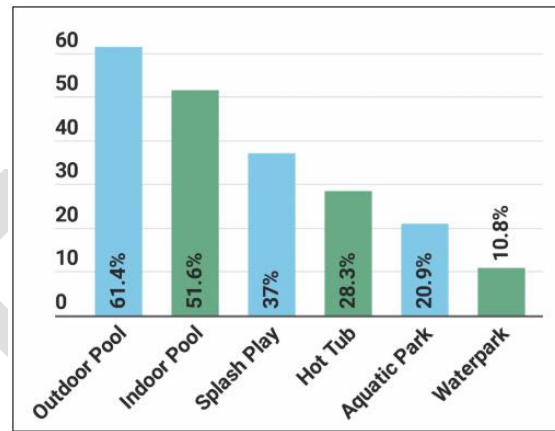
Below are graphs showing larger pools are typically provided by the public sector in the United States, and the types of pools provided:

Who provides pools in the US?



*Recreation Management, Aquatic Trend Report 2019

What types of pools are provided?



*Recreation Management, Aquatic Trend Report 2019

Funding for an indoor aquatic facility has been the primary hurdle in moving an indoor aquatics facility from an identified need in planning documents to reality over the past three decades. Following a Board of Supervisors work session in early 2020 including discussion of putting the funding decision directly to voters in the form of a referendum, this plan recommends pursuing a ballot referendum. A recommendation from the Parks and Recreation commission to pursue a referendum would have to be approved by the Board of Supervisors, an action ideally completed in the spring of the target year to allow for adequate time to follow the steps needed to get an item on the ballot, and time to allow citizens to fully understand the issue prior to voting.