



SEPTEMBER 11, 2015

CHICO AREA RECREATION  
AND PARK DISTRICT  
Attn. Ross Hensley

To whom it may concern.

I met with Ross Hensley at the Shapiro Pool for observation of existing conditions and also received a report from Aquatic Commercial Consulting dated August, 2009.

Existing Conditions:

1. Two pools with single filter system and divided by a five foot bulk head.
2. Combined square feet of around 4,900 and just under 200,000 gallons.
3. Gutter to waste system barely operational.
4. Primary suction 100% from split main drain system through three rapid sand filters to less than required return lines.
5. Existing flow around 320+ GPM for 8 to 9 hour turn-over rate.
6. Existing plumbing and filters are only capable of around 350 to 380 GPM.
7. Chemical automation seems intact, but storage of liquid chlorine and acid not at all approved.
8. Conditions of existing plumbing, filters, and heater in severe need for replacement.

Other observations such as existing plaster, depth markers, no diving demarcation line, rails, incorrect deck slopes, A.D.A. requirements and slopes, and enclosure requirements need attention, repair and replacement. I also observed the bathrooms and though they appear to have the required fixtures, slopes, spacing, and A.D.A. requirements are lacking.

REMEDY

Other than basic maintenance any real repair would trigger a complete renovation of the existing facilities. At the very minimum the recommendations and budget estimates as stated in the report from Aquatic Commercial Consulting (2009) be implemented. Also required would be permitting (building and

health), and widening of the bulk-head to six feet minimum between both pools. Though diving boards and solar are not a requirement, the minimal renovation as stated in the ACC report I don't believe would be approved. Also the budget numbers of the 2009 report would be much higher at today's prices. The question is does the existing footprint supply the needs to warrant such costs? The existing conditions need such extensive work but will never be able to meet the requirements for swim meets and diving. New diving depth standards are now minimum twelve feet deep, and two meters minimum for any starter stands for competitive swimming. The existing depths are short of these standards.

In closing we have dealt with very similar conditions last year alone at the Orland and Colusa community pools. Orland's pool was very similar to the Shapiro and we completed that re-build last spring with all new deck level gutters, a surge tank, plumbing, equipment, and decks. Colusa we widened the bulk-head, put in separate systems, added surge tank, plumbing, equipment, and decking along with A.D.A. systems and slopes.

I hope this evaluation will be helpful.

Thank You

James R. Dougherty

# *Chico Area Recreation and Park District*

*Shapiro Aquatic Center*

*Evaluation and Needs Assessment  
With Budget Estimates*

*August, 2009*

*Prepared by:*

***Aquatic Commercial Consulting***

*P.O. Box 892 Saratoga, CA 95071 - Voice: 800-660-5202 - FAX 408-867-1216 - email: [aquacom@flash.net](mailto:aquacom@flash.net)*

**Introduction:**

The purpose of this document is to provide information and recommendations with budget estimates for the Chico Area Recreation Staff for the renovation for the Shapiro Swimming pool. The comments below were generated from a facility walk-through and interviews with operating staff. The budget estimates have been extrapolated to reflect actual costs through 2010. Although we were not commissioned for a complete facility report, we felt it helpful to provide a list of issues that are of concern, do not meet current California State Health and Safety Codes, Federal Pool and Spa Safety Act and National Industry Standards, among others. Some items were specifically brought to the staff's attention through a County Health Inspection Report.

The report is divided into two sections:

- I. Description and General Evaluation
- II. Recommendations with budget estimates

Abbreviations used:	CHSC	California Health & Safety Code
	FPSSA	Federal Pool and Spa Safety Act
	NISPS	National Industry and Swimming Pool Standards
	OSHA	Occupational Safety and Health Administration
	NEC	National Electrical Code
	NPC	National Plumbing Code
	UFC ART 80	Uniform Fired Code Article 80 (Hazardous Material Handling Standards)

## Part One: General Description and Evaluation

### General Description:

The original pool was a large single pool that was divided into two pools during a renovation many years ago. Although this is really two pools now with different uses, it is circulated and treated as a single pool. Current CHSC and NISPS does not allow for the separation of a single pool into two pools for many good reasons, most of which having to do with different use and organic loading.

NOTE: This report does not address the facility bath house, showers, toilet facilities, office or staff areas.

Below is a list of the general pool data and features:

### Pool Data and Features:

Pool Surface Area: Approx. 4,500 sq.ft.  
6 competitive swim lanes  
Single step entry area into each pool

Three ladders

### Pool Mechanical Systems:

Flooded suction 10 HP recirculation pump  
Cast iron strainer and valves  
Automatic chemical control

Liquid chlorine with muriatic acid pH

Shallow gutter with no surface  
water recovery  
Plaster surface  
Water-line and gutter tile  
Water power operated handicapped  
Lift.  
Non-OSHA Lifeguard chair

control  
Two drains (two small to meet current  
State and Federal Health and Safety  
Code. New Compliant drain covers  
were recently installed. (Still undersized)  
A Suction Release Vacuum System was  
Installed in 2009.  
The pool plumbing is for the most part  
of steel construction.  
Vertical steel, sand filter system

Pool and Pool Mechanical Evaluation and Comments:

