

**City of Fircrest, WA
Community Center and Pool Design
Community Pool Operations Analysis
August 2018**



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TABLE OF CONTENTS

EXISTING AQUATIC FACILITY	3
OPTIONS FOR CONSIDERATION	4
OPTION 1.....	5
OPTION 2.....	6
MARKET ANALYSIS.....	7
POPULATION.....	8
AGE	9
INCOME.....	10
KEY DEMOGRAPHIC INDICATORS	11
AREA PROVIDERS.....	12
AQUATIC FACILITIES	13
CAPACITY.....	16
REVENUE/EXPENSE ANALYSIS.....	17
FIRCREST POOL ESTIMATED REVENUE	18
OPINION OF EXPENSES.....	20
EXPENSES.....	22
REVENUE / EXPENSE SUMMARY.....	23

EXISTING AQUATIC FACILITY

The existing Fircrest Swimming Pool is an L-shaped, 6-lane, 25-yard competition pool with a diving well and a separate tot pool. The facility offers open swim hours during the following times. For the purposes of this study, the facility hours are assumed to be unchanged.

Weekday Open Swim Hours

- May 28 – June 15
 - Monday – Friday: 3:30-6:30pm
- June 18 – August 31
 - Daily: 1:30pm-4:30pm

Weekend and Holiday Hours

- Saturday & Sunday: 1:30pm-6:00pm 6:30pm-8:30pm

2017 Attendance: 12,316

2017 Actual Revenues: \$85,078

2017 Actual Expenditures: \$153,677.05

2017 Actual Recapture Rate: 55%



OPTIONS FOR CONSIDERATION

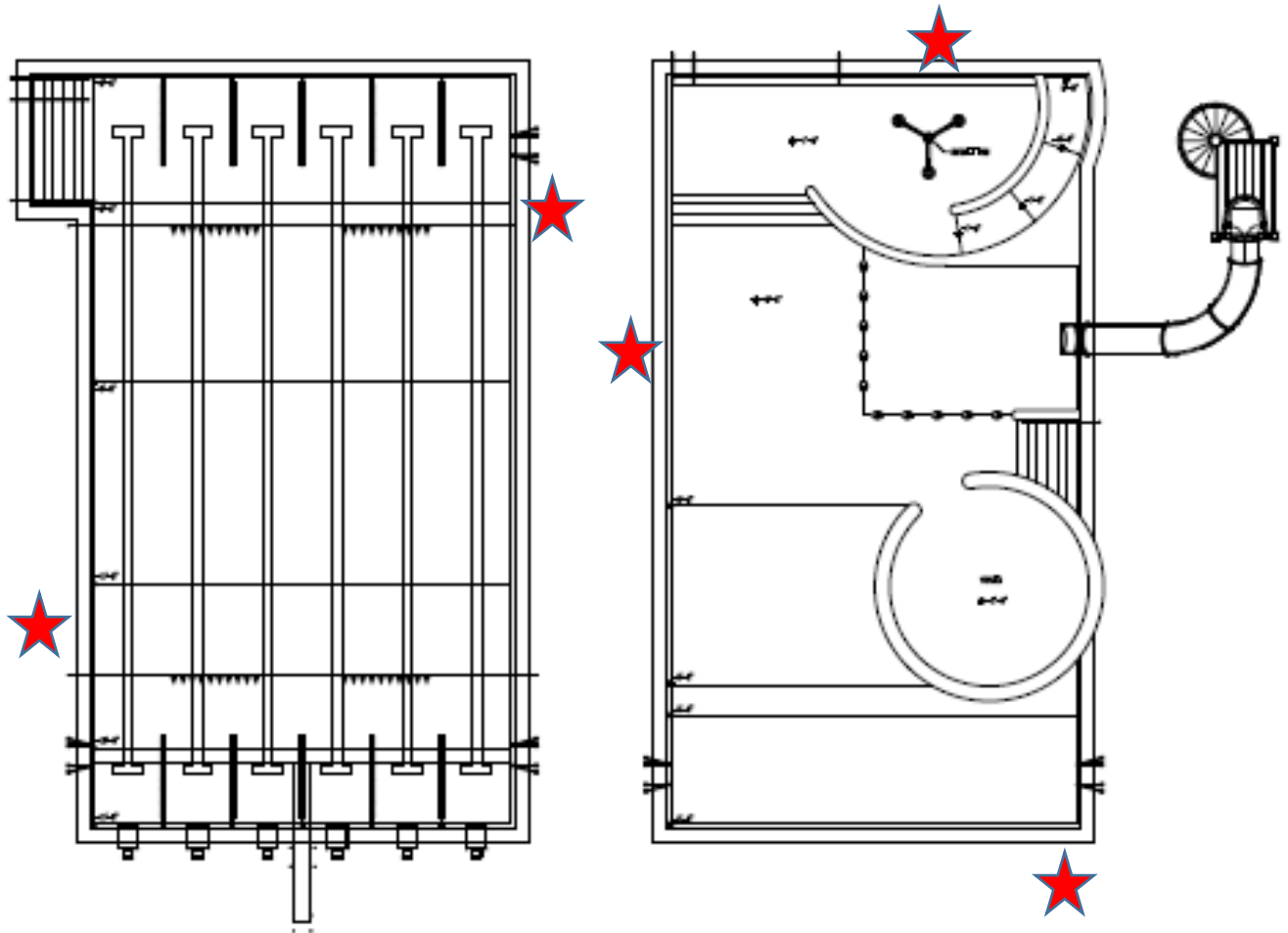
Two options have been developed that both include a 6-lane, 25-yard lap pool and shallow water recreational amenities. The option 1 includes a separate children's pool, while option 2 separates the shallow water leisure pool from the lap pool.

