Stretch vs Skinny

The Pool Users Recommendation for a New Competition Pool

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Summary

This white paper summarizes public testimony by the named Pool Users to the Lake Oswego School Board and the Ad Hoc Pool Committee between December 16, 2019 and February 24, 2020. It also includes data that was requested by members of the Ad Hoc Committee. The Pool Users support the development of a Recreation/Aquatics Center at the Municipal Golf Course using funds from the District Facilities Bond designated to repair or replace the current District Pool. The Pool Users recommend, however that the competition pool to be sited at the new center should be longer and narrower ("Skinny") than the pool being proposed by the District's Project Team ("Stretch"). This difference in shape makes a material difference in how the pool is used for training and competition by the high school and age group aquatic teams.

- The Skinny pool would have a larger total footprint than the Stretch pool (9800 vs 7800 square feet) and would support 4 more lanes (16 vs 12 lanes). Like the Stretch pool, the Skinny pool would meet all of the technical requirements for high school swimming and water polo.
- The Skinny pool could be configured as two end-to-end tanks separated by a fixed deck. This configuration would enable both Lake Oswego HS and Lakeridge HS to brand and control their own competition pools during the high school swimming and water polo seasons, consistent with other OSAA varsity sports offered by the District. Conversely, the Stretch pool would essentially be a single use tank that would be difficult for both high schools to share or utilize at the same time. Branding and control are particularly important considerations for a high school athletic facility to be located in a public recreation center.
- The Skinny pool could be reconfigured with long course (50m) swim lanes used by all competitive age group swimmers during the spring and summer seasons when the pool was not being used by high school teams. There are currently no long course pools near Lake Oswego, so swimmers must travel to train and compete, and remote facilities are expensive to rent and difficult to schedule. Along with constant 6-foot depth for water polo, the inclusion of 50m lanes for swimming is the most important requirement for the competition pool and is not supported by the Stretch pool.
- During the fall and winter high school seasons, the Skinny pool would satisfy 89% of the age group teams' current required aggregate lane use compared to 45% for the Stretch pool.
 From April to August, the Skinny pool would be fully utilized by the age group swimming and water polo teams nearly all day; the Stretch pool would be underutilized while swimmers rented ~32 lane hours per day at long course facilities.
- The expected annual rents from age group teams, based on current (2018) pool usage, would be \$345K-\$426K for the Skinny pool and \$200K-\$258K for the Stretch pool. The gap between the Skinny and Stretch pools is driven primarily by the four lanes of additional capacity and more efficient utilization characteristics of the Skinny pool which would allow the age group teams greater access and enable consolidation of rents currently paid to other facilities.

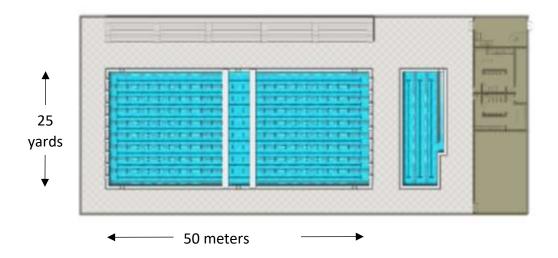
The availability of funding from two bonds and the willingness of the District and City to collaborate in building a new recreation and aquatics center has created a "once in a generation" opportunity to replace the current District Pool. The Pool Users are committed to fully support this process and align resources to assist in design, operations and financing.

1. Introduction

In April 2019, the Superintendent's Pool Task Force facilitated by Ballard*King recommended that an Olympic size competition pool was required to meet the requirements of all Lake Oswego District and Community users and provide capacity for expected growth. This recommendation was consistent with a public study performed by Lake Oswego City Council in 1991 and a private study funded by Lake Oswego Swim Club in 2017. The benefit of this type pool is that it supports the two primary swimming courses used in the United States:

- Short Course 25 yards (SCY) this course is used for high school and college swimming during the fall and winter seasons.
- Long Course 50 meters (LCM) this course used by swimmers during the spring and summer seasons, including all age group and senior championship events and the Olympics.

This type pool can also be partitioned, using movable bulkheads, to support many different activities, including water polo fields and swim courses sized for training and lessons.



The Task Force advised, however, that Olympic size pools are very expensive to build and operate and that the District should pursue a smaller competition pool which would meet the capacity needs for prioritized user groups. In June 2019, the School Board took two actions:

- Voted to build a new 50 meter competition pool to replace the current District Pool.
- Directed the District Administration to form a Project Team and invited the City Council
 to participate in building an aquatics facility that would serve the needs of both the
 District and community.