1. The pool will accommodate approximately 50 people in the shallow area and 100 people in the deep area. (Based upon national averages and square footage). The facility capacities appear to be adequate to accommodate local community demand.
2. The six lanes provide an adequate competitive workout for approximately 36 swimmers at one time without considerable crowding.
3. The large deck area allows for ample competitive meet set ups, accommodating start areas, clerk of the course area and spectator viewing area.
4. The deck area and surrounding lawn areas outside the pool enclosure can accommodate competitive meets.
- ⑤. Entry into the main pool requires the use of one set of steps or three ladders, jumping or diving into the water. The pool has an eight inch cantilever-type pool gutter edge making entry and exit difficult for children and mature adults. ~~This does not meet current NISPS~~
6. There is a simple bleacher area and adequate shade area.
- ⑦. The deck and pool lighting falls well short of industry standards and current ~~CHSC and NISPS for night time operation~~
- ⑧. The amount of existing deck area is considerable, however, some or most of the deck surface is in poor condition with a number of cracks. Several concrete patch areas are evident from minor mechanical work. ~~This does not meet with current CHSC and NISPS standards.~~
- ⑨. The plaster is extensively stained and has failed in several areas with several areas having flaked away leaving rough and some sharp edges. ~~This falls below current CHSC and NISPS standards.~~
10. The water-line and gutter tile has become porous over time with years of cleaning. considerable grout is missing and overall is quite unsightly.
- ⑫. The pool fill line originates from the deck surface (originally below the diving board that has been since removed), and presents a trip hazard. ~~This does not meet current CHSC, NISPS and NPC standards and codes.~~
13. The swimming pool has no play features such as diving board, slide, or mushroom.

### General Mechanical Comments:

1. The two pools have different organic loads during swim lessons, lap swimming and public swim sessions and CHSC and NISPS call for two separate recirculation and water treatment systems. There is only one circulation system for both activity areas with equalizer lines connecting the two pools.
- ② The pool recirculation system is undersized to handle the flow per CHSC, FPSSA and NISPS for a six hour turnover.
- ③ The bottom drains are undersized to meet current CHSC, FPSSA and NISPS.
- ④ Thousands of gallons of heated, chlorinated, pH adjusted, alkalinity adjusted, calcium hardness adjusted water flows through the gutters weekly, so the pool water level is normally kept below the gutter line and the code required skimming action is for the most part non-existent.
5. The chemical control is adequate, although staff reports some issues with tracking chlorine and maintaining desired chlorine levels, requiring frequent staff attention.
- ⑥ The chlorine and acid feed pumps are of adequate size to handle the volume of the pool and the patron load. The chemical feed lines are not double contained per current UFC ART 80 and OSHA standards.
- ⑦ The chlorine and acid barrels are stored in such a way as to not meet current UFC ART 80 and OSHA standards for storing such hazardous chemicals.
- ⑧ The steel high-rate sand filters keep up with the demand by patrons, however, is somewhat undersized to handle the six hour turnover flow rate called for by CHSC and NSIPS. In addition, this type of filter requires considerable backwashing time, using many more treated water gallons to clean the filter than do state-of-the-art sand filters. In addition, the backwash discharge plumbing does not have the CHSC and NSIPS "air gap" clearance above the backwash pit.
- ⑨ The heater is of conventional gas-fired, standard efficiency (75-78%). It does not meet current LowNox air standards.

### Part Two: Recommendations and Budget Estimates

NOTE 1: The Major Renovation section recommendations are not listed with specifics, however, the budget estimates include all the items as listed above. This section can be considered the "dream list"; that is, completion of items 1 through 6 would, for the most part, construct a new facility.

NOTE 2: Below the Minimum Renovation section addresses many but not all of the code related issues. It is important to remember, however, that the county health department may not allow just these items alone to be completed, without addressing some of the other issues.

### **Major Renovation:**

1. Replace the "scum gutter" with a surge gutter to reclaim the skimmed water and provide the code required 75% portion of recirculation flow to be collected from the pool surface:

Budget Estimate: \$89,000

2. Re-plumb the pool with appropriately sized PVC pipe, installing new bottom drains of code compliant size and additional return inlets and gutter collection points.

Budget Estimate: \$37,000

3. Re-plaster the entire pool, including tile

Budget Estimate: \$82,000

4. Install a new water treatment plant including: New strainers, high efficiency pumps with variable speed drive, filters, chemical controls, and additional feeders, high efficiency heaters and automatic fill systems. This would also include a surge pit for gutter water collection, and separation of the two pools. This will require an expansion of the mechanical area.

Budget Estimate: \$ 108,000

5. Install a new deck. This includes demolition and installation of an entire new deck, leaving the fence and building in place.

Budget Estimate: \$93,000

6. Install new underwater and deck lighting to allow for code compliant night use.

Budget Estimate: \$47,000

7. Install new higher efficiency, Low Nox heater of 85% or more and or install solar heating to at least supplement, if not replace, the gas-operated unit. Solar heating would reduce spring, summer and fall heating costs to a fraction of existing costs.

New heater budget estimate: \$17,000

Addition of a solar heating system (assuming the mechanical room and bathhouse can be used for solar panels.

Solar System budget estimate: \$40,000





**Chico Area Recreation and Park District "Helping People Play"**

**Staff Report 14-8  
Agenda Item 9.1**

# STAFF REPORT

**DATE:** March 20, 2014  
**TO:** Board of Directors  
**FROM:** Jake Preston, Superintendent of Parks and Facilities  
**SUBJECT:** Shapiro Pool Mechanical System Imminent Failure and Contingency Options

## **DISCUSSION:**

Shapiro Pool currently follows a model of use that sees seasonal closures from approximately the beginning of November through the end of February. During preoperational efforts to get the facility ready to support the seasonal programming and use, ensuing inspections discovered two items that will ultimately lead to eminent mechanical system failure. Due to the nature of these items, it has radically changed the situation we now have, as well as forces decisions regarding short term and long term planning for the District.

The hydraulic flow system that circulates water through the heater and water treatment components (i.e. filter, chemicals, etc.), is a closed system operating in a vacuum that creates needed pressure for operation. The components of this system are largely steel pipes that are the main source of water delivery. These original water delivery systems have, over time, eroded by way of oxidization and compromised two separate areas of the system. The effect of this, as described above, will lead to system failure.