Maintaining the pools at different water temperatures would be ideal for the needs of the various aquatic user groups and would lead to a slight increase in utility costs for option 1, in comparison to option 2, due to the increased size of the leisure pool.

An initial placement of lifeguards is shown below for budgetary planning purposes that includes 4-5 lifeguards with the addition of a head lifeguard. This is above and beyond the current Fircrest Pool due to the increase of the pool's size, the inclusion of the children's pool within the pool's fence and amenities such as the waterslide and vortex that necessitate additional lifeguards to ensure coverage of all areas.

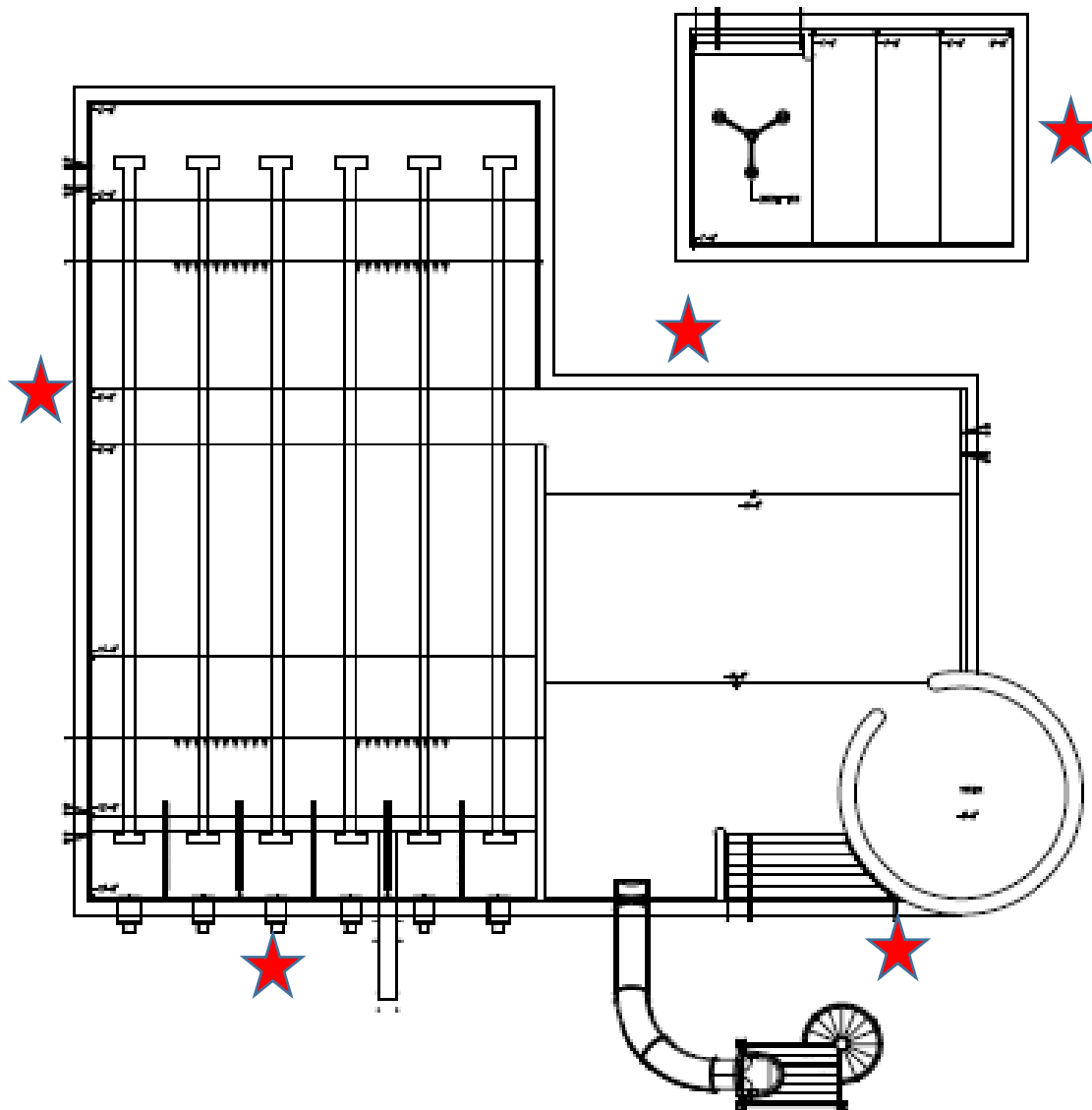
Option 1

Option 1 consists of two bodies of water with 6, 25-yard lanes and 1-meter diving in the main pool. A separate shallow water children's pool contains a water cascade play feature, a waterslide and a vortex.



Option 2

Option 2 consists of two bodies of water. The competition pool contains 6, 25-yard lanes, a vortex, waterslide and 1-meter diving. A separate shallow water children's pool contains a water cascade play feature.



MARKET ANALYSIS

Factors that can influence attendance include projections for growth/decline of population, income levels, and age groups. Market studies are used to predict how relevant products, services, and fees are to residents. Originating from the Fircrest Pool, the primary area is assumed as a 15-minute drive time while the demographics for a 25-minute drive time radius were also examined. A study of demographic patterns in the area is helpful in projecting usage rates.

