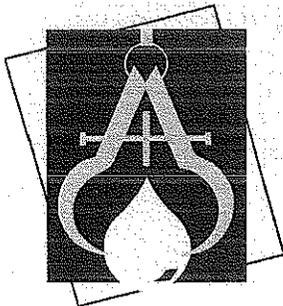


**Borough of Bellefonte
Kepler Pool
Bellefonte, PA
Pool Conditions Assessment & Feasibility Study**



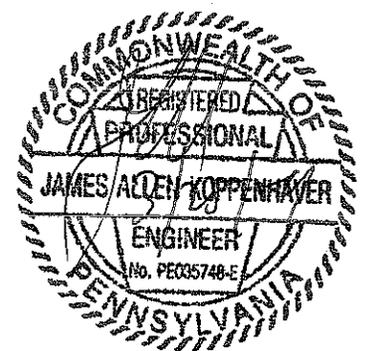
Submitted to
Borough of Bellefonte

PREPARED BY:

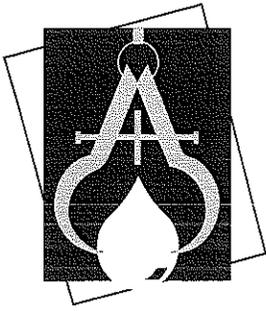


Aquatic Facility Design, Inc.

183 Moore Street
Millersburg, Pennsylvania 17061
1-800-680-SWIM (7946)
Fax 717-692-0950
www.aquaticfacilitydesign.com



MARCH 2009



Aquatic Facility Design

INCORPORATED

Aquatic Facility Designers and Consultants

183 Moore Street • Millersburg, Pennsylvania 17061 • (800) 680-SWIM • Fax (717) 692-0950

March 23, 2009

Borough of Bellefonte
Attn: Donald L. Holderman, Asst. Borough Manager
236 W. Lamb Street
Bellefonte, PA 16823

RE Conditions Assessment/Feasibility Study for
The Kepler Pool Complex

Dear Mr. Holderman,

Upon the request of the Borough of Bellefonte and on behalf of the Kepler Pool Complex, the following study has been prepared to assist you and the Borough in its deliberation on the rehabilitation and enhancements for the Kepler Pool Complex.

The scope of this Study is as mandated by DCNR. Its format follows the scope of: Rehabilitation of an Existing Facility. Contained within this scope is both Section 1. Facility Assessment and Section 2. Facility Management.

In this process **Aquatic Facility Design, Inc.** has completed the following processes and reviews:

- A **Public Participation** process consisting of **Key Person Interviews** and a **Public Meeting**
Interview of five (5) managers of Public Pools within the region
- A profile of pool programs
- A profile of pool attendance and users
- A five-year summary of pool revenues and expenses
- A summarization of the maintenance and repair history
- A survey and assessment of the existing facility
- Core Boring and sampling of the existing pool shell for evaluation of structural conditions
- Pressure and/or Static testing of pool recirculation lines

This study includes recommendations for renovation and enhancements, along with budgetary projections so that the Borough can make informed decisions on the best solutions for their complex. Following the

Borough of Bellefonte
Kepler Pool
Transmittal Letter

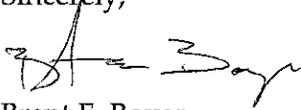
Member - NSPI (National Spa & Pool Institute)
World Waterpark Association

Aquatic Facility Design, Inc.
March 2009

Borough's review of the attached document we suggest that a Public Meeting be held to review these recommendations and to answer any further questions the Borough and/or Public may have.

Aquatic Facility Design, Inc. would like to thank the Borough of Bellefonte for their cooperation and assistance during the development of this Study.

Sincerely,



Brent E. Boyer
President/CEO

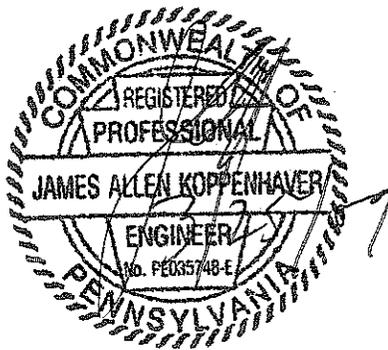


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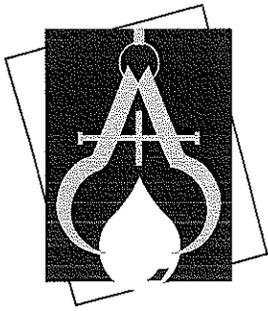
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DRAWINGS AND SUPPORTING DOCUMENTATION

LIST OF DRAWINGS

D-1 Existing Complex Plan

D-2 Proposed Complex Plan



Aquatic Facility Design INCORPORATED

Aquatic Facility Designers and Consultants

183 Moore Street • Millersburg, Pennsylvania 17061 • (800) 680-SWIM • Fax (717) 692-0950

March 23, 2009

Executive Summary

The Kepler Pool, first constructed in 1971, currently serves patrons from five surrounding Boroughs and Townships; these are Bellefonte Borough, Benner Township, Spring Township, Marion Township, and Walker Township. Additionally, the facility is utilized by the Bellefonte Area School District. It may perhaps be more appropriate to think of the Kepler Pool in terms of a regional facility, and not simply as the Bellefonte Community Pool, as the facility is considered invaluable within the region.

A Shared Services Committee between Bellefonte Borough and Benner, Spring, Marion, and Walker Townships was in place for the 2007 and 2008 operating seasons. Participants contributed toward general operational type functions based on the contributors' respective population. It is anticipated this agreement will continue into the 2009 season. The Bellefonte YMCA manages and operates the complex and is responsible for programming.

The complex's swimming pools are in great need of renovation as their systems have reached or exceeded their life expectancies. A reconfiguration of the pools is required to overcome the "usability" issues currently plaguing the complex. Both bodies of water, as currently constructed, are not only ADA inaccessible, but are also incompatible with the usage needs and programming requirements of the general public. A recommendation has been made for a dual Zero-Entry Addition to the Main Pool, whereby, creating a single structure and a unified body of water. The addition will facilitate ADA and patrons with special needs, as well as accommodating increased programming. User load for the newly configured pool is calculated at 554 patrons. A new filtration and chemical system will service the reconfigured pool. "Play type" features are added throughout the "new" pool.

The newly configured pool will not only facilitate access by all, but will allow the implementation and coordination of a wide variety of aquatic and community programs. Base Renovation/Reconfiguration/Improvement costs are estimated at \$1,250,000.00.

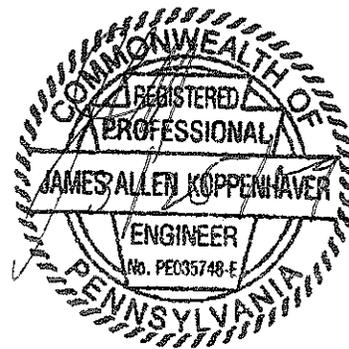
Design investigation has deemed refurbishment of the Wading Pool impractical under the facility reconfiguration plan and it has been recommended for removal. A Children's Splash Pad is recommended to be constructed adjacent the new addition to the Main Pool. This is recommended in a Phase I project but could be accomplished in a Phase II project. Cost is estimated between \$125,000 and \$175,000, dependent upon project phase.

The Bathhouse and Concession Buildings are also due for an upgrade. The layout of the Bathhouse building will be modified to accommodate the addition of a Family Changing Area, as well as, the elimination of the open-air design. The Concession Area is scheduled for renovation to better accommodate patron requirements. Additional Equipment will be provided to accommodate the preparation of an expanded menu, which will serve both Pool and Park patrons. General cosmetic upgrades will be made to both the interior and exterior of both buildings. Bathhouse/concession renovations/upgrades are estimated at \$550,000. All Bathhouse and Concession work is recommended in Phase I of a project; however, if prevailing financial conditions mandate, a Phase II project could be considered pending further design review.

In closing, we believe that the Kepler Pool is an asset to the Borough of Bellefonte, and surrounding area, with all of its major structural components being of sound condition and accepting of long-term improvements. With the implementation of the proposed rehabilitation and code compliance plan, we believe the life of the facility can be extended substantially.



Brent E. Boyer
President/CEO, Aquatic Facility Design, Inc.