The areas in question are located within the mechanical room confines. Please see the attached photographs indicating the location and visual extent of the compromised areas.

Due to the delicate nature of the affected areas, there are inherent challenges in assessing the nature and expanse of the leaks, as well as formulating plans to mitigate this problem. While many options have been discussed and vetted by internal certified Aquatic Facility Operators, as well as local experts and consultants, there is no clear path to proceed. At this time, it is felt that the only options available to resolve these issues is a replacement of all affected areas of the system. The negative ripple effect of any attempt at improvement is profound and far reaching, and ultimately leads to cost prohibitive options.

**Facility Needs - Capitol Expenditures: Renovation**

Facility needs have been identified through a series of site evaluations based on two categories reaching as far back as 2000. The categories include site issues associated with ADA & Code Compliance.

Capitol Expenditures: Renovation	Estimated Cost
*Code Compliance & Liability	*\$1,450,000 to \$225,000
*2009 report plus inflation & prevailing wage	
*Does not include ADA	
*Keeps same footprint and is sum total of itemized list	
*Applicable Code compliance and Agency Oversight	

Capitol Expenditures: Renovation	Estimated Cost
*ADA	\$150,000 to \$500,000
*~ADA Complete Compliance	*~ recommend reconstruction
*2010 Survey - Transition Plan Estimates	
*Includes only items within fence Boundaries	
*Excludes: Building Structure Restrooms, showers, office Building	
* Estimated Cost varies due to variables: Prevailing Wage, Contracted work, In-house	

While the District took steps to ADA compliance beginning with the initial assessment and transition plan in 2000, we are currently reassessing compliance needs based on new laws going into effect in 2010. At this time, it is believed that true compliance can only be realized by a complete reconstruction of the site.

Code compliance and liability issues create inherent challenges due to the number of laws, and the agencies charged with oversight. This, over time, has created a moving target of facility needs. The number of items if taken alone creates even more challenges if trying to assess a priority ranking in efforts to transition into compliance. The ripple effect of tackling one item in sequence based on a priority ranking in relation to ADA and Code Compliance issued concludes that the prudent approach is to move towards reconstruction. In both cases, the factors that have the potential to drastically inflate any estimate include cost incurred from unknown existing conditions.

The discovery process taken when the two system leaks were identified included contacting a local consultant and contractor, Jim Dougherty. Mr. Dougherty's on-site assessment and recommendation took into consideration several key factors. The scope of his work has included being contracted by other private and government agencies in adjacent counties in the "Design/Build" process of pool renovation. Based on his current experience with pools this age and older, he could not recommend renovation ~~of reconstruction~~.

**Facility Needs - Capitol Expenditures: Reconstruction**

Since 1996, the District has looked at the reconstruction of this site on numerous occasions. In 1996, 2001, 2004, and 2010 separate reconstruction estimates were provided based on design standards of the time and design principles guided by how the site was proposed to be programmed and used. In summary, these cost figures range from \$2,250,000 to

\$7,000,000. If reconstruction was to be considered for this site, there would need to be a master plan process that would include identifying potential program offerings, a business plan, a feasibility study, and facility development. The bigger question becomes funding for such a proposed site improvement.

An Income Statement summary of the past three years for Shapiro Pool is provided as follows:

### Chico Area Recreation and Park District

#### Shapiro Pool - Income Statement

Items in Red represent revenue and expenditures to date for the 2013-2014 budget year

<b>Recreation &amp; Private Rentals</b>	<b>2010-2011</b>	<b>2011-2012</b>	<b>2012-2013</b>	<b>2013-2014</b>
<i>Programming (summary)</i>	\$20,270	\$23,776	\$25,049	\$13,661
<i>Rental (summary)</i>	\$970	\$900	\$825	\$1,108
<b>Net Income</b>	<b>\$21,240</b>	<b>\$24,676</b>	<b>\$25,874</b>	<b>\$14,769</b>

<b>Operating Expenditures</b>	<b>2010-2011</b>	<b>2011-2012</b>	<b>2012-2013</b>	<b>2013-2014</b>
<i>Recreation &amp; Private Rentals</i>	\$17,002	\$19,669	\$17,259	\$10,488
<i>Maintenance and Operations (summary)</i>	\$61,500	\$61,000	\$60,500	\$61,700
<b>Total Expenditures</b>	<b>\$78,502</b>	<b>\$80,669</b>	<b>\$77,759</b>	<b>\$72,188</b>

<b>Net Income (Loss)</b>	<b>-\$57,262</b>	<b>-\$55,993</b>	<b>-\$51,885</b>	<b>-\$57,419</b>
--------------------------	------------------	------------------	------------------	------------------

The operational loss recognized at Shapiro Pool to date is noted on the line item "Net Income". These net income figures represent money that would be saved if Shapiro Pool closed down.

It is important to note that the loss figure can be expanded on by categorizing fixed costs (such as full-time employment calculations). Under any scenario, if Shapiro Pool closed, fixed costs would be absorbed by the District by prioritized need and reallocated based on that evaluation.

#### Options to Consider in Moving Forward

As previously noted, the negative ripple effect of any attempt at improvement is profound and far reaching and ultimately leads to cost prohibitive options. The foundation of that statement is based on the number of identified issues, as well as the unknown issues that would be uncovered during any type of work.