Distance From Site

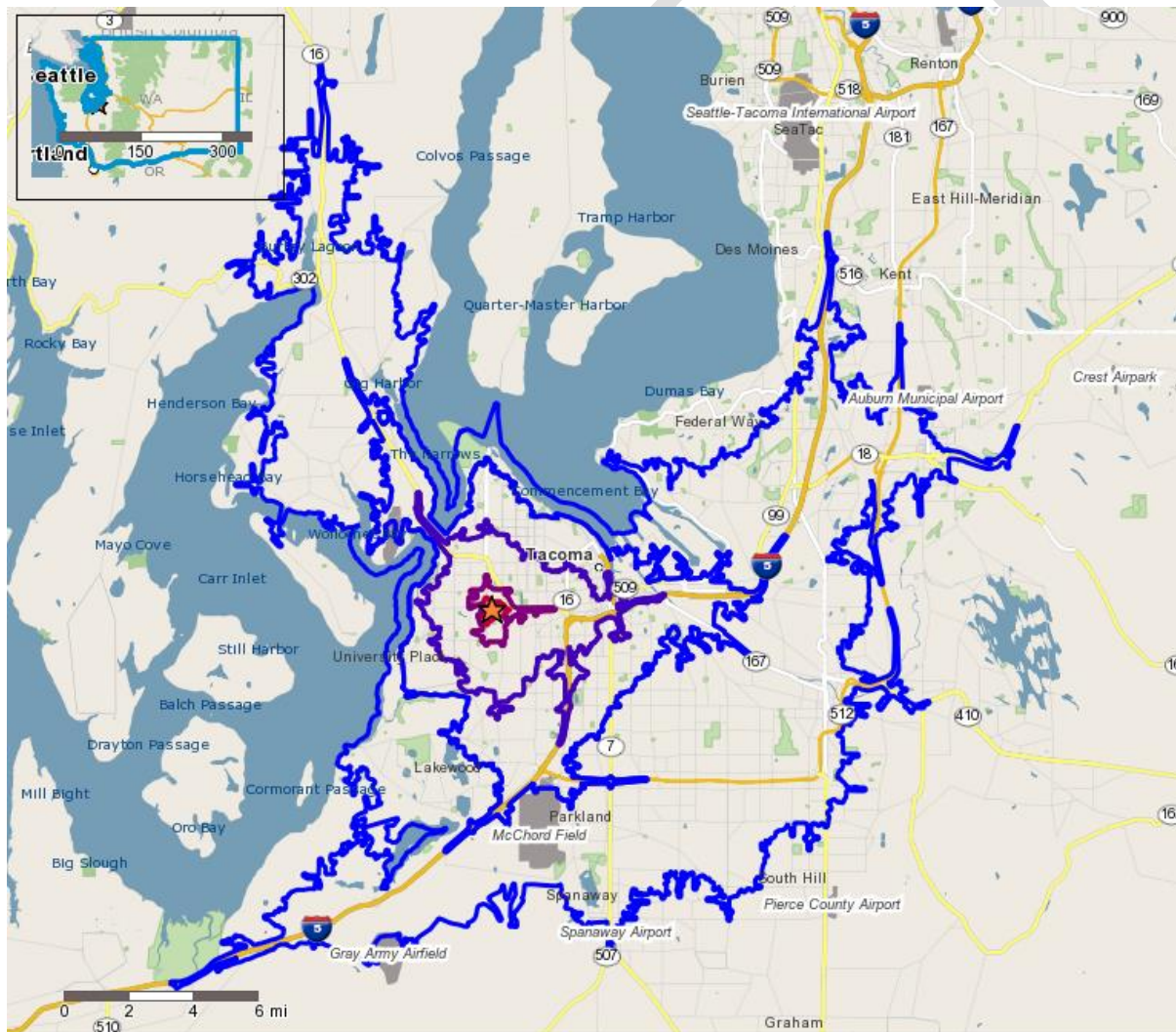
0 to 3 Minutes

3 to 5 Minutes

5 to 10 Minutes

10 to 15 Minutes

15 to 25 Minutes



POPULATION

The following chart presents a summary of market area population with various drive times surrounding the Fircrest Pool. The 2010 U.S. Government Census was used to estimate the population for 2015 and to make projections for 2020.

The current population of Fircrest is shown in the chart below, currently at 6,700 people and projected to grow slightly by 2020.

MARKET AREA POPULATION BY DISTANCE

	Population						Average Annual Change			
	2010		2015		2020		2010-2015		2016-2020	
Drive Times	Number (000's)	Percent of Total	Number (000's)	Percent of Total	Number (000's)	Percent of Total	Number (000's)	Percent Change	Number (000's)	Percent Change
3 Minute	1.2	0.2%	1.3	0.2%	1.3	0.2%	0.0	0.7%	0.0	0.0%
3 to 5 Minutes	5.2	0.9%	5.4	0.9%	5.3	0.8%	0.0	0.8%	0.0	-0.4%
5 to 10 Minutes	75.5	12.6%	79.6	13.0%	80.9	12.9%	0.8	1.1%	0.3	0.3%
Subtotal	81.9	13.6%	86.2	14.1%	87.5	13.9%	0.9	1.0%	0.2	0.3%
10 to 15 Minutes	153.0	25.5%	161.8	26.4%	162.3	25.9%	1.8	1.1%	0.1	0.1%
15 to 25 Minutes	365.6	60.9%	365.6	59.6%	377.5	60.2%	0.0	0.0%	2.4	0.6%
Subtotal	518.6	86.4%	527.4	85.9%	539.8	86.1%	1.8	0.3%	2.5	0.5%
Total (0-25 Minutes)	600.5	100.0%	613.6	100.0%	627.2	100.0%	2.6	0.4%	2.7	0.4%
Fircrest, WA	6.5		6.7		6.7		0.0	0.7%	0.0	0.1%

Source: Alteryx

AGE

Age distribution is another population characteristic used to determine the type and level of use of any type of program. The following table provides the number of residents and the percentage of total population for each age group compared to the U.S. column, which identifies the national average.