Introduction

In August of 2008, the Borough of Bellefonte solicited a proposal from our firm focusing on the Kepler Swimming Pool Complex, as managed by the Bellefonte Area YMCA. Our focus on the Aquatic Complex is a conditions assessment and feasibility study of the Pools and Their Systems, as well as the Bathhouse and Concession Buildings. This report will address function, equipment, structures, ADA, and code compliance and recommend solutions with budgetary projections to complete modifications, renovations, and enhancements. **All recommendations and conclusions will consider a multi-use facility concept approach.** The multi-use facility approach helps insure activities are available for all age groups and activity levels. This approach aids in revenue production and contributes to the sustainability of the facility.

The views of the owner were a foremost consideration in the formulation of this study.

Aquatic Facility Design, Inc.'s ability to evaluate, assess, and make recommendations on Aquatic design and construction, is unique. Our foresight as a designer is invaluable as our staff and key personnel's knowledge is based on experience in the design, maintenance, service, and construction of commercial swimming complexes.

I. Methodologies:

Methodologies employed by Aquatic Facility Design, Inc. to complete this study include the following:

- A Public Participation Process consisting of Key Person Interviews and a Public Meeting
- Interview of five (5) managers of public pools within the region
- Visual inspection of the existing pools and their functionality
- Visual inspection of the equipment and piping as feasible
- Visual inspection of the Bathhouse and Concession Buildings
- Investigative testing in the form of 6 inch core borings throughout the structure of the Main Pool
- Investigative testing in the form of Pressure and/or Static Testing of Pool Recirculation Lines

In order to arrive at our conclusions, each of these methodologies has been used in this study in varying intensities and levels of application.

II. Objectives:

The objective of this study is to assess our findings and to make experienced, professional recommendations for the modification / renovation of the complex. In that pursuit, the following is a list of items that have been studied, discussed, and reviewed in an effort to provide a document that will serve as a catalyst for making informed decisions.

A. What will this Study tell you?

- A site inventory and general description of existing conditions.
- What is the actual condition of the Pools, their Structures, and Systems?
- What is the actual condition of the Bathhouse/Concession Building?
- Is the facility ADA and code compliant?
- Is the facility multi-use? Recommendations will be made throughout this study with the multi-use concept in mind. The multi-use facility approach helps insure activities are available for all age groups and activity levels. This approach aids in revenue production and contributes to the sustainability of the facility.
- An assessment of Virginia Graeme Baker Pool and Spa Safety Act compliancy with recommended solutions
- What are the best solutions for this particular complex?
- What are the projected costs for the solutions to be recommended?
- What are the life expectancies, maintenance issues and ramifications of the solutions proposed?
- Recommendations for the implementation of an optional Phasing Program.

MANAGEMENT OF KEPLER POOL

2008 MANAGEMENT OF THE KEPLER POOL
BY BELLEFONTE BOROUGH
AND
THE BELLEFONTE FAMILY YMCA

In 2008, The Kepler Pool was under a joint management agreement between the Bellefonte Borough and the Bellefonte Family YMCA; the Borough being the Owner and the YMCA as an Independent Contractor.

The YMCA was responsible for opening and closing the pool daily through the season. All membership and daily pass rates were set by the YMCA and approved by the Borough. All financial and attendance reports were provided to the Borough for review.

The YMCA operated a food and beverage concession. It was the sole responsibility of the YMCA to purchase, store and sell all concession items. The YMCA retained all revenues.

The YMCA was responsible for all hiring/payroll, training, scheduling of all staff, scheduling of all pool functions, providing one or more Certified Pesticide Applicators for chemical application, conducting weekly bacteria testing.

The YMCA was responsible for all daily cleaning of pool, dressing areas, restrooms, pool grounds.

The YMCA maintained appropriate and necessary liability and Worker's Compensation coverage for all staff and named the Bellefonte Borough as an additional insured.

The Bellefonte Borough provided an appropriate and fully operational pool and surrounding facility, including parking. The Borough was responsible for all maintenance and repair of the pool and grounds.

The Borough maintained appropriate liability insurance as owner of the pool and named the YMCA as an additional insured.

The Borough provided all pool chemicals necessary for operation of the pool. All removal and disposal of refuse was the responsibility of the Borough. The Borough was responsible for such expenses as electrical, water, sewage, gas, and refuse disposal utilities.

PROGRAMS AND USAGE

III. Programs and Usage

- General Recreational Swimming is the primary pool program at Kepler Pool
- .The Bellefonte Family YMCA Stingrays Swim Team uses the Kepler Pool for practices and also for home swim meets
- The Kepler Pool is used for Private Parties such as Teen Swimming Parties, Birthday Parties, Family Reunions, Group Functions
- An Adult Lap Swim is offered Monday – Friday between the hours of 11 a.m. – 12 p.m.
- Water is currently too cold to host Swimming Lessons

The Borough of Bellefonte, Kepler Pool, currently serves patrons from the following entities:

- 1. Borough of Bellefonte**
- 2. Benner Township**
- 3. Spring Township**
- 4. Marion Township**
- 5. Walker Township**
- 6. Bellefonte Area School District**

MEMBERSHIP AND ATTENDANCE

2008 POOL MEMBERSHIP AND ATTENDANCE

MEMBERSHIPS FOR 2008:

ADULT: 7
YOUTH: 29
FAMILY: 103
SENIOR: 5
TOTAL: 144

JULY 18 & 31, 2008 – HIGHEST DAILY ATTENDANCE FOR SEASON – 304
USERS EACH DAY

AUGUST 5, 2008 – LOWEST DAILY ATTENDANCE FOR SEASON – 8 USERS

RANGES FOR MONTHLY ATTENDANCE:

	<u>MEMBERS</u>	<u>DAILY PASS</u>	<u>TOTAL</u>
MAY/JUNE	1,119	695	2,746
JULY	2,435	960	5,249
AUG./SEPT.	1,112	367	<u>2,428</u>
2008 TOTAL			10,423
CHILDCARE	932	1,929	1,042

BREAKDOWN BY MUNICIPALITY:

	<u>MAY/JUNE</u>	<u>JULY</u>	<u>AUG./SEPT.</u>	<u>TOTAL</u>
BELLEFONTE	1,059	1,801	770	5,273
SPRING	377	750	346	2,212
WALKER	123	254	158	815
MARION	20	33	12	100
BENNER	119	271	114	737
OTHER	103	265	100	<u>715</u>
TOTAL				9,852

(UNKNOWN IF POOL PARTY GUESTS INCLUDED IN THESE NUMBERS)

POPULATION/AGE RELATED DEMOGRAPHICS

Bellefonte Borough

TOTAL POPULATION (Per US Census Bureau, Census 2000)

6,395

SEX

Male	2,952
Female	3,443

AGE

Under 5 Years	401
5 – 9 Years	386
10 – 14 Years	360
15 – 19 Years	343
20 – 24 Years	464
25 – 34 Years	1,082
35 – 44 Years	897
45 – 54 Years	768
55 – 59 Years	279
60 – 64 Years	255
65 – 74 Years	557
75 – 84 Years	429
85 Years and over	174

Median Age	36.8
------------	------

MAINTENANCE AND REPAIR HISTORY

MAINTENANCE/REPAIR HISTORY

YEARLY

- Opening/Winterizing Pool
- Reconnect System/Fixtures

2008

- New Shower Fixtures in Men's and Women's Changing Areas
- New Changing Stalls in Men's and Women's Areas
- New Filter Pump – Motor and Stand
- New Fill Hose to fill pool from wet well

2007

- Three (3) New Chemical Pumps and Hardware
- Repaired two (2) leaks around pool area
- Repaired Main Line break
- Repaired Valve in pool area

2006

- Repaired three (3) Leaks around pool area
- Repaired Main Line break

2005

- Rebuilt Sand Filter, sand piping, etc.
- Repaired two (2) Leaks around pool area
- Repaired Valve in pool area

2004

- Repaired one (1) Water Leak around pool area
- Repaired Main Line break
- Repaired Valve in pool area

SUMMARY OF REVENUES AND EXPENSES

SUMMARY OF REVENUES AND EXPENSES
2004 – 2008

Following is a summary of revenues and expenditures for the Kepler Pool for the 2004 – 2008 Pool Seasons:

	<u>REVENUES</u>	<u>EXPENSES</u>	<u>NET INCOME</u>
2004	\$23,639.00	\$26,342.00	\$- 2,703.00
2005	\$29,954.00	\$31,578.00	\$- 1,624.00
2006	\$22,859.00	\$40,784.00	\$-17,925.00
2007	\$37,904.00	\$37,885.00	\$ 19.00
2008	\$35,582.00	\$35,562.00	\$ 20.00

OPERATIONAL COMPARISON

IV. Operational Comparison

Requests for operational comparison interviews were made to the managers of five (5) commercial swimming complexes within the region, along with the Kepler Pool. Those contacted were as follows:

- Kepler Pool, Bellefonte, PA
- Park Forest Community Pool, State College, PA
- William L. Welch Community Pool, State College, PA
- Science Park Swimming Pool, State College, PA
- Centre Hills County Club, State College, PA
- State College Elks Club Pool, Boalsburg, PA

The following are the responses received.