One option that should be considered is the eventual closure of Shapiro Pool. If the District were to close Shapiro Pool, the District and Community would feel the impact in a profound way. Contingency planning options that must be considered in the event of closure include (1) in the short term, how to provide aquatic based programs and services with one remaining public pool facility for the Community of Chico, (2) how to plan for and fund a replacement or

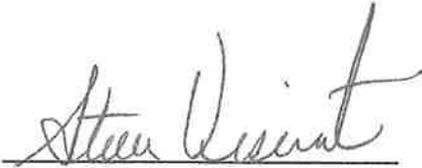
additional Aquatic Facility, and (3) how to utilize operational loss savings. Answering these questions is imperative in fulfilling CARD's mandate as identified in its Mission Statement: The Mission of the Chico Area Recreation and Park District (CARD) is to provide recreation opportunities to the greater Chico Community in a coordinated and cost effective manner.

**Recommendation:**

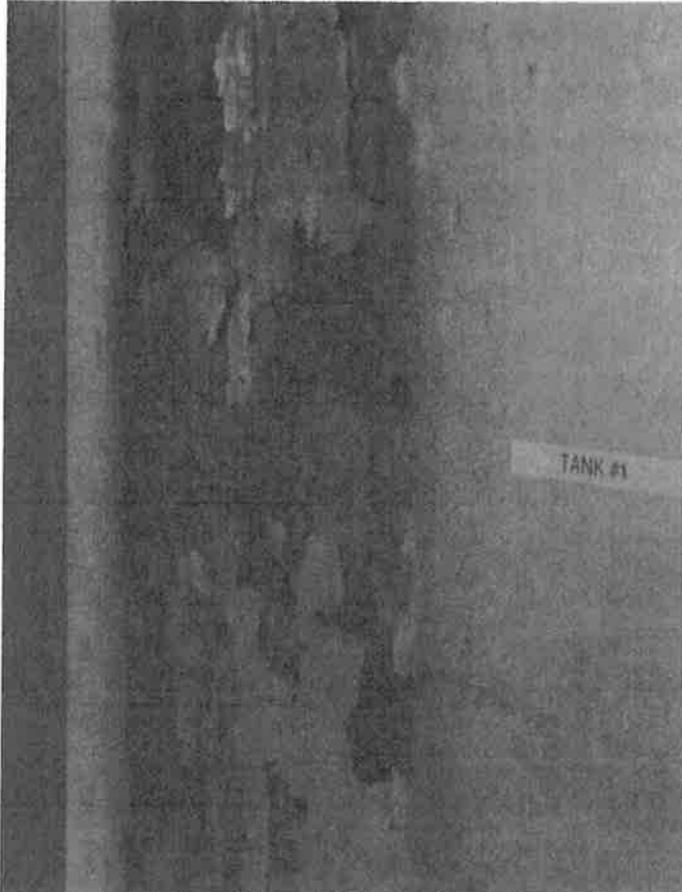
It is recommended that the Board of Directors:

- (1) Consider closure of Shapiro Pool at the end of the traditional aquatic season concluding in 2015 rather than allocating funds to repair the pool.
- (2) Provide direction to staff to begin considering contingency planning based on the three planning options referenced above.
- (3) Provide guidance to staff regarding how to proceed in preparation for an eventual catastrophic system failure.

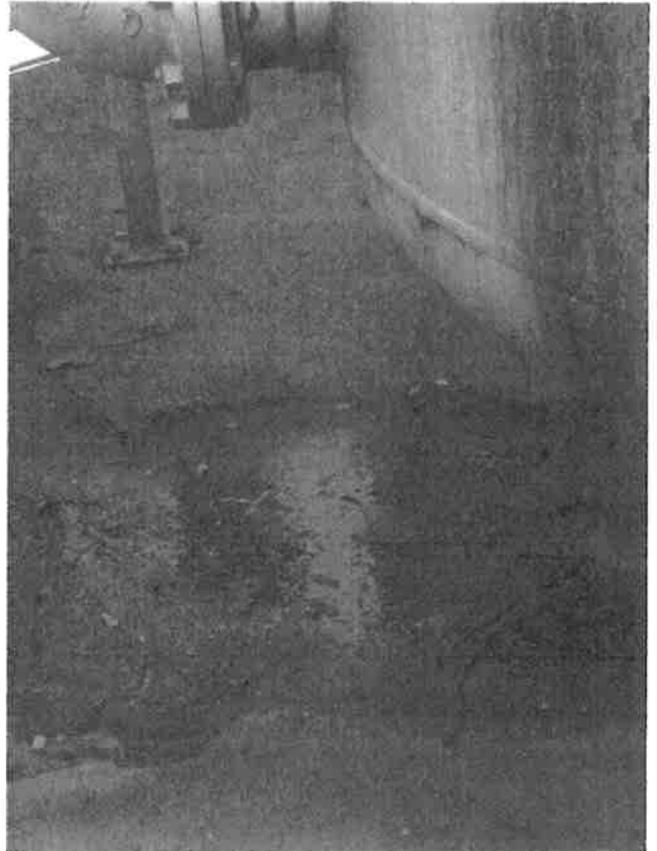
By   
Jake Preston  
Superintendent of Parks and Facilities