MARKET AREA AGE DISTRIBUTION													
Age Groups	3 Minute		3 to 5 Minutes		5 to 10 Minutes		10 to 15 Minutes		15 to 25 Minutes		Fircrest, WA		U.S. Age
	#	%	#	%	#	%	#	%	#	%	#	%	Population
Age 0-4	65	5.2%	313	5.8%	5,708	7.2%	11,170	6.9%	26,125	7.1%	324	4.8%	6.5%
Age 5-9	76	6.1%	334	6.2%	4,920	6.2%	9,961	6.1%	24,724	6.8%	408	6.1%	6.5%
Age 10-14	78	6.2%	319	5.9%	4,530	5.7%	9,029	5.6%	22,803	6.2%	421	6.3%	6.6%
Age 15-19	96	7.7%	304	5.6%	4,300	5.4%	9,252	5.7%	22,430	6.1%	409	6.1%	6.9%
Subtotal	315	25.2%	1,270	23.6%	19,458	24.5%	39,412	24.3%	96,082	26.3%	1,562	23.4%	26.5%
Age 20-24	64	5.1%	371	6.9%	6,115	7.7%	12,949	8.0%	28,736	7.9%	341	5.1%	7.1%
Age 25-29	73	5.8%	470	8.7%	7,581	9.5%	15,108	9.3%	30,084	8.2%	420	6.3%	6.8%
Age 30-34	66	5.3%	365	6.8%	6,836	8.6%	13,425	8.3%	26,450	7.2%	363	5.4%	6.6%
Age 35-39	67	5.4%	335	6.2%	5,371	6.8%	10,908	6.7%	22,321	6.1%	362	5.4%	6.3%
Age 40-44	91	7.3%	318	5.9%	4,631	5.8%	9,623	5.9%	21,297	5.8%	405	6.1%	6.8%
Age 45-49	121	9.7%	326	6.1%	4,624	5.8%	9,610	5.9%	22,904	6.3%	454	6.8%	7.1%
Age 50-54	109	8.7%	369	6.9%	5,030	6.3%	10,661	6.6%	24,417	6.7%	507	7.6%	7.3%
Age 55-59	82	6.5%	356	6.6%	4,838	6.1%	10,486	6.5%	23,928	6.5%	490	7.3%	6.5%
Age 60-64	64	5.1%	306	5.7%	4,064	5.1%	8,887	5.5%	20,051	5.5%	433	6.5%	5.7%
Age 65-69	55	4.4%	238	4.4%	3,110	3.9%	7,139	4.4%	16,583	4.5%	350	5.2%	4.2%
Age 70-74	39	3.1%	197	3.7%	2,386	3.0%	4,957	3.1%	11,879	3.2%	309	4.6%	3.1%
Age 75-79	36	2.9%	159	3.0%	1,714	2.2%	3,420	2.1%	8,392	2.3%	252	3.8%	2.4%
Age 80-84	36	2.9%	140	2.6%	1,563	2.0%	2,579	1.6%	6,093	1.7%	217	3.2%	1.9%
Age 85+	34	2.7%	165	3.1%	2,223	2.8%	2,846	1.8%	6,386	1.7%	220	3.3%	1.9%
TOTAL:	1,252	100.0%	5,385	100.0%	79,544	100.0%	162,010	100.0%	365,603	100.0%	6,685	100.0%	100%
Median Age	42.4		38.2		34.8		35.1		35.3		43.7		37.0
Source: Alteryx													

INCOME

To a certain degree, the likelihood of residents to engage in aquatics depends on their ability to pay for admission and program fees. In the following chart, the U.S. national average is set at 1.00. Index refers to the percentage higher or lower than the national average.

MARKET AREA INCOME				
Radius	Per Capita Incomes		Median Household Incomes	
	Dollars	Index	Dollars	Index
0 to 3 Miles	\$32,605	1.23	\$70,756	1.35
3 to 5 Miles	\$31,011	1.17	\$58,887	1.12
5 to 10 Miles	\$27,123	1.02	\$48,613	0.92
10 to 15 Miles	\$29,425	1.11	\$52,597	1.00
15 to 25 Miles	\$30,444	1.15	\$61,181	1.16
Fircrest, WA	\$35,955	1.36	\$69,539	1.32
Total U.S.	\$26,464	1.00	\$52,599	1.00

Source: Alteryx

KEY DEMOGRAPHIC INDICATORS

- There are currently 6,700 residents of Fircrest, with a median household income that is 132% of the national average.
- 247,000 people are located within a 15-minute drive time of the Fircrest Pool.
- The percentage of children under the age of 19 in Fircrest and the surrounding area is 1% to 3% below the national average.
- Fircrest currently has a higher than average percentage of residents 55+ years old.
- Several aquatic facilities exist in the area surrounding Fircrest, though the majority are indoor facilities, including two outdoor facilities, Stewart Heights and Kandle Pool in Tacoma.
- With income levels primarily at, or above, the national average, the surrounding community does have available discretionary income to use for recreational purposes such as the Fircrest Swimming Pool.