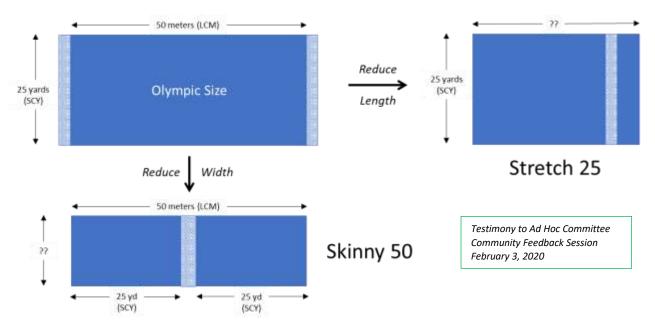
The Project Team hired an architecture firm (Opsis) that evaluated several potential pool sites and configurations. In September 2019, the Project Team held a public session at Lakeridge HS to seek feedback on a proposed recreation and aquatics center to be sited at either Lakeridge Middle School or the LO Municipal Golf Course. The center would house a 12-16 lane "stretch"

competition pool and also include community recreation facilities and a warm water pool for lessons and lap swimming.

The Project Team received guidance from the District and City to target a \$30M construction cost for the new center to be jointly funded with \$15M from the School Facilities Bond and \$15M from the Parks & Rec Bond. The guidance also included a 70% operational recovery rate, with the remaining 30% of operating costs to be funded by the District and City. By December 2019, the Project team had further narrowed its proposal to a 12 lane stretch competition pool, a warm water pool, and several multi-use rooms and offices and was socializing this proposal with District and City stakeholders. The Pool Users first contested this proposal in testimony to the Board on December 16.

2. Stretch 25 and Skinny 50

Pools are built in many shapes and sizes, but competition pools must meet exact standards for swimming courses and water polo fields. There were two approaches to reduce the size of the desired Olympic size pool to bring it in line with the target budget – either reduce its length or reduce its width.



The Project Team, led by aquatic consultants from Ballard*King and Counsilman-Hunsaker, pursued the Stretch 25 approach. Meanwhile, the Pool Users – including the LO and Lakeridge high school swimming and water polo coaches and age group swimming and water polo club officers – have unified to advocate for the Skinny 50 approach.

Stretch 25 Pool

Cities and universities that cannot afford Olympic size pools typically build stretch pools in recreation centers. "Stretch" means the pool is lengthened to provide more than 6 or 8 SCY lanes found in most high school and community pools — e.g. the current District Pool has 8

SCY lanes. The most common size stretch pool is 25 meters long by 25 yards wide and provides 10 SCY lanes. Stretch pools longer than 25 meters typically have at least one bulkhead (the patterned strip in the picture) that can be moved to support different length courses and fields. For example, the bulkhead could be moved to provide a SCY course, an international 25 meter (SCM) course or a FINA championship 30 meter water polo field. The bulkhead can also be used to partition the pool into two different spaces for teams and lap swimmers. Cities and universities that plan to program a public pool for different stakeholders favor the flexibility offered by a stretch pool.

Skinny 50 Pool

The skinny 50 pool is a less common shape than the stretch 25 pool nationwide, but it is not uncommon in Oregon, and it has several benefits that would be applicable to Lake Oswego. "Skinny" means the pool is reduced along its width to preserve the 50 meter length for long course swimming while providing two narrower SCY lengthwise courses with a partition during the short course season. ("Skinny" is not an industry term but was chosen by the Project Team to compare the shapes).

There are currently four indoor Skinny 50 pools in Oregon:

- Osborn Aquatic Center (Corvallis) 8 lanes
- Juniper Swim and Fitness Center (Bend) 8 lanes
- Multnomah Athletic Club (Portland) 6 lanes
- Albany Community Pool (Albany) 6 lanes

Lake Oswego had a Skinny 50 pool at the Mountain Park Recreation Center that was used by local club teams until 2005 when it was shuttered due to plumbing issues and eventually replaced with a smaller pool.

3. Competition Pool Requirements

The competition pool has the following functional requirements:

High School Water Polo (August - November)

Water polo is an OSAA sport for girls and a sanctioned club sport for boys and is played at both LO and Lakeridge high schools. Both schools offer Varsity and JV programs.

- For games: Field with length of 20-30 meters (20-25 meters for girls) and width of 10-20 meters; constant depth greater than 6 feet across the entire field.
- For practice: Enough field space to accommodate from 50-70 players at each high school for two hours per day (Varsity) and one hour per day (JV) on school days.