Operational Comparison/Survey of Managers

1. Name of Facility	KEPLER POOL	PARK FOREST COMMUNITY POOL	WM. L. WELCH COMMUNITY POOL	STATE COLLEGE ELKS CLUB	SCIENCE PARK SWIMMING POOL	CENTER HILLS COUNTRY CLUB
2. Address	Governors Park Bellefonte, PA 16823	2100 School Drive State College, PA 16801	670 Westerly Pkwy. State College, PA 16801	100 Elks Road Boalsburg, PA 16827		
3. Phone	814-355-5551	814-231-3071	814-231-3071	814-466-7231		
4. Website	www.bfymca.org	www.crpr.org	www.crpr.org	www.elks1600.com		
5. Director/Manager		Todd A. Roth	Todd A. Roth	Chris Mingos		
6. Population Served by Facility	6,395	78,000	78,000	1,400		
7. Is your Pool Owned by the Boro, Township, Other?	Borough	Municipality Entity – Rec Authority serving 5 Municipalities	Municipality Entity – Rec Authority serving 5 Municipalities	Privately		
8. Describe any Municipal or Other Partnerships in which you participate.		Centre Region Council of Governments, 5 Municipalities	Centre Region Council of Governments, 5 Municipalities	N/A		
9. Is your Pool Governed by a Recreation Board/ Other?		Yes – Rec Boad	Yes – Rec Boad	No		
10. Is your Pool Managed by a YMCA/Other?	Yes – Bellefonte Family YMCA	No	No	No		
11. Type and # of Memberships (2008)	Youth – 29 Adult – 7 Family – 103 Senior - 5	Youth 3-10 – 297 Adult 11-64 – 398 Senior 64+ - 6 5 th Family Member & Up - 33	Youth 3-10 – 297 Adult 11-64 – 398 Senior 64+ - 6 5 th Family Member & Up - 33	Single Family		

12. Membership & Daily Rates (2008)	Youth: \$75 Adult: \$85 Family: \$145 Senior: \$75 Daily: Tot (4 & under): \$2.75 Youth: \$3.75 Adult: \$4.75 Senior: \$4	Youth 3-10 - \$40 Resident, \$60 Non-resident, \$4 Daily Adult 11-64 - \$55 Resident, \$83 Non-resident, \$4.50 Daily Senior 64+ - \$40 Resident, \$60 Non-resident, \$4.50 Daily After 5 p.m. \$3.50 Daily: Resident Rates – Residents of the (5) participating municipalities	Youth 3-10 - \$40 Resident, \$60 Non-resident, \$4 Daily Adult 11-64 - \$55 Resident, \$83 Non-resident, \$4.50 Daily Senior 64+ - \$40 Resident, \$60 Non-resident, \$4.50 Daily After 5 p.m. \$3.50 Daily: Resident Rates – Residents of the (5) participating municipalities	Single: \$100 Family: \$160 Each additional Member: \$65 Daily: \$5		
13. Revenue Breakdown by percentage:						
a) Membership Fees		25%	25%			
b) Program Fees		20%	20%			
c) Municipal Support / Governmental Support		38%	38%			
d) Contribution Funding		0%	0%			
e) Other		Daily Admission – 17%	Daily Admission – 17%			
14. When was your Facility initially Constructed?		1970	1958	1965		
15. When was your Facility Last Renovated / Updated? Renovations Performed:	2008: New shower fixtures and changing stalls in Men's and Women's Areas; New filter pump – motor and stand; New fill hose – fill pool form wet well	Currently under renovation, to open in May 2009. Complete replacement of pool, tot pool, & bathhouse, addition of 2 water slides & sprayground features	Design development currently underway, construction to begin Aug 2009 – open May 2010. Complete replacement of current facilities – new 8-Lane lap pool, new leisure pool, water slides, current channel, sparyground features, zero depth entry, new bathhouse and support	2009		

16. Did you utilize Grant Monies? If yes, from where?		Yes PA DCNR for master planning & construction (2 grants received – 1 Planning & 1 Construction)	Yes PA DCNR for master planning & construction (2 grants received – 1 Planning & 1 Construction)	No		
17. Does your Facility serve people of All Ages and All Fitness Levels? If so, how?	Yes	Yes Through programming, design, & availability	Yes Through programming, design, & availability	Yes		
18. How many pools are present in your complex? Please describe them.	2 Main Pool and Wading Pool	One Main L shaped pool w/6 lap lanes, 2 water slides, grand stair entry & 1 tot pool w/spray features	One 8-Lane Competition Pool & One Leisure Pool w/2 water slides, current channel, sprayground features & zero depth entry	One		
19. Does your Pool(s) have a Zero Entry?		No	Yes	Yes		
20. Does your Pool(s) have an ADA Lift, Ramp or Stairs? If so, please list.		ADA Lift and Stairs	ADA Lift and Stairs	Yes		
21. Does your Pool(s) have Diving?		Yes	Yes	Yes		
22. Does your Pool(s) have Slides? If yes – quantity & type.		Yes 2 Total (1 drop slide & 1 runout slide)	Yes Design Pending	Yes		
23. Does your Pool(s) have Play Features? If yes – quantity & description. Which of these Play Features is, in your opinion: 1. Most Popular: 2. Second Most Popular: 3. Third Most Popular:		Yes Assorted spray features, tumble buckets, jets Have not opened yet	Design Pending	No		

24. Is your pool Heated?		Yes	Yes	Yes		
25. Does your facility host Competition Swimming? If yes, what rules do you follow?		Yes USA & NCAA	Yes USA & NCAA	No		
26. Does your Facility have a Family Changing / Bathroom?	No	Yes	Yes	Yes		
27. Does your Facility have a Concession Operation?	Yes	No	No	Yes		
28. Is your Concession managed "In-House", Leased or Other?	In-House	N/A	N/A	In-House and Leased		
29. Does your Concession <i>prepare</i> and <i>sell</i> Hot Food, Pre-Packaged, a Combination or Other? Please describe menu. What are your Top (3) selling items? #1. #2. #3.	Combination: Hamburgers; Hot dogs; Fries; Nachos; Soft Pretzels; Chips; Asst. Candy; Ice Cream Sandwich; Popcorn; Sodas; Water; Gatorade #1. French Fries #2. Ice Cream Sandwiches	N/A	N/A	#1. Ice Cream #2. Drinks #3. Sandwiches		
30. List any Program Offerings such as Swimming Lessons, Aqua Aerobics, Daycares, Day Camps, etc.	Swim Team, Private Parties, Adult Lap Swim	Swim Lessons, Water Polo, Private Lessons, Water Exercise, Special Events, Youth Triathlon, Agency camps visit 3x per week	Swim Lessons, Water Polo, Private Lessons, Water Exercise, Special Events, Youth Triathlon, Agency camps visit 3x per week	Swim Lessons		
31. Does your Facility offer "Reduced Rate Memberships" or "Sponsored Memberships" to those in the community who might not otherwise be		Yes – Partial fee reduction	Yes – Partial fee reduction	No		

able to afford Membership/ Program Fees?						
32. # of Sponsored Members in 2008		20	20	N/A		
33. Do you have a Fund to support these "Sponsored Memberships"? If so, what?		Yes Youth Scholarship Fund	Yes Youth Scholarship Fund	No		
34. Pool Hours	Adult Lap Swim: M-F: 11 am – 12 pm; Open Swim: M – F: 12 pm – 8 pm; Memorial Day & July 4 th , 12 pm – 6 pm	Weekends Lap Swim – 11 – Noon, General Swim – Noon – 8PM, Weekdays Lap Swim – Noon-1, General Swim – 1-8 PM (Programs in AM)	Weekends Lap Swim – 11 – Noon, General Swim – Noon – 8PM, Weekdays Lap Swim – Noon-1, General Swim – 1-8 PM (Programs in AM)	Daily: 11:00 am – 7:30 pm		
35. Lifeguards:						
a) # April – May		15	20			
b) # June – July		15	20			
c) # Aug – Sept		15	20			
d) Starting Hourly Wage -		\$7.30	\$7.30	\$8		
e) Starting Hourly Wage with One Year of Experience		\$7.40	\$7.40			
f) Training Required		Lifeguard (ARC, YMCA, or Ellis), CPR for Professional Rescuer, First Aid Facility In-Service	Lifeguard (ARC, YMCA, or Ellis), CPR for Professional Rescuer, First Aid Facility In-Service	Yes		
g) Does your Facility have a "Jr Lifeguard Leadership Program"?		No	No	Yes		