AREA PROVIDERS

The following map and list detail the area providers for aquatics 10 to 15-mile radius of Fircrest, though not all of these facilities will compete with the Fircrest Pool for users



Aquatic Facilities

Curtis Aquatic Center

8805 40th St W, University Place, WA 98466



Kandle Pool

5302 N 26th St, Tacoma, WA 98406



Stewart Heights Pool

5715 Reginald Gutierrez Ln, Tacoma, WA 98404



Clover Park Pool

11023 Gravelly Lake Dr SW, Lakewood, WA 98499



Twin Lakes Pool

3583 SW 320th St, Federal Way, WA 98023



Kimbro Pool

Liggett Ave, Fort Lewis, WA 98433



Morgan Family YMCA

1002 S Pearl St, Tacoma, WA, 98465



Capacity

The following chart shows the capacity load for the proposed Fircrest Pool options based upon the number of training lanes and surface area of competitive and recreational water and comparing it to the current pool. The capacity load reflects the total number of users the facility could possible handle over the course of the day for training and recreational purposes. The holding capacity has been calculated at 25 SF of water per person for shallow water and 100 SF of water per person for deep water. Since all options have +/- 5,600 SF of water surface area, the capacity loads are nearly identical, around 165 users at a time or 500 over the course of an entire day.

	Existing	Option 1	Option 2
WET-SIDE CAPACITY			
Training (Available 25-Yard Lanes)			
Outdoor Lap	6	6	6
Total	6	6	6
Estimated Training Holding Capacity	30	30	30
Daily Training Capacity	90	90	90
Recreation (Surface Area Sq. Ft.)			
Outdoor Lap	5,298	3,229	3,229
Outdoor Leisure	0	2,343	1,925
Outdoor Tot	600	573	604
Total	5,898	6,145	5,758
Shallow Water	3,834	3,994	3,743
Deep Water	2,064	2,151	2,015
Estimated Recreation Holding Capacity	174	181	170
Daily Recreation Holding Capacity	435	453	425
Total Holding Capacity	204	211	200
Total Daily Facility Capacity	525	543	515

Revenue/Expense Analysis

Revenue analysis includes special user group usage and facility per capita spending trends, thus developing an opinion of revenue for the first five years of operation. Programming revenue is based on user groups and local programming fees. Fee structure is based on fees from members and other users to project per capita income. Revenue is estimated, taking recommended fee schedules into account and current market rates and utilization figures.

Expense analysis includes a detailed budget model for estimating probable expenses for major areas of labor, contractual services, commodities, and utilities. User projections are made based on programming. Expenses are estimated considering hours of operation, attendance projections, local weather patterns, local utility rates, and other key items.

The Fircrest Pool is assumed to operate 105 days per year on a seasonal basis. The estimated attendance and fee structure for daily / monthly passes and programs are based on the following price points for residents and non-residents, both daily admissions and season passes. A daily rate of \$5 for all guests ages 3-over was used for residents. A rate of \$8 per guest was used for non-residents.

Fircrest Swimming Pool				
Category	Existing Rate	Proposed Rate	Percent of Visits	Per Visit Unit
Daily Admission				
Residents				
Daily Pass	3.00	5.00	50%	2.50
Free (3-under)		0	2%	-
Non-Resident				
Daily Pass	6.00	8.00	15%	1.20
Free (3-under)		-	5%	-
Season Pass				
Resident				
Individual	50.00	80.00	4%	0.21
Family (4)	32.00 per addtl	200.00	20%	0.67
Non-Resident				
Individual	110.00	128.00	2%	0.17
Family (4)	70.00 per addtl	320.00	2%	0.11
Subtotal / Average			100%	4.86
Credit Card Fees (2%)				0.10
Concessions				\$ 0.10
Total				\$4.86

Fircrest Pool Estimated Revenue

Any facility and program schedule will require flexibility to adapt to specific needs of the community, including both daily and monthly pass users, as well as those signing up for programs.