High School Swimming (November - February)

Swimming is an OSAA sport for both girls and boys and is a "no-cut" sport at both LO and Lakeridge high schools. All swimmers – including Unified students and adaptive athletes – compete in up to two Varsity or JV events and two relays at each dual meet.

• For meets: Six (6) SCY lanes (3 for each team for both individual and relay events); starting end depth greater than 4 feet.

 For practice: Enough SCY lanes to accommodate from 50-100 swimmers at each high school for two hours per day (Varsity) and one hour per day (JV and Unified/adaptive) on school days.

Age Group Water Polo (Year Round)

Water polo is a USA Club sport for both girls and boys and is offered in Lake Oswego to athletes ages 8 to 18 by <u>Lake Oswego Water Polo club (LOWPO)</u>.

- For games: The field requirements are essentially the same as for high school, with fields sized appropriately for the age and skills of the participants.
- For practice: Enough field space to accommodate more than 150 players for one to two hours per day six days a week.

LOWPO is the feeder program for both high schools, and some high school players compete for LOWPO year round. In addition to the District Pool, LOWPO currently practices at Tigard HS, Tualatin HS, and Tualatin Hills Recreation Center.

Age Group Swimming (Year Round)

Swimming is a USA Club sport for both girls and boys and is offered in Lake Oswego to athletes ages 8 to 18 by <u>Lake Oswego Swim Club (LOSC)</u> and <u>Cascadia Swimming</u>.

- For meets: 6-10 SCY lanes during the short course season September to March and 6-10 LCM lanes during the long course season April to August; starting end depth greater than 6 feet. (For depths between 4 to 6 feet, USA Swimming requires a swimmer to be certified, and the CDC recommends a minimum of 6 feet 7 inches.)
- For practice: Enough SCY and LCM lanes to accommodate from more than 300 swimmers for one to three hours per day six days a week.

LOSC is the feeder program for both high schools, and many high school swimmers compete for LOSC year round. In addition to the District Pool, LOSC and Cascadia currently practice at Lewis & Clark College, PCC Sylvania, Mt Hood CC (LCM pool) and Eastside Athletic Club.

LOSC also actively partners with the District to maintain the current pool, spending several thousand dollars per year for maintenance and equipment. In 2016, LOSC contributed \$44,415 to the District to purchase a new ultraviolet filtration system for the pool.

4. Commentary on the Proposed Stretch Pool and Natatorium Layout

The Pool Users would expect competitions in the proposed Stretch pool to run widthwise across the 25y dimension, using the bulkhead to adjust the width of the playing field, e.g. six lanes for high school swimming and eight lanes for club swimming and water polo. In this more common configuration, the spectator stands would be located on the left side and the building envelope would need to be widened.

The competition field is shown along the length of the pool to demonstrate its flexibility. The pool is lined with eight Olympic width lanes (9.375 feet), but in practice it should be lined with ten lanes (7.5 feet). This very wide pool would be fine for a championship swimming event (e.g. OSAA 6A state meet) but is not practical for a regular high school meet.

The 25m (SCM) course is the international short course standard but is irrelevant in US high school and age group swimming. Meets in the US are contested in SCY and LCM. There are only a handful of SCM pools in Oregon (Oregon City, Lincoln City, Redmond, Burns, Prineville), and most US age group swimmers have never trained or raced in a SCM pool. Contrary to public statements, swimmers cannot qualify to swim major summer championship events – e.g. Sectionals, Futures, Olympic Trials – in a SCM pool.

The NHSF championship water polo pool would be appropriate for hosting a championship men's game but is too big for most of the age group and high school athletes in Lake Oswego's programs. The pool would need to be one lane (8 feet) wider to actually meet the FINA regulation width of 30m line-to-line including the bulkhead, which would require the building envelope to be widened.

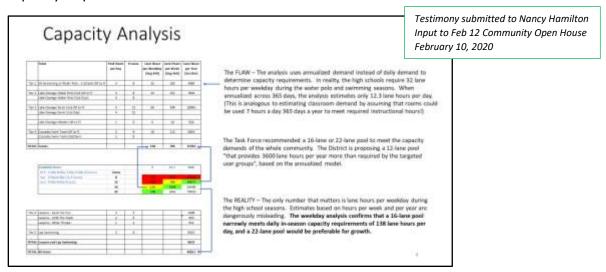
The proposed layout does not include any on-deck storage. The Pool Users recommend at least 1500 to 2000 square feet of enclosed storage co-located next to the deck for water polo goals (6), swim lane spools (4), turn pads (16-20), equipment bins (e.g. water polo balls, kickboards, fins), meet/game equipment, on deck exercise equipment, etc. One good place to locate this storage would be under a raised spectator area that runs the length of the pool.