h) Person responsible for hiring Lifeguards		Aquatics Supervisor	Aquatics Supervisor	Pool Manager		
36. Name or Title of Person Responsible for Pool Programs		Todd Roth, Aquatics Supervisor	Todd Roth, Aquatics Supervisor			
a) College Degree / Certifications		Bachelor of Landscape Architecture, PA Pesticide Category 24, Certified Aquatics Facility Operator, American Red Cross Instructor-Trainer for Lifeguarding, Water Safety Instruction, CPR Pro	Bachelor of Landscape Architecture, PA Pesticide Category 24, Certified Aquatics Facility Operator, American Red Cross Instructor-Trainer for Lifeguarding, Water Safety Instruction, CPR Pro	Yes		
b) Years of Service		6	6	6		
c) Three Primary Responsibilities		Oversee aquatic facilities & staff; Coordinate & oversee aquatic programming; Budget & planning for the future	Oversee aquatic facilities & staff; Coordinate & oversee aquatic programming; Budget & planning for the future			
37. Does your Pool Manager teach Swimming Lessons?	N/A	If they wish, as a separate paid position	If they wish, as a separate paid position	Yes		
38. What do you feel are the Three Primary Reasons for Success of the Complex		Long Term Planning; Community Commitment; and Great Personnel	Long Term Planning; Community Commitment; and Great Personnel	Activities Lessons Cleanliness		
39. What do you feel are the Three Primary Improvements you feel would Benefit your Complex.		More Land More Money More Aquatic Opportunities	More Land More Money More Aquatic Opportunities	New Heater New Pump		

PUBLIC PARTICIPATION

PUBLIC PARTICIPATION

A Public Meeting/Information Session was conducted on February 5, 2009.

Those attending the public participation meeting were provided the opportunity to discuss and share ideas for the rehabilitation and enhancements for the Kepler Pool. **Those attending are viewed as a cross-section of the Community.**

The following comments and questions/concerns are the result of this meeting.

Public Meeting/Information Session Results:

The overall reaction to the presentation and proposed design of the Kepler Pool was Positive. Those in attendance were pleased to see the suggestions and requests from the community were incorporated into the proposed design.

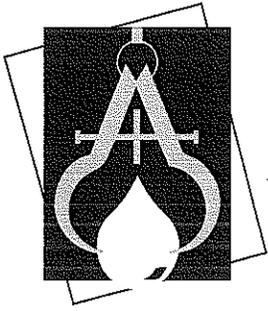
Following are several options discussed and reactions:

- Features:
 - Dragon – Positive Reaction
 - Butterfly Ride
 - Rain Cap
 - Flowers – Very Positive Reaction for Main Pool
 - Concern: Are lifeguards able to walk under these?
 - Climbing Wall – Mixed Reactions
 - Concern: How high is wall?
 - Slide – Very Positive Reactions
 - Concerns: Are lifeguards required at top and bottom? Insurance issues?
- Sun Screen for Swim Meets – Positive Reaction
- Heater
 - No swimming lessons held due to water temperature being too cold
 - Will there be a pool heater?
 - What type of temperatures can be expected with pool heater?
- Foot-Bridge joining both pools – Not many comments or reaction
- Hot Dog Cart – Reaction – Skeptical at first – began to understand concept and benefits. Suggestion made to be used at ball field as well.
- Splash Pad Area
 - Is splash pad area able to be turned on and off?
 - Any consideration for non-slip materials (i.e. rubber)?
- Bathhouse Rehabilitation
 - Is this able to be completed in phases?
- Virginia Graeme Baker Pool and Spa Safety Act
 - Informed group that Kepler Pool currently does not comply with Act
 - Discussed what is required to meet compliance
 - Cost estimate given

Additional Concerns and Comments:

- 1 or 2 Pools – what if child has accident, how will filtration be affected?
- If existing storage shed is removed, will there be area designated for storage of competition equipment?
- Will there be backstroke flags at each end of pool?
- Question in regards to lifeguard stands
- What can be done to cut down on wind – fence covers?
- Concession building needs to be secured
- No lights required – too cold after regular pool hours
- Comment on whether facility would be losing the grass and green
- What is cost of project as presented at meeting?
 - Estimated 1.5 million
 - Less than anticipated
- Will DCNR grants be available?
- Are there other available grants?

**VIRGINIA GRAEME BAKER
POOL AND SPA SAFETY ACT
ASSESSMENT & RECOMMENDATIONS**



Aquatic Facility Design INCORPORATED

Aquatic Facility Designers and Consultants

183 Moore Street • Millersburg, Pennsylvania 17061 • (800) 680-SWIM • Fax (717) 692-0950

January 27, 2009

Bellefonte Borough
Attn: Don Holderman
236 West Lamb Street
Bellefonte, PA 16823

RE: **Kepler Pool** – Virginia Graeme Baker Pool & Spa Safety Act
Evaluation and Recommendations

Dear Mr. Holderman,

As a result of our recent site visit and conversations we have performed extensive research and have concluded the following in reference to your facility's compliance with the Virginia Graeme Baker Pool & Spa Safety Act and Relevant ANSI Standards.

I. Main Pool Filtration System

The Main Pool at your facility does not comply with the Act in the following respects:

1. The Main Pool drain covers do not meet the Anti-Suction Entrapment Hazard Standard as required by the Act.
2. The Main Pool sump inlet piping sizes do not meet the ANSI requirement of 6' per second maximum velocity due to the under sizing of the intake piping related to the required flow rate of the system.

The solutions to these deficiencies are as follows:

1. Installation of a new Griswold Flow Control Valve set for 530 GPM, which would then bring the pipe velocity below the 6' per second maximum required by the Act.
2. Replacement of the two (2) existing drain covers with approved Anti-Suction Entrapment Hazard covers rated for a flow rate of 530 GPM.

II. Wading Pool Filtration System

The Wading Pool at your facility does not comply with the Act in the following respects:

1. The single Wading Pool drain cover does not meet the Anti-Suction Entrapment Hazard Standard as required by the Act.
2. The Wading Pool has a single main sump, without secondary protection, which makes the pool noncompliant with the requirements of the Act.
3. The Wading Pool main drain line is believed to be connected to the Main Pool drain line. This constitutes a violation of the PA Dept. of Health regulations. The Wading Pool should have a separate filtration system with a 2-hour turnover rate. **(This is a matter separate from Virginia Graeme Baker Pool and Spa Safety Act compliance).**

The solution to these deficiencies is as follows:

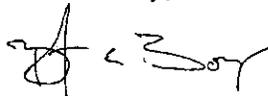
1. Replacement of the main drain sump and cover with approved Dual Anti-Suction Entrapment Hazard sumps and covers rated for a flow rate of 44 GPM.

In conclusion, your facility's Main and Wading Pools can be remediated by following the above stated solutions to each deficiency. The pools will then be in compliance with the Virginia Graeme Baker Pool & Spa Safety Act and Associated Standards.

Aquatic Facility Design, Inc. will now research the availability of the above-mentioned parts and equipment.

Should you have any questions or if we can be of further assistance, please contact me at 1-800-680-7946.