It is the responsibility of the facility supervisor to monitor user group demands and adjust schedules accordingly. Revenue projections are based on marketing programming that would include the following programs

- Season Passes
- Daily Admissions
- Swim Lessons
- Water Fitness/Aerobics
- Swim Team
- Swim Meet Rentals
- Birthday Parties
- Lifeguard Courses

Aquatics Programs Revenue & Expenses

Revenue	Mgmt. Assump.	Price Per Session (10)	Total Per Session	No. Sellable Sessions	
		Year 1	Year 1		Year 1
Aquatics Instruction Revenue					
Swim Lessons	10 classes/session	\$50	175	4	\$35,000
Swim Team Revenue	Per Season	\$125	40	1	\$5,000
Water Fitness	\$/Session	\$35	40	2	\$2,800
Lifeguard Certification	\$/Session	\$250	20	1	\$5,000
Rentals					
Birthday Party	\$ / 2 HRS of Party Pavillion	\$100	50	1	\$5,000
Private (Full Pool)	\$/2 HRS	\$350	18	2	\$12,600
Non-capacity growth rate					
Capacity growth rate					
Area Revenue					\$65,400
Expense	Mgmt Assump.				Year 1
Program Supplies	4% of year 1 gross revenue; 3% annual increase				\$2,616
LG Class Materials	\$60 per participant for course record fee and manuals				\$1,200
ARC LTS Facility Fee	1500 cards; ; 3% annual increase				\$975
Marketing	5% of year 1 gross revenue				\$3,270
Credit Card Fees	1.5%of Revenue				\$981
Part-Time Program Staff	70% of gross				\$29,960
Area Expense					\$39,002
Net Revenue					\$26,398

The following chart details the number of expected visits multiplied by the per capita expenditure per visit as detailed in the chart on page 16. Programming revenue is added to the admission revenue to show the total revenue for the Fircrest Swimming Pool.

The attendance projections below are based on the existing layouts and amenities included with each option. Each option will generate approximately the same attendance based on the similar features and layouts, which equates to 200 people per day based on an 80-day season. The waterslide and vortex add considerable play value to the facility and a 15% to 20% decrease in attendance would be expected if those amenities were removed from the swimming pool.

		2018	2019	2020	2021	2022
Attendance						
	Option 1	16,179	16,202	16,241	16,264	16,286
	Option 2	16,179	16,202	16,241	16,264	16,286
Per Capita Spending (3% Annual Increase)						
	Option 1	\$4.86	\$5.01	\$5.16	\$5.31	\$5.47
	Option 2	\$4.86	\$5.01	\$5.16	\$5.31	\$5.47
Aquatic Programming Revenue						
	Option 1	\$65,400	\$71,940	\$83,091	\$87,245	\$96,188
	Option 2	\$65,400	\$71,940	\$83,091	\$87,245	\$96,188
Total Revenue (Gross)						
	Option 1	\$144,035	\$153,047	\$166,833	\$173,619	\$185,276
	Option 2	\$144,035	\$153,047	\$166,833	\$173,619	\$185,276

Opinion of Expenses

Facility Staff

Projected annual payroll expenses are listed by summer and winter classifications reflecting benefits and taxes. Scheduling employees is determined by programming demand and management procedure. Wherever possible, pay rates were determined local job classifications and wage scales. Cost for swim instructors and other employees associated with program income were factored in as programming personnel on the expense chart on page 21. The chart below details the expected hours per day for cashiers, lifeguards and head lifeguards for the 105-day season, with an allowance for pre-season preparation work to get the pool up and running.

Job Description	Hours Per Day			Cost Per Hour		Days per Season	Total Employer Expense		
	Existing	Option 1	Option 2	Hourly Rate	Rate with overhead		Existing	Option 1	Option 2
<i>Summer</i>									
Cashier	8	8	8	12.25	\$14.70	105	12,348	12,348	12,348
Head Lifeguard	8	8	8	14.10	\$16.92	105	14,213	14,213	14,213
Lifeguard	24	40	40	12.80	\$15.36	105	38,707	64,512	64,512
Swim Instructors	24	0	0	13.05	\$15.66	40	15,034	0	0
Summer Total	40	56	56				\$80,302	\$91,073	\$91,073
<i>Pre-Season Preparation</i>									
Head Lifeguard	0	40	40	14.10	\$16.92	10	0	6,768	6,768
Winter Total	0	40	40				\$0	\$6,768	\$6,768
Annual Labor Expense							\$80,302	\$97,841	\$97,841

Insurance

Insurance denotes liability for more people and more structure based on visits and labor. Since the owner/operator of this facility is not yet determined, insurance costs were excluded from the expense budget.

Commodities

Commodities are day-to-day products used to operate aquatic centers. Office supplies, program supplies, custodial supplies, repair supplies and chemicals are included. In determining annual chemical expense, chemical treatment assumes the use of calcium hypochlorite and muriatic acid (pH buffer). Chemical use can depend upon bather load and chemical balance of the water. In estimating annual costs, medium bather load figures are assumed.