Approved:   
Steve Visconti  
General Manager

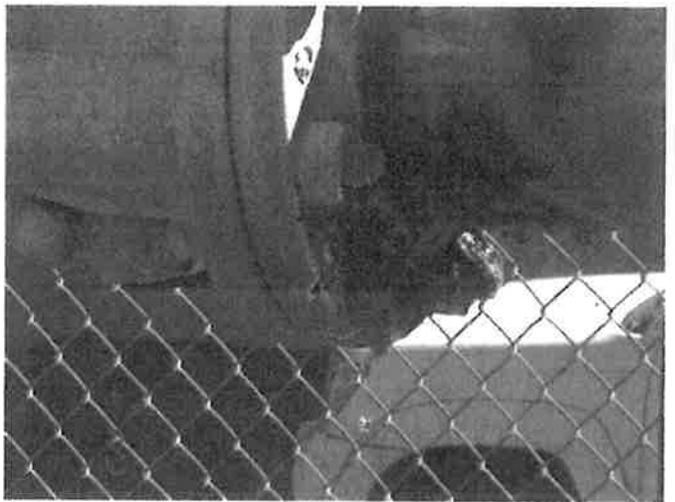
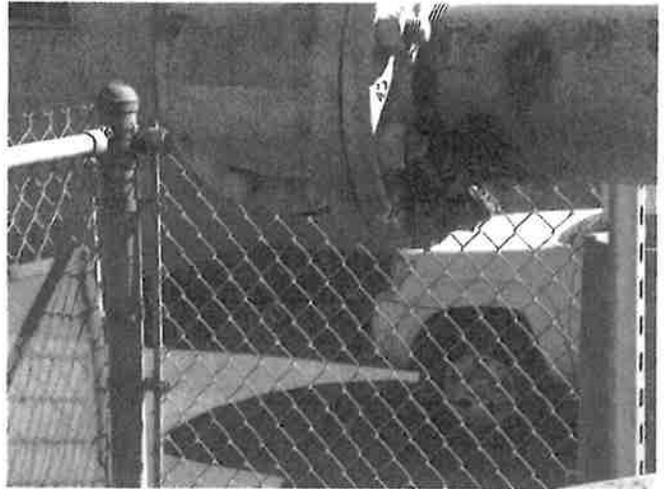
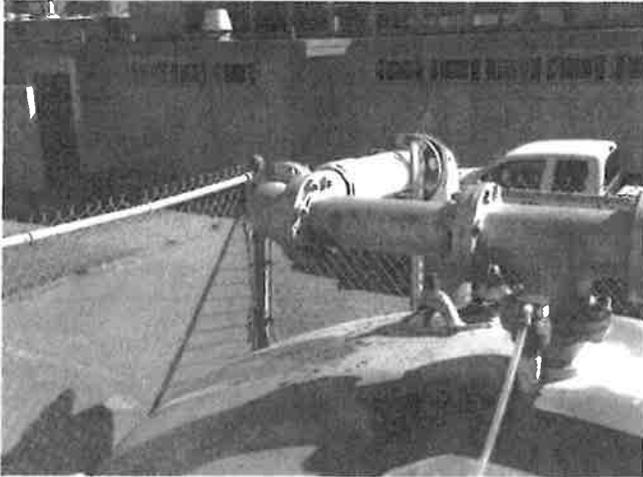
**Leak #2: From Sand and Gravel Filtration Tank #1**



**Residual Effects From Leak #2: Surface Rust and Leak on Sand and Gravel Filtration Tank # 1**

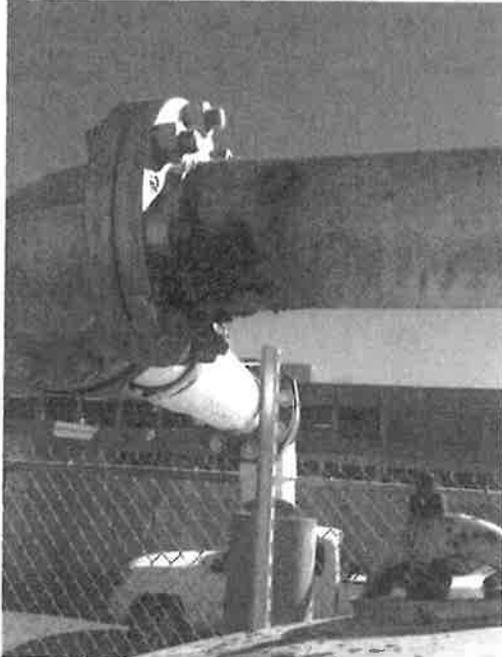


**Leak #1: From 5 Inch Pipe**  
**Above Sand and Gravel Filtration Tank # 3**



**Leak #1: From 5 Inch Pipe**

**Above Sand and Gravel Filtration Tank # 3**



**Leak #1: From 5 Inch Pipe**

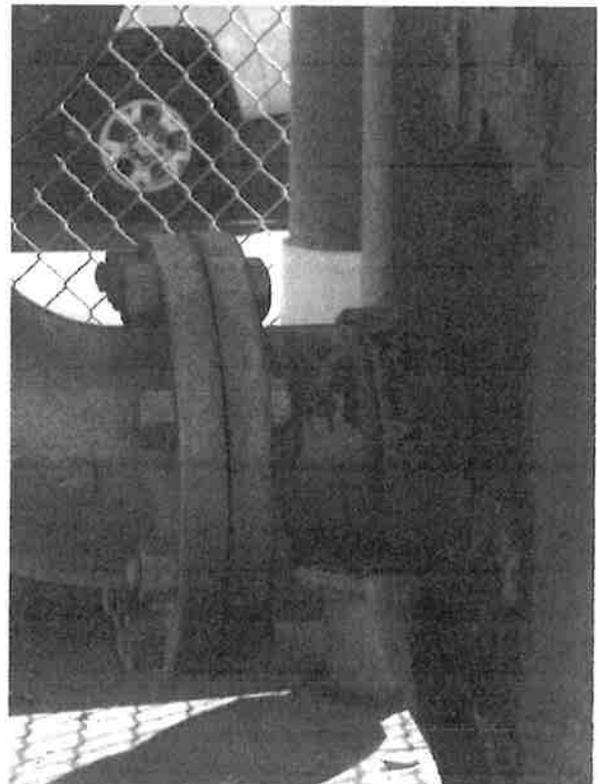
**Above Sand and Gravel Filtration Tank # 3**