Sincerely,



Brent E. Boyer
President/CEO

SITE INVENTORY AND GENERAL DESCRIPTIONS

V. Existing Pools and Their Systems: - see Drawing D-1 hereafter

A. The Main Pool

The Main Pool was constructed in 1971. It is of shotcrete type concrete with a layer of marcite plaster. A paint type coating has been previously applied as a finish. A retrofit vinyl liner covers the entire structure. It is an "L" configuration beginning at a depth of approximately 3 feet 5 inches in the shallow end and terminating at a depth of approximately 9 feet 8 inches in the deep well. The pool consists of approximately 5,443 sq. ft. of surface area and approximately 237,660 gallons of water. The pool has an underground recirculation piping system consisting of an overflow type gutter, a sidewall filtered water return system, and two deep well drain intake boxes. The underground piping system appears to be a combination of PVC and steel piping. **The Pool Structure as constructed, is non-ADA Compliant.**

There are eight (8) competition style race lanes. **These are constructed to 25 yards competition length.** See Fig. 1. There is a series of stainless steel ladders for access and 5 wooden lifeguard platforms. A handicapped chair lift is present on site for patron use. A poured concrete deck surrounds the pool. See Fig. 2. **No play type or other general recreational amenities exist.**



Figure 1



Figure 2

Filtration/Chemical Equipment and Systems - Main Pool

The Main Pool filtration system consists of a gravity fed recirculation pump and motor linked to a single tank pressure sand system. See Fig. 3 & 4 page 23. The filter tank is steel with manual setting controls. This system also serves the Wading Pool, which has no filtration of its own. The chemical system consists of a Liquid Chlorine system for sanitation and a Muriatic Acid system for pH regulation. This system also services the Wading Pool. These units are computer regulated. The Filtration and Chemical Systems are located at the deep well end of the pool. They are below grade. The Filter is exposed to the elements and to the public with no enclosure. The Filtration pump,

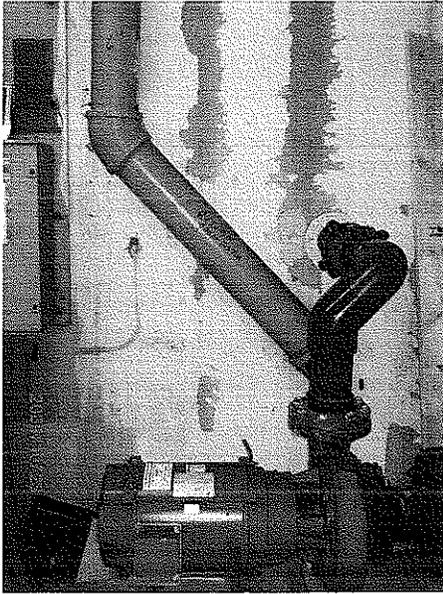


Figure 3

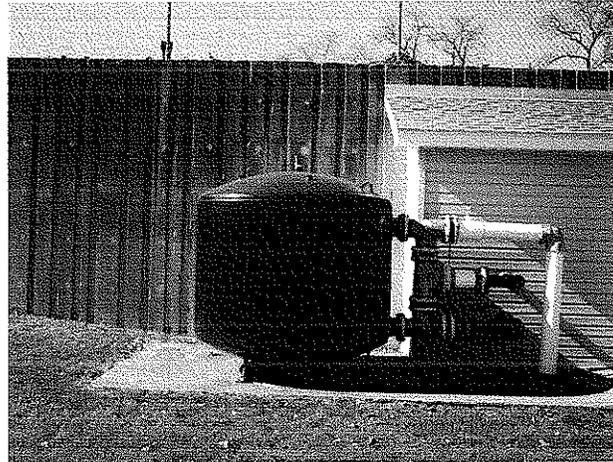


Figure 4

valving and controls, as well as the chemical system, are housed in rooms below and adjacent the deep well decking.

B. Wading Pool

The Wading Pool was constructed in 1971. It is believed to be constructed of steel reinforced shotcrete type concrete. Due to the specialized nature of the retrofit vinyl liner, which encases it, no Core Borings were performed. It is a Circular configuration. The pool consists of approximately 707 sq. ft. of surface area. The pool has an underground recirculation piping system consisting of a series of sidewall intake boxes, a sidewall filtered water return system, and a single bottom drain intake box. Underground piping appears to be a combination of PVC and steel composition. A poured concrete deck surrounds the pool. The pool structure, as constructed, is **NON-ADA COMPLIANT**. No amenities exist. See Fig. 5.



Figure 5

Filtration/Chemical Equipment and Systems – Wading Pool

The Wading Pool is served by the Main Pool Filtration and Chemical Systems.

C. Bathhouse Building – See Fig. 6



Figure 6

Existing sloped sidewalk leads from the parking area to the Bathhouse structure.

The existing building is a slab on grade, square steel post and beam structure with a shingled roof. The building is of **open-air design** with Men's and Women's changing areas protruding from the Main Structure. See Fig. 7 & 8.

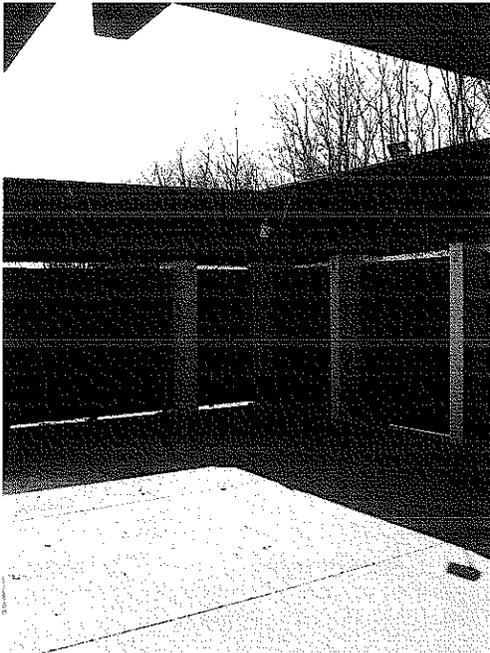


Figure 7

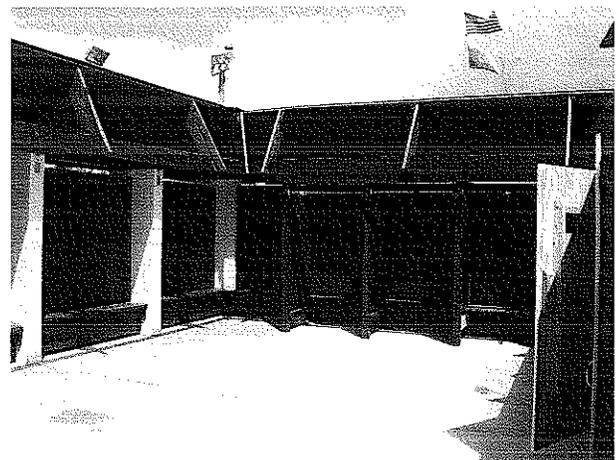


Figure 8

The building consists of:

- General Admissions Area
 - This space contains a foyer area and a service/ticket counter. See Fig. 9

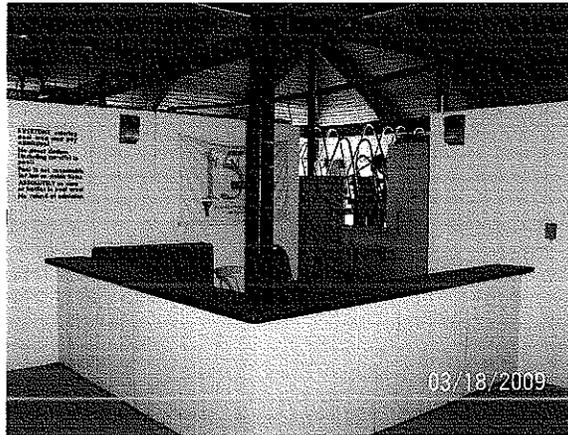


Figure 9

- Separate Men's and Women's Changing Room, Toilets, and showers
 - The Men's and Women's toilet areas are under roof with the Men's and Women's changing areas being completely exposed to the elements.
 - The Men's side consists of:
 - (6) Showers (one being a Handicapped Accessible type shower)
 - (1) Sink – non-ADA – a total of three sinks originally existed
 - (3) Toilets (one being a Handicapped Accessible type toilet)
 - (3) Urinals
 - The Women's side consists of:
 - (6) Showers (one being a Handicapped Accessible type shower)
 - (1) Sink – non-ADA – a total of three sinks originally existed. See Fig. 10
 - (3) Toilets (one being a Handicapped Accessible type toilet)



Figure 10

- Mechanical Room – A separate room contains the well pressure tank, hot water heater and electrical service. This room is also used for general storage.

D. Concession Building – See Fig. 11

- Concession Building – This building is of slab on grade cmu construction
 - This space contains open ceilings. There is one (1) Service counter.



Figure 11

E. Grounds/Amenities

A perimeter chain link fence with multiple entry points contains the complex. Outside the pool perimeter deck is grass area. The deck features minimal patron benches and picnic tables. The grass area is home to a series of light standards placed strategically outside the fence for area lighting. Currently no separate pavilions or sunshade structures exist. See Fig. 12.