The Pool Users believe that co-locating the competition pool in such close side-by-side proximity to the warm water pool would be problematic. The competition pool should be physically partitioned from the program pool for both safety and usability considerations.

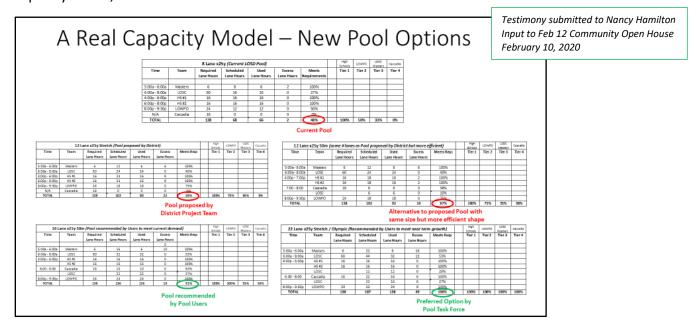
5. Commentary on the Proposal Financials

Capacity

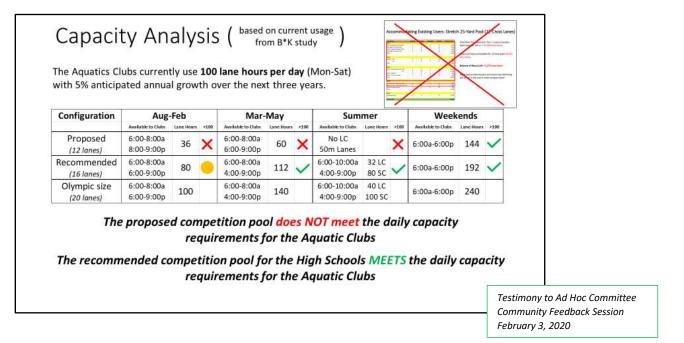
The Pool User's contested the B*K Capacity Analysis from the beginning of the process. Although the analysis was based on actual 2018 usage data collected from each of the high school and club teams during the Superintendent's Task Force, the underlying model annualized the data to grossly misrepresent the proposed pool's ability to meet the teams' capacity requirements.



The Pool Users presented a model based on projected schedules for different pool types during the peak high school seasons to demonstrate how each of the options actually satisfied capacity needs, with the results shown below.



The additional four lanes in a 16 lane pool versus a 12 lane pool would allow the club teams to consolidate most of their practice time in the proposed pool instead of renting pool time outside of the district, raising the utilization factor for the clubs from 45% to 89% (or 58% to 91% including the high school teams). This position was summarized in the slide below.

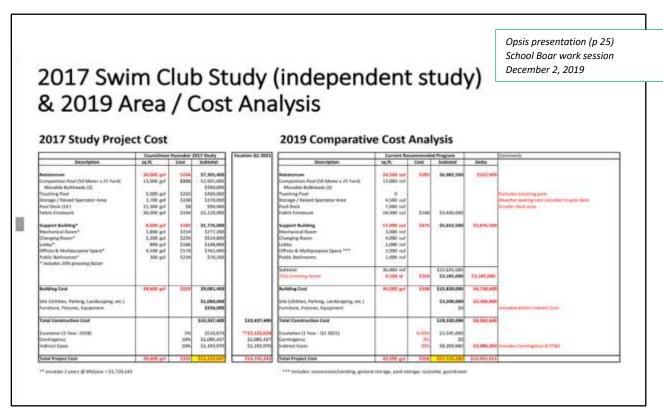


Capital Cost

The Pool Users believe that a \$30M capital allocation should be enough investment to build a great aquatics and recreation facility and that the marginal construction cost differences between 12, 16 and 22 lane facilities are exaggerated. These beliefs are largely based on work done by LOSC with Counsilman-Hunsaker in 2017 to examine cost effective construction approaches using industry leading pre-fabricated components.



At the request of the School Board, Opsis re-evaluated the 2017 study and estimated that a natatorium with an Olympic sized pool and required dry side amenities could be built for \$27M in 2021 dollars using these pre-fabricated components, including \$3.5M for site renovations.