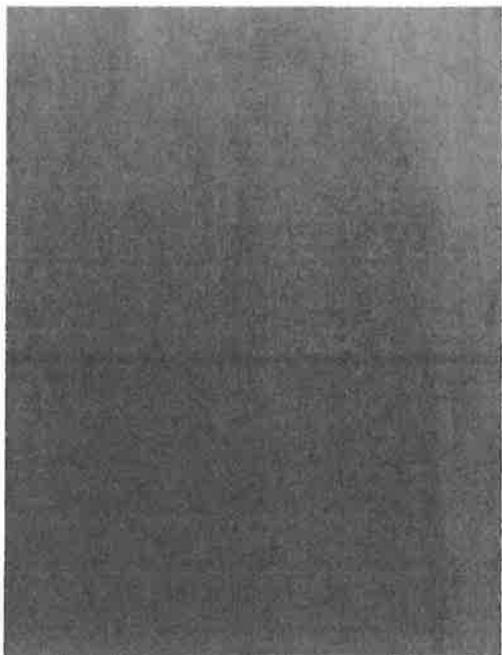
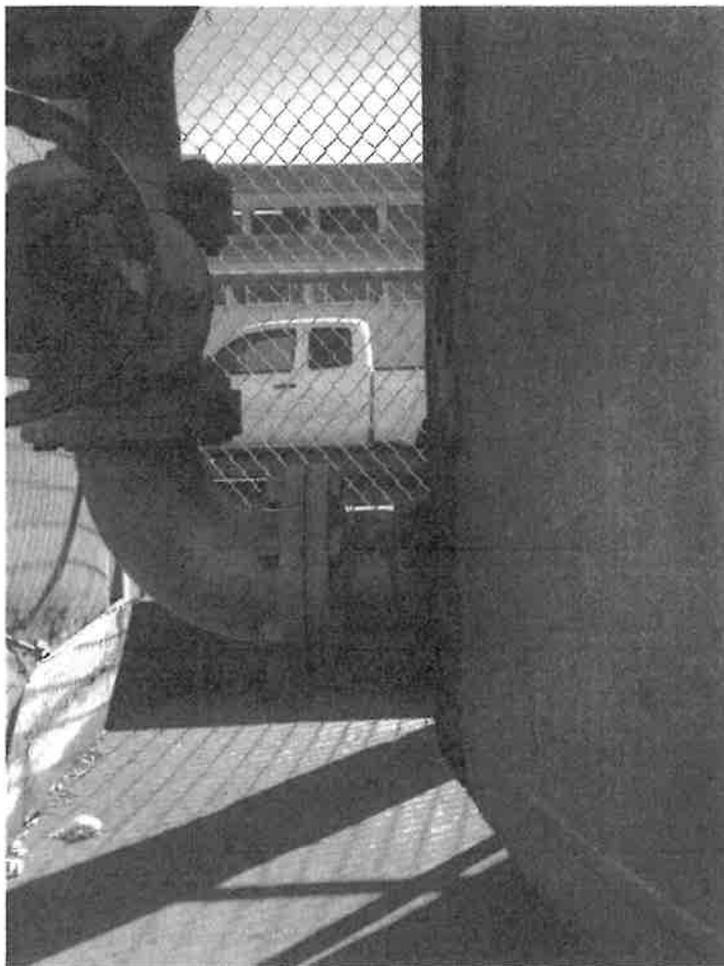
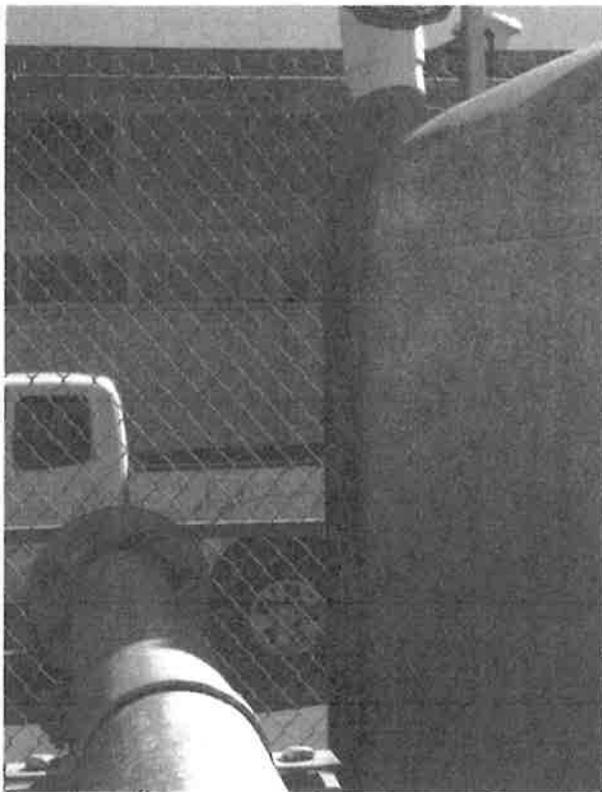
**Residual Effects From Leak #1: Surface Rust on Sand and Gravel Filtration Tank # 3 From 5 inch Pipe Leak Above**



**Residual Effects From Leak #1: Surface Rust on Sand and Gravel Filtration Tank # 3 From 5 inch Pipe Leak Above**



**Residual Effects From Leak #1: Surface Rust on Sand and Gravel Filtration Tank # 3 From 5 inch Pipe Leak #1**





## CHICO AREA RECREATION AND PARK DISTRICT

545 Vallombrosa Avenue, Chico, California 95926  
(530) 895-4711 Fax (530) 895-4721

DATE: March 5, 2014

TO: Jake Preston; Robert Hinderer; Steve Visconti

FROM: Ross Hensley

SUBJECT: Averages of the total maintenance and operating costs of Shapiro Pool.