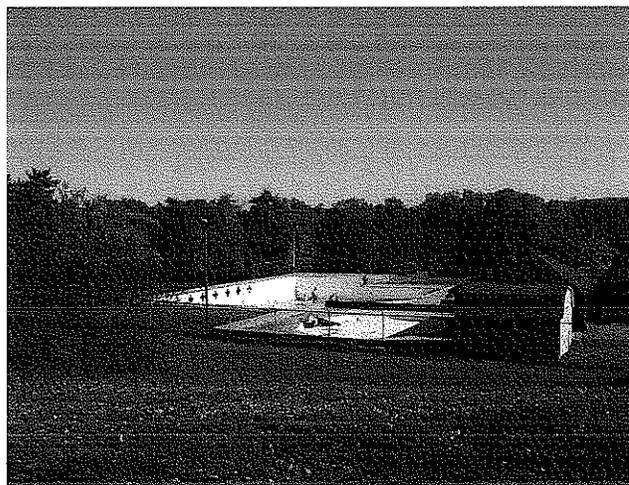


Figure 12

**DISCOVERIES UPON COMPLETION OF ASSESSMENT
AND TESTING/TEST RESULTS**

VI. Discoveries Upon Completion of Assessment and Testing / Test Results

A. Shell Structures

1. Core Sample Borings

Core Sample Borings were taken from the Main Pool shell to access the condition of the structure. Samples were not broken for a strength test, as this was deemed not necessary. **No sample was taken from the Wading Pool due to the Specialized nature of the Pool Liner.** The Results are as follows:

Main Pool

Floor: Three (3) 6-inch Borings were taken. The floor ranges between 9 inches and 10 inches thick. Samples indicate Steel Reinforced Shotcrete Type Concrete Construction. See Fig. 13.

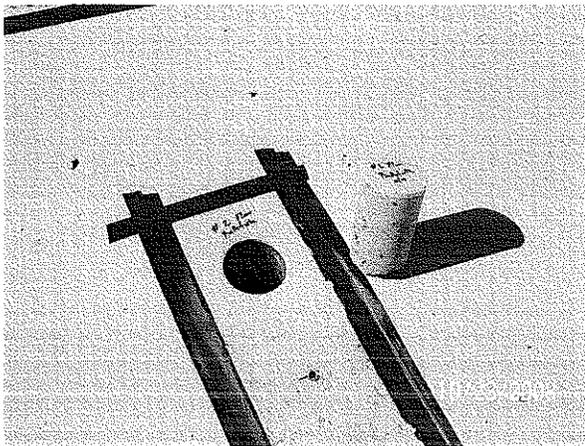


Figure 13



Figure 14

Walls: Two (2) 6-inch Borings were taken. The walls range between 8 ½ inches and 9 ¼ inches thick. Samples indicate Steel Reinforced Gunite Type Concrete Construction. See Fig. 14.

Conclusion: All Borings yielded Consistent Results. **The Main Pool Structure shows no visible signs of Internal Structural decay or excessive fatigue. The shell is believed to be of Segmented Type Construction.** (This could not be confirmed due to the presence of the liner.) Although the borings indicate that the Structure is stable and accepting of Long-term Improvements and/or Reconfiguration, the Surface of the Structure is badly spalled in areas. See Fig. 15. It is theorized this was the reason for the liner installation. **Based on the condition of the surface of the shell as viewed during sampling, it is projected a completely new liner will be required to be placed in the areas of the existing pool remaining at the time of reconfiguration.**

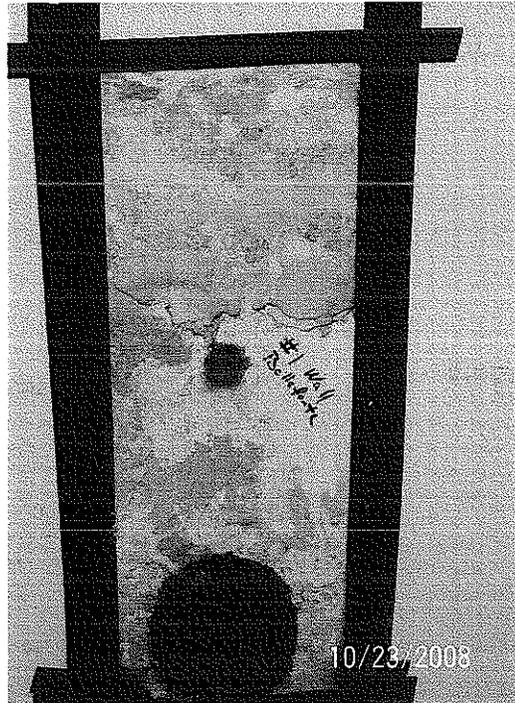


Figure 15

2. Laser Transiting of Pool Tops

Laser Transiting of Pool Tops was performed as a gauge of Structural Subsidence.

Results are as Follows:

Main Pool: Level within .5 inch around perimeter

Wading Pool: + 2' feet ½" inch to Main Pool elevation

General Conclusions: The Shell Structures indicate little to no subsidence since their original construction.

3. Piping Systems

Testing of the Recirculation piping in the form of Pressure and/or Static Water Testing was conducted to gauge the competency of the Piping Systems for the Main and Wading Pools. All testing was dependent upon existing site conditions and isolation valving.

Results are as Follows:

Main Pool

Gutter Line: Static test – Results inconclusive due to isolation valve failure

Main Drain Line: Static test – Results inconclusive due to isolation valve failure

Return Line: Pressure test – Results inconclusive due to isolation valve failure

Wading Pool

Gutter Line: Static test – Results inconclusive due to isolation valve failure

Main Drain Line: Static test – Results inconclusive due to isolation valve failure

Return Line: Pressure test – Results inconclusive due to isolation valve failure

General Conclusions: Testing inconclusive. Deficiencies in existing plug points and isolation valves did not facilitate accurate testing.

General Piping Systems, although believed to be suffering only minor losses, are incorrectly configured and in a weakened condition. The existing piping systems configurations (both pools) are not conducive to efficient flow characteristics or proper maintenance routines and do not meet current PA Dept. of Health recirculation code requirements. Additionally, the existing “bottom drain” boxes in all pools do not meet current anti-entrapment standards. (See Virginia Graeme Baker Pool & Spa Safety Act Report)

RECOMMENDATIONS

VII. Recommendations

A Reconfiguration of the Pools is required to overcome the “usability” issues currently plaguing the complex. The Main and Wading Pools, as currently constructed, are not only ADA inaccessible, but are also incompatible with the usage needs and programming requirements of the general public. The current configurations permit only general swimming or wading and do not meet the public’s “expectations” of a modern complex. The current configurations also do not allow the management of the facility to implement such programs as the Public may demand.

A Contemporary Aquatics Complex will provide access and activities for all age groups and activity levels. **The goal of this complex is to provide equal opportunities for educational, social, and recreational types of programs.** This would include, but is not limited to, activities such as youth swimming lessons, teen water sports, competitive swimming, senior fitness classes, lap swimming, splash hops, private parties etc., as well as a variety of “recreational play type” activities.

A. Main Pool

Creation of a Multi-use Pool – see Drawing D-2 hereafter

The Reconfigured Pool would consist of:

1. **Dual Zero-Entry addition to the Main Pool**

A dual zero-entry addition, with play features, to the Main pool will not only bring the pool into ADA compliance, but will also allow ease of access to the pool by any patrons with mobility issues. These “ramp” areas will provide a recreation area for any person or activity requiring a shallow depth of water as they progress from 0” to 1’6” of water depth in the center of the new addition. The dual zero-entry configuration will maximize the confined space of the complex by allowing patrons to enter the water from the complex entrance, as well as, the grass area. This dual entry configuration will also open the facility to an increase in programming opportunities.

2. **Joining Section**

A section joining the two pools will be constructed. This will serve as a general, as well as, an ADA corridor to the Main Pool. A foot-bridge across this area will aid in patron traffic flows.

3. Main Pool Body

The Main Pool main body of water is constructed to a competition length of 25 yards, with 8 competition lanes. Most of this area would currently be considered “wasted space” as it is unsuited to any particular use or activity when not hosting a competitive training session or a swim meet. The addition of play features along the west wall section of this area will allow for general recreational activities and swimming. The sectioning off of several races lanes near the deep well during general operating hours will accommodate adult and lap swimming. The Main Body of water may be additionally utilized for Aquatic Exercise, Therapy, Swimming Lessons, Safety and Rescue Training and so on.