Contrary to published specifications and field experience by current pool operators in other cities, the Project Team disparaged this approach as "temporary" and not structurally or environmentally robust. While the Pool Users understand that this approach may not be aesthetically appealing to some stakeholders, they urge the City to more broadly consider function versus form in designing the enclosure and investigate practical ways to reduce construction cost without compromising the capacity and functionality of the competition pool.

Operating Costs

The Pool Users do not fully understand the operating model or estimated subsidies presented by Ballard*King but believe that the goal of 70% cost recovery for the competition pool should be achievable if it is operated on a pure rental basis. The Pool Users estimated the annual rents that the Clubs could pay if provided sufficient capacity in the new competition pool. The upper range is based on a flat rate of \$12 per lane hour (\$24 for 50m lanes) proposed by Ballard*King. The lower range is based on a sliding scale tied to time of day proposed by the Pool Users, which better aligns to rents currently paid at other pools. The results are summarized below and the full analysis was provided to the Ad Hoc Committee and the District administration.

			Potential Annual Revenue from Club Rents						Rents	
			Sep-Feb		Mar-May		Jun-Aug		TOTAL	
O Lana v35v/Commant LOSD Daall	Class Datas		۲.	58,760	4	F2 F20	,	FO 030	¢ 170 200	
8 Lane x25y (Current LOSD Pool)	Flex Rates		\$	•		52,520		59,020		
	Flat Rate		\$	78,000	\$	66,456	\$	72,696	\$217,152	
12 Lane x25y Stretch (Pool proposed by District)	Flex Rates		\$	73,320	\$	67,340	\$	59,020	\$199,680	
	Flat Rate		\$	99,840	\$	85,176	\$	72,696	\$ 257,712	
16 Lane x25y 50m (Pool recommended by Users)	Flex Rates		\$	129,480	\$	90,220	\$	125,580	\$ 345,280	
	Flat Rate		\$	171,600	\$	107,016	\$	147,576	\$ 426,192	
22 Lane x25y 50m (Olympic)	Flex Rates		\$	148,200		95,940		144,300		
	Flat Rate		\$	190,320	\$	102,336	\$	166,296	\$ 458,952	
Flex Rate Schedule						Flat Rate	Sch	edule		
Short Course (25y) Lanes	\$/Hour				Lane Type		\$/Hour			
School day 5:00a - 6:00a	\$	6			25-yard lane		\$	12		
School day 6:00a - 8:00a	\$	8			50-	meter lane	\$	24		
School day 4:00p - 6:00p	\$	12								
School day 6:00p - 8:00p	\$	10								
School day 8:00p - 9:30p	\$	8								
Weekend	\$	10								
Summer	\$	10								
						Summo	ary s	submitted (at request of A	ld Hoc Co
Long Course (50m) Lanes						via Em	ail t	o Jahn Wal	llin February 1	4, 2020
LO Clubs	\$	20				Summary updated with full analysis (p4)				
Other Rental	\$	24				via Em	ail t	o John Wal	llin February 1	9, 2020

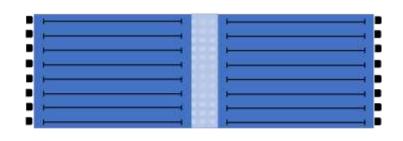
The Clubs already finance their own personnel and operating costs, and these rents would simply replace the rents currently paid for the District pool and other local pools. These rents would be used to subsidize the cost of commodities, pool operation and maintenance. The Pool Users want to emphasize that the Clubs desire to be financial partners to ensure the successful ongoing operation of the competition pool and recreation center facility.

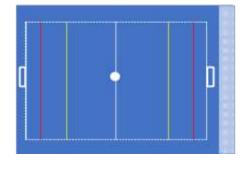
6. Skinny 50 vs Stretch 25 – A Comparison

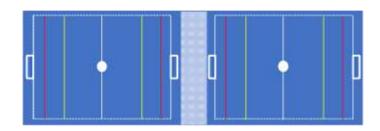
Feature	Stretch 25	Skinny 50		
Square footage (total footprint)	7800 sq ft	9840 sq ft		
Dimensions (length x width)	104 ft x 75 ft	164 ft x 60 ft		
Water surface area (with bulkheads installed)	7200 sq ft	9000 sq ft		
High school competition courses / fields	1	2		
Short course (SCY) swimming lanes	12	16		
Long course (LCM) swimming lanes	0	8		
Regulation water polo fields	1	2		