---

<u>Service &amp; Supply</u>	<u>Costs</u>
Pool Supplies	\$11,000
Structures & Grounds	\$7,500
Household Supplies	\$3,000
Communication	\$816
Medical First Aid	\$150
Contract Services	\$1,020
Advanced Sound & Electric Alarm	
Waste Management	
<u>Utilities</u>	
Electricity	\$11,000
Gas	\$10,000
Sewer	\$1,000
Water	
	<u>Totals</u>
	\$ 45,486

In Season- 8 months

Backwash once a month (450 gpm x 3 filter tanks x 5 minutes per tank = 7,200 gallons).

Regular water loss that enter gutters (1gpm x 60 minutes x 24 hours = 1,440 gallons per day).

Off Season- 4 months

Backwash every other month (7,200 gallons x 2 = 14,400 gallons).

Regular water loss is minimal due to rain and less evaporation.

**Labor**

In Season – 8 months

<b>Average</b>	<b>Wages</b>	<b>Weekly</b>	<b>Monthly</b>	<b>8 Months</b>
Labor III	\$8.00	10 hours labor	\$320	\$2,560
Labor IV	\$9.50	20 hours labor	\$760	\$6,080
Utilities	\$19.00	10 hours labor	\$760	\$6,080
			<b>Total</b>	<b>\$14,720</b>

Off Season – 4 months

<b>Average</b>	<b>Wages</b>	<b>Weekly</b>	<b>Monthly</b>	<b>4 Months</b>
Labor III	\$8.00	2.5 hours labor	\$80	\$320
Labor IV	\$9.50	2.5 hours labor	\$95	\$380
Utilities	\$19.00	2.5 hours labor	\$190	\$760
			<b>Total</b>	<b>\$1,460</b>

**Yearly Labor Total**                      **\$16,180**

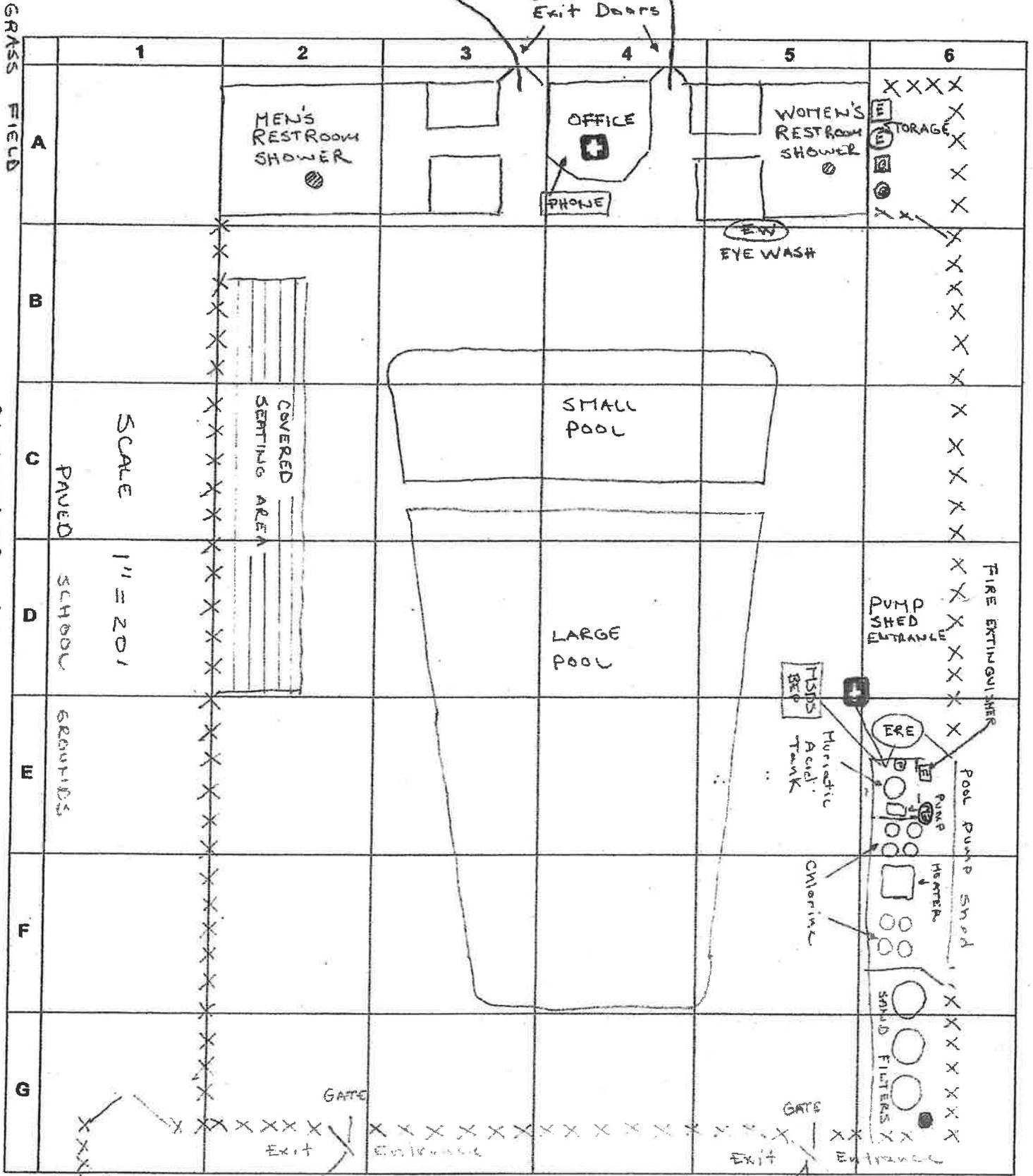
**Total Yearly Operating Expenditures**    **\$61,666**

GRASS FIELD

paved School Grounds

### FACILITY MAP

Exit Doors



CHICO JUNIOR HIGH

Date: \_\_\_\_\_

Chico Jr. High School

Fire hydrant at corner of \_\_\_\_\_ and \_\_\_\_\_

PARKING

XXX  
X

## Aquatics Facilities

By Ross Hensley

## Shapiro Pool

- Constructed in 1958.
- Chico Junior High Physical Education Department.
- CSU, Chico Kinesiology Department.
- Aqua Jets Swim Team.
- Card Offers: Swim Lessons, Lap Swim, Family Open Swim, and Private Rentals.