4. Deep Well Area – Diving/Slides and Amenities

The code standards, which currently govern recreational diving, are “gray” and subject to proprietary formulation and interpretation. It is the writer’s opinion this places an undue burden of liability on the facility owner. It is therefore recommended that new dive stands not be included in the renovation plan and the deep well area of the Main Pool body be utilized for the inclusion of a slide and an Aqua Climbing Wall. “Water park” type slides and Aqua Climbing Walls generally experience far greater public enthusiasm than do “dives” and attract greater numbers of patrons to recreational facilities.

Note: The inclusion of a Slide is Recommended in a Phase I project, but may also be added in a Phase II project.

5. Play Features/Amenities

Play/Water Features are an important element for a community aquatics facility. These amenities are the “attraction” the public is unable to experience or duplicate in a backyard home pool. It is these features, which “draw” the public typically, therefore aiding in revenue production and contributing to the sustainability of the facility.

A Schedule of Proposed Features is as Follows:

Zero-Entry Areas

1. **Baby Dragon Slide** is a small fiberglass bolt down slide. The **Baby Dragon Slide** is designed for very small children up to approximately age six. This slide can be used with or without water flow.
2. **Butterfly Slide** is a medium size fiberglass bolt down slide designed for children ages three to approximately ten years old. This slide can be used with or without water flow.
3. **Pop Jets** are located on one of the zero entries. **Pop Jets** are fountain like ground spray features that children can interact with; step on one and it causes the others to shoot higher into the air, step on two & the spray will go even higher. This is something that one child or many can play in at a time. This interactive water feature works on the simple principle of cause & effect.
4. **Fun Form Spraying Flowers** (two) are placed on the deck along the wading pool wall to create a shower of water for general play for children.
5. Centered in the middle of the double zero entries are three **Rain Cap Mushroom** water features. These **Rain Caps** are designed to have a maximum water flow of 15 gpm. The three mushrooms are placed in a cluster & to be manufactured at three different heights in order to create an area where children can play in the water or stand under the rain cap to stay dry. These **Rain Caps** will be enjoyed because of the low flow rates, are suitable for all ages of children.

Main Pool Body and Deep Well Area

1. **Fun form Spraying Flowers** are placed along the deck, on the wall of the competition & general swimming area. These flowers are the same flowers as utilized in the wading pool. These flowers are to be valved separately so the staff can turn them off if there are swimming lessons, water exercise classes or competition swimming taking place at the facility. Placing these flowers in this area allows the Borough to take what would typically be a "flat" water area and transform it into a general recreation area.
2. **Lane lines & Designated Swim Areas** are provided to encourage, adult & lap swimming.

3. A **Double Flume Slide** is located at the Bathhouse side of the deep well. The placement of this slide will require that the fence is moved slightly and additional decking is added to this location. The slide has two flumes; one that is a closed flume with a longer, smoother ride and one that is a corkscrew style closed flume. This slide requires water to be supplied to both flumes.
4. An **Aqua Climb Climbing Wall** is deck mounted along the back wall of the deep well. The **Aqua Climb** is sized according to the depth of the pool & the width of the area. In this pool the climbing wall is three panels high & three panels wide. All of the panels are interchangeable by the staff. The **Aqua Climb** can be used by children and adults. This is a very popular feature for middle school and high school aged children.

6. Recirculation/Plumbing Systems – Pool Top

The existing Plumbing/Recirculation Lines are mis-configured and in a weakened condition. Additionally, they are non-adaptable to the varying flow rates recommended in a multi-use pool. **Abandonment of All Existing Pool Recirculation Lines is Recommended.**

The Recommended Method of Replacement for these piping systems of the reconfigured pool is with a **Stainless Steel Perimeter Recirculation System** (*see Typical Gutter Section hereafter*). This is the most economical solution in both the short and long term. **This system is virtually maintenance free for up to 30 years.** Only cleaning and proper winterization are required. As the surface skimming as well as filtered water return piping are contained within the Stainless Steel Perimeter System, most underground piping as currently exists is eliminated, therefore, **substantially reducing the potential for future maintenance.**

A new Bottom Drain influent system would be constructed to accommodate the new flow rates as required in the reconfiguration, as well as, to conform to current Anti-Entrapment Regulations.

7. Filtration/Sanitation System

A new Filtration System consisting of a pressure DE type system is recommended for the newly reconfigured pool. This system is more efficient in a multi-use pool than the current pressure sand system.

A U.V. System, in conjunction with a bulk Liquid Chlorine System for sanitation, as well as, a CO2 System for pH adjustment, is recommended. Sanitation systems will be controlled and dispensed by a computerized system.

All systems will be housed in the area of the existing systems.

8. Pool Interior

The interior of the existing shell area would be sandblasted and repaired as required. This may involve restructuring of the existing expansion joints and remediation to any shell cracks. Complete removal of the Vinyl Liner System will be required to fully develop this scope of work, as well as, to accommodate installation of the Stainless Steel gutter system. It is projected at the time of this writing that a new liner will be required to be installed in the existing shell areas.

9. Heater

It is **strongly recommended** a heating system be installed with the reconfigured pool. Heating the water will allow aquatic programs to be conducted, which are not suited to colder water. Heated water will also encourage general recreation and swimming activities at times previously considered "off peak." Energy costs can be regulated through the use of the heater on an as needed basis only. For example, you may choose to heat the water only during the early or late swimming season. The heating system could also be utilized during a cold snap. As these systems are in a constant state of evolution, a recommendation on the type of system believed to be the most efficient will be made at the design stage. A budget projection will be provided at the conclusion of this study.

10. Decking

Construction requirements for the reconfiguration of the pool, along with the installation parameters of the Perimeter Gutter System, will require replacement of the concrete decking.

New decking complete with trench drain system and deck safety signage would be installed. A new system of Lifeguard Stands and Ladders would be installed and bonded.

B. Wading Pool

The existing Wading Pool, although believed to be structurally sound, is inappropriately located for an efficient inclusion into a Complex Reconfiguration Plan, as this area is required for the construction of the new Zero-Entry Addition. Additionally, its dependence upon the Main Pool recirculation and sanitation systems, result in a violation of PA Dept. of Health turnover rate and sanitary codes.

Its location combined with its lack of play features/amenities and its ADA inaccessibility, as well as sanitary code non-compliance make a rehabilitation plan for this structure both impractical and uneconomical.

It is therefore Recommended the Wading Pool be Removed.

The construction of a Children's Splash Pad Area is recommended. *See Drawings D-2 hereafter*

A Splash Pad is a spray park type water spray play feature area with no standing water.

The Children's Splash Pad would be constructed adjacent the Main Pool Zero-Entry access. This location will provide caregivers, as well as pool staff, with excellent supervision capabilities.

An additional advantage of a Splash Pad is that unlike a Wading Pool, it requires no staffing, therefore lowering facility management costs.

Construction of the Children's Splash Pad is Recommended in Phase I of a Project; however, it is possible to be constructed as a Phase II Project.

A Schedule of Proposed Features is as Follows:

Splash Pad

1. Two **Tiny Toolip** ground spray water features. The **Tiny Toolip** has a spray area of approximately two feet and requires approximately 14 gpm of water each. This is a water feature that will entertain children from 6 months of age.
2. A single **Tall Toolip** ground spray water feature. The **Tall Toolip** has a spray area of approximately two feet and requires 20 gpm of water. This feature, much like its cousin the **Tiny Toolip**, is geared to entertain children of all ages.

3. **Mystical Sillier Serpent Mist Maker Head, Body & Tail.** The large **Sea Serpent** feature can be controlled by an electronic controller, or can be set to run automatically spraying mist of a regular cycle from its head, body and tail, or it can be set to a controller allowing it to be interactive with the children.
4. **Mini PopKorn Jet Ground Spray** water feature. The **Mini Popkorn Jet** is a spray feature which uses 14 gpm of water and can be regulated by valves. This spray feature is approximately 12" to 18" high. This feature will be mostly enjoyed by the younger patrons as well as adults who may just want to cool their feet.
5. **PopKorn Jet Ground Spray** water feature uses 30 gpm of water and can also have a valve to monitor the flow of the water. This Feature can be from 2 feet high to a height of approximately 4 feet.

C. Bathhouse Building

The building overall is perceived to be in good structural condition. Visual only inspections have been conducted.

General Observations are as Follows:

General Structure

- Floors slabs are in generally good structural condition.
- Walls (supports) are structurally sound.
- Roof structure is sound.
- Roof covering is relatively new and in excellent condition.