Stretch 25
Swimming and Water Polo

Skinny 50 Swimming and Water Polo





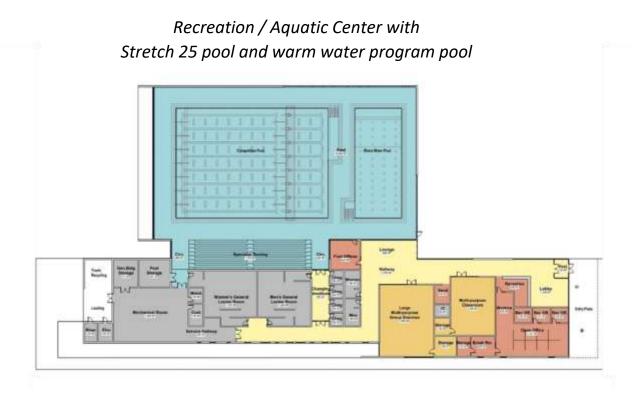


Notes:

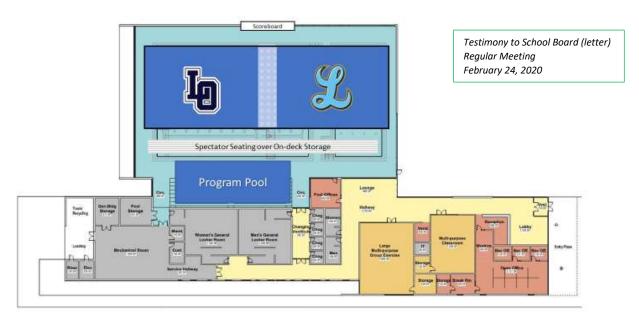
¹ The Stretch 25 in this picture is shown lined with 10 high school width lanes (7.5 feet) instead of 8 Olympic width lanes (9.4 ft) shown in the proposal.

² The Skinny 50 is shown with a static deck (14 feet wide) dividing the two tanks instead of two movable bulkheads. The deck would rest on hinged turn walls or a similar fixed structure and would be removed after the high school seasons to provide a long course.

As shown below, the Skinny 50 pool would fit in the building envelope proposed by the Project Team, with minor expansion required to better accommodate the program pool, widen the decks and provide on-deck storage which is missing from the current proposal. Based on this observation, the Pool Users believe that the construction and operating costs for the larger Skinny 50 pool should not materially differ from the proposed Stretch 25 pool.



Recreation / Aquatic Center with Skinny 50 pool and warm water program pool



Two Pools for Two High Schools

Lake Oswegans care deeply about two high schools with equal facilities. Given the investment into a new facility, Lake Oswego HS and Lakeridge HS should have their own pools which the coaches can program as they choose. With the Skinny 50 configuration, both high schools could practice at the same time after school. For example, varsity teams could practice at 4:00-6:00 and JV teams at 6:00-7:00 or practices could be split between boys and girls. Water polo games and swim meets would be contested in either the LOHS or Lakeridge HS home tank. With the pool moving into a community recreation center, maintaining a branded look and feel in a space they can call "home" is especially important to the high school athletes. Locating the Skinny 50 pool toward the back wall of the facility, partitioned from the community spaces with raised spectator seating would create the desired high school environment and provide a great spectator experience.

More Intimate Competition Venue

The skinny shape is more appropriate for high school swimming and water polo competitions. For example the Three Rivers League championship meet is currently contested in a single 6-lane pool, and the Skinny 50 with two tanks for competition and warmup/warmdown would be a superior facility. The skinny shape comfortably fits a regulation water polo field (23 meters x 18 meters), and given the pools' constant 6 foot depth and side-by-side tanks for running two concurrent games, this would be one of the best water polo facilities in the state

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More Proximal Training Environment

With more deck space closer to all of the lanes, the skinny shape provides a more proximal situation for coaches to offer advice and correct technique – this is especially important for younger age group athletes and high school JV and Unified athletes, who would be "lost" in the middle of the stretch pool.

Year Round Use

The LCM lanes provided by the skinny shape would be used by more than 300 age group and masters' swimmers from May through August, ensuring the pool is fully utilized year round. The long course configuration also benefits the water polo clubs during the summer, as they have the flexibility to configure a variety of different size courses for different age groups.

7. Conclusion

The availability of funding from two bonds and the willingness of the District and City to collaborate in building a new recreation and aquatics center has created a "once in a generation" opportunity to replace the current District Pool with a new competition pool to serve Lake Oswego's high school and age group athletes. The Skinny 50 competition pool is the better choice and is recommended by the Pool Users. The Pool Users are committed to fully support this process and align resources to assist in design, operations and finances.