Heating/Dehumidification

In determining utility costs, current energy costs at other facilities in the area were reviewed. Total costs include energy, energy demand and delivery charges. Caution must be used when comparing this cost with operating expenses of other facilities across the country.

Electricity

The calculations are based on 2018 utility rate information. A figure of \$0.10 cents per kWh was estimated based on the current Fircrest Pool actuals, including both demand and energy costs.

Water and Sewer

Water and sewer services will be needed for domestic use and compensation for evaporation and backwashing purposes. Backwash water and domestic water will be released to the sanitary system. This does not include landscape irrigation.

Expenses

The following tables reflect a summary of all operating expenses, assumptions, and estimates detailed by the expense category as well as an expense summary including operating and programming expenses.

Direct Facility Expense Budget			
	Existing	Option 1	Option 2
Facility Staff			
Full Time Employment	Not Included	Not Included	Not Included
Summer Employment	\$102,480	\$91,073	\$91,073
Winter Employment	\$0	\$6,768	\$6,768
Training	\$0	\$3,000	\$3,000
Total Labor	\$102,480	\$100,841	\$100,841
Programming			
Personnel	Included above	\$13,860	\$13,860
Supplies / Marketing	\$0	\$4,963	\$4,963
Total Contractual Services		\$18,823	\$18,823
Contractual Services			
Insurance	"All City" Premium	"All City" Premium	"All City" Premium
Repair and Maintenance	\$8,378	\$13,900	\$13,700
Total Contractual Services	\$8,378	\$13,900	\$13,700
Commodities			
Operating Supplies	\$14,100	\$8,340	\$8,220
Chemicals	\$16,210	\$15,466	\$11,964
Advertising	\$0	\$4,750	\$4,750
Total Commodities	\$30,310	\$28,556	\$24,934
Utilities			
Public Utility Services	12,509		
HVAC	Included Above	\$4,243	\$4,243
Electricity	Included Above	\$32,984	\$32,162
Water & Sewer	Included Above	\$8,637	\$7,851
Total Utilities	\$12,509	\$45,864	\$44,257
Total Operating Expenses	\$153,677	\$207,984	\$202,554
Capital Replacement Fund	\$0	\$27,800	\$27,300
Total Expense	\$153,677	\$235,784	\$229,854

Revenue / Expense Summary

The below chart details the estimated, total attendance, operating revenue and expenses (operating + programming) with the percentage of recapture in bold.

	2018	2019	2020	2021	2022
Existing					
Attendance	12,316				
Revenue	\$85,078	\$87,630	\$90,259	\$92,967	\$95,756
Expense	\$153,677	\$158,287	\$163,036	\$167,927	\$172,965
Operating Cashflow	(\$68,599)	(\$70,657)	(\$72,776)	(\$74,960)	(\$77,209)
Recapture Rate	55%	55%	55%	55%	55%
Capital Replacement Fund	\$0	\$0	\$0	\$0	\$0
Cash Flow	(\$68,599)	(\$70,657)	(\$72,776)	(\$74,960)	(\$77,209)

Option 1

Attendance	16,179				
Revenue	\$144,035	\$153,047	\$166,833	\$173,619	\$185,276
Expense	\$246,986	\$246,518	\$256,734	\$264,062	\$273,598
Operating Cashflow	(\$102,951)	(\$93,471)	(\$89,901)	(\$90,442)	(\$88,322)
Recapture Rate	58%	62%	65%	66%	68%
Capital Replacement Fund	\$27,800	\$27,800	\$27,800	\$27,800	\$27,800
Cash Flow	(\$130,751)	(\$121,271)	(\$117,701)	(\$118,242)	(\$116,122)

Option 2

Attendance	16,179				
Revenue	\$144,035	\$153,047	\$166,833	\$173,619	\$185,276
Expense	\$241,556	\$240,952	\$251,029	\$258,214	\$267,604
Operating Cashflow	(\$97,521)	(\$87,905)	(\$84,196)	(\$84,595)	(\$82,328)
Recapture Rate	60%	64%	66%	67%	69%
Capital Replacement Fund	\$27,300	\$27,300	\$27,300	\$27,300	\$27,300
Cash Flow	(\$124,821)	(\$115,205)	(\$111,496)	(\$111,895)	(\$109,628)