Interior

- Toilet fixtures, although ADA accessible, are recommended to be updated to 2004 ADA Guidelines.
- No separate or suitable Lifeguard or First Aid areas exist. General pathway areas are currently utilized.
- There are no segregated storage areas or family changing facilities.

The interior spaces although primarily ADA Compliant are patron unfriendly due to the small quantity of fixtures available. Most importantly, the open-air design leads to unsanitary conditions, primarily caused by birds, making janitorial type maintenance extremely difficult. Additionally, the areas, which are constructed completely in the elements (not under roof), are subject to accelerated deterioration.

The structure's open-air design, combined with the general lack in number of toilet fixtures for a redesigned complex and the lack of a family changing area, results in a structure which is currently neither public nor staff "user friendly."

Conclusion: A Rehabilitation/Reconfiguration of the Bathhouse Building is required.

Recommendations:

- Among the topics of discussion during the public participation process was the lack of and need for a private restroom, shower, locker room and changing area for patrons with special needs. Patrons with limited mobility such as seniors and disabled individuals or patrons with caregivers of the opposite sex could use the ADA accessible/Family Changing Area. Often mothers bring sons, fathers bring daughters, seniors who need an extra hand bring a spouse, and the disabled patrons often have a caregiver of the opposite sex bringing them to the facility. No private accommodations for such patrons currently exist. **This addition to the facility would meet current ADA standards as well as the need for privacy.**
- **A redesign would reuse the main building structure with the possibility of an addition(s) to the structure. The exact scope of the new layout would be determined based upon choices made by the Borough regarding the new pool complex configuration. Precise user loads would then be calculated to arrive at a final design.**
- Replace all toilet fixtures. Provide correct fixture count as per ANSI and ADA code requirements. To consist of:
 - Water closets with flush valves.
 - Provide new shower controls and assemblies.
 - Provide new lavatories.
 - Provide automatic shut-off and automatic flush valves for all fixtures.

- Replace all toilet partitions and screens with recycled HDPE plastic partitions with anti-microbial agents. Provide new tamper proof accessories and grab bars where required. Replace all benches and changing booths with anti-microbial coated products.
- Place flooring material such as non-skid, seamless epoxy throughout building

D. Concession Building

Current concession operations are managed by the Bellefonte Family YMCA. A combination of prepared and pre-packaged items are sold. Currently the concession area houses a microwave, oven/stove, hot dog cooker, popcorn machine, (2) freezers and (2) refrigerators. Menu items consist of:

- Hamburger
- Hot Dogs
- French Fries
- Nachos
- Soft Pretzels
- Chips
- Candy (assorted)
- Prepackaged ice cream
- Dairy Queen Buster Bar and Dilly Bar
- Popcorn
- Soda (assorted Pepsi products)
- Gatorade (assorted flavors)
- Bottled Water
- Hugs

If managed properly, concession sales can generate considerable revenue.

It is recommended the concession area be renovated to comply with current PA Dept. of Health regulations and to expand preparation facilities to include a variety of prepared and hot foods.

A change in Serving Window Layouts and building entry/exit points is recommended.

Addition of a portable cart for food preparation is recommended to serve both pool and park patrons.

Note: It is strongly recommended all remediations to the Bathhouse/Concession Building as outlined be performed in Phase I of a Project in order to adequately host anticipated attendance levels. However, if prevailing financial considerations do not facilitate a “complete” project in Phase I, the Bathhouse could be considered as a Phase II project pending further review.

E. Grounds/Amenities

Optional, yet **highly recommended**, amenities such as Area Lighting, are recommended in a Phase I project. The Installation of lighting combined with heating of the water, could extend operating hours and open the facility to the possibility of revenue producing activities such as night swims or private parties. Sunshades are included in a phase one project throughout the complex.

A Phase II project may make use of construction of a Picnic Pavilion for patron usage. Construction of a Sand Volleyball court is also an option. This would require the addition of an outdoor shower adjacent the court. A new small storage shed is additionally recommended for exclusive storage of competition equipment.

F. Synopsis

It is our conclusion that the Kepler Pool Complex is an asset to the Borough of Bellefonte with all of its major structural components being of sound condition and accepting of long-term improvements. The facility is due for a renovation, as many of its systems and cosmetic amenities have reached the end of their life expectancies. However, with the implementation of the preceding comprehensive rehabilitation and code compliance plan, we believe the life of the facility can be extended substantially. This is of course considering a proper care and maintenance program is continued after renovations.

The proposed renovation plans and options utilize all of the strong points that exist within the complex. To these strong points are added remediations and renovations designed to add long-term functionality and usability to the complex with minimal maintenance. **All recommendations are based upon a multi-use facility complex concept.** Play features and other amenities are included in the proposed renovation plans to maximize public participation and usage. The proposed renovations are designed to not only provide substantial mechanical and cosmetic upgrades, but also to reconfigure the complex to allow for the creation and implementation of new programs and activities and to carry the community of **Bellefonte forward into the future.**

**BUDGETARY CONSIDERATIONS /
PHASING AND OPTIONS**

VIII. Budgetary Considerations/Options

The following budgetary projections are componentized to allow them to be utilized in part or as a whole, depending upon prevailing fiscal conditions.

RECOMMENDED – RECONFIGURED COMPLEX – MULTI-USE

(see Drawing D-2 hereafter)

- **Life Expectancy of Improvements is Approximately 25-30 Years (Major Pool Systems)**

Main Pool

- Sandblast Pool, Repair Joints, Repair Shell \$ 70,000.00
- Provide Addition of Dual Zero-Entry and Connection to Main Pool \$ 415,000.00
- Installation of New Stainless Steel Perimeter Recirculation System, New Bottom Drain System, Complete Filtration System, and Associated Completed Plumbing Systems \$ 440,000.00
- Provide and Place New Decking with Drain System and Deck Features (Ladders, Lifeguard Stands, Competition Deck Sockets, etc.) \$ 101,000.00
- Provide and Place Play Features to the New Pool \$ 149,000.00
- Provide and Place New Liner System \$ 60,000.00
- Provide and Place Complete Chemical Systems and Computer Control System \$ 15,000.00

Main Pool Total \$1,250,000.00
(Includes overhead & profit)

Main Pool Options – Double Flume Slide Phase I or II Add \$ 115,000.00

General Options – Light Standards (for night time activities) Add \$ 19,696.00
Picnic Pavilion Add \$ 45,000.00
Sun Shade Structures Add \$ 34,500.00
(per shade)

The following is a list of associated maintenance costs:

3 – 5 Years:

- Interior joint replacement (re-caulking) \$ 3,000.00
- Interior re-coating (1 coat) \$ 3,500.00

Renovation/Modification of the Bathhouse and Concession Buildings

(See Drawing D-2 hereafter)

Recommended Phase I – Potential Phase II Pending Further Review

- Entry Way and Parking ADA Modifications \$ 40,000.00
- Conversion of Bathhouse from Open-Air Design to Enclosure –
Addition to Structure for Expanded Fixture Schedule \$240,000.00
- Fixture Replacements and Modifications to Existing Interior
Layouts for Men’s and Women’s Bathhouse Sides \$146,000.00
- Interior/Exterior Wall and Floor Finishes \$ 52,000.00
- Addition of New ADA Accessible Family Changing Facility \$ 30,000.00
- Modifications to Concession Area to include New Food Preparation
and General Equipment \$ 42,000.00

Total – Bathhouse \$550,000.00
(Includes overhead & profit)

Phase I or II

New Children’s Splash Pad

- See Concept Design (*Refer to Drawing D-2 hereafter*)

Splash Pad Total \$125,000 - \$175,000
(Includes overhead & profit)

(Cost variation is dependent upon Phase I verses Phase II Construction)

Please note:

A minimum 10% contingency should be added onto every project anticipated for incidentals and unforeseen circumstances. It should also be noted that the trends in construction and material pricing has been an increase of 10%-15% per year. If a project is not anticipated for several years, it is recommended that 10%-15% be added per year until the project is started to avoid budget issues. **Future design fees are not included.**

IX. In Closing

The Borough of Bellefonte, Kepler Pool, has the opportunity to renovate and enhance its existing complex to be compliant with current codes and trends and to be an important regional Aquatics Complex. The format with which this assessment has been completed is to give the Borough the opportunity to make informed decisions on what they want for their complex's future with the ability to know the budgetary impacts associated with their decisions.

It has been a pleasure working with the Borough of Bellefonte and we look forward to the completed success of your project.

Aquatic Facility Design, Inc. Staff