## Pleasant Valley Pool

- Constructed in the 1960's.
- Bidwell Junior High School Physical Education Department.
- Pleasant Valley High School Swim Team.
- Aqua Jets Swim Team.
- Card Offers: Swim Lessons, Lap Swim, Family Open Swim, and Private Rentals.

## Pool Systems

- Shapiro Pool.
  - 250,000 Gallons.
  - Sand & Gravel Filtration.
  - Scum Gutter.
- Pleasant Valley Pool.
  - 140,000 Gallons.
  - Diatomaceous Earth Filtration.
  - Canfilever Gutters.

## Pool Systems

- Chemtrol Automated Water Treatment Systems
- Peristaltic Feeders.
  - Acid (pH Control).
  - Chlorine (ORP Control).



## Sanitation

- Chlorine Levels (1.0 – 5.0 ppm).
- Total Chlorine & Free Available Chlorine Will Be Recorded At Each Test Time (Handout).
- Holiday Pools Test (Handout).
- Park Supervisor In Charge Of Pools Will Be Consulted Before Any Super Chlorination Occurs.

## Water Balance

- CARD Pools Will Be Maintained At A pH Range Of 7.3 – 7.8.
- Total Alkalinity Range Of 125-150.
- Chemical Balance Index Reading Between -5 & +5 Is Balanced Water.

## Pool Water Testing

- Essential In Maintaining Proper Water Balance.
- Water Testing Frequency, Once In The Morning & Once In The Afternoon.



### Daily Maintenance Check List

1. Clean & Restock Restrooms.
2. Disinfect Shower Room Floors & Benches.
3. Check For Vandalism & Additional Problems.
4. Hose Off Decks.
5. Inspect Pool Equipment (pumps, lines, valves, etc.).
6. Examine Pool (water clarity, gutters, debris, etc.).
7. Perform Pool Test (chlorine, Acid, and PH levels).
8. Skim Pool Surface.
9. Inspect Lifeguard Stands, Bleachers, and ADA Chairlifts.
10. Visually Inspect Landscape For Any Problems.

### Weekly Maintenance Check List

1. Check Pool For Algae.
2. Disinfect Office Counters & Floor.
3. Clean Pump Room.
4. Inspect Water Heater.
5. Examine Pool, Building & Outside Lights.
6. Check Signage.
7. Wash Bleachers.
8. Check Railings, Ladders & Grates.
9. Take Inventory Of Supplies & Chemicals.
10. Leaf Sweep & Vacuum Pool.

### Monthly Maintenance Check List

1. Check Fire Extinguishers.
2. Check Facility Structure (paint, concrete, etc.).
3. Check Fencing, Gates & Locks.
4. Perform A Backwash.

## Pool Procedures

- Vacuuming.
  - CARD Uses A Manually Operated Portable Vacuum That Filters Water Through A Cartridge Filter And Returns Filtered Water To The Pool.



## Pool Procedures

- Backwashing.
  - When Pool Filters Get Dirty Enough That Water Passing Through Slows The Filtering System, The Filters Need To Be Backwashed. This Is The Reversing Of The Flow Of Water Through The Filter In Order To Clean It.

## Health Department

- Considerations:
  - Clear Water (to see the bottom drain).
  - Presence Of Circulation (that at least approaches code required flow rate).
  - Chlorine And pH Values.
  - Secure and Self Closing Gates.
  - Adequate Safety Equipment and Signs.
  - Gauge or Flow Meter Failures.
  - Lack of Adequate Records.
  - Loose Handrails.

## Virginia Graeme Baker

- Drain grates are designed to eliminate both physical and hair entrapment.
- Drains must now meet the Federal VGB by being listed with ASME/ANSI A112.19.8a standard.

## Shapiro/PV Pool

- Both Shapiro & Pleasant Valley Pool bottom gates have been retrofitted.
- Both pools have automation which helps reduce costs.
- Shapiro pool has a safety vacuum release system (SVRS), which introduces air into the suction port of the pump causing suction on the bottom drain to stop.
- Both pools have ADA lift chairs.

## Pleasant Valley Pool

### Butte County Health Code Numbers

- 54 – No Backflow prevention device observed on all hose bibs (fixed).
- 33, 34 – Rescuer loose stair handrails & ladder handrails (fixed).

## Shapiro Pool

### Butte County Health Code Numbers

- 17 – Pool shell is worn.
- Some black algae (due to needing a new pool shell).

## Capital Projects

- Plaster Shapiro Pool Shell.
- Bowen Pools and Renovations
  - Total Estimate: \$29,570
- Budget Line Item: Pool Supplies \$22,000

## Safety & Staying Current

- Current aquatic facility operator certified
- Training videos (backwash procedures) and safety meetings (hazardous material)
- Response Plan
  - Current MSDS binder up to date and Butte County Health Code standards

## The Systems Approach

- The efficient and effective operation of the pools depend on operator decisions. The condition of the filters, pipes, and circulation pump. As well as the long-term effects of water balance.
- Aquatic facility operators (AFO's) have the daunting task of understanding and operating each swimming pool system.

