COLUMBIA PARK MASTER PLAN:

Turlock,
California

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TABLE OF CONTENTS

A. SCOPE

Aquatic Design Group visited Columbia Park located in Turlock, California on January 28, 2020 to perform an assessment of the swimming pool and sprayground, as well as their systems and equipment as part of a master plan project for the park. The swimming pool and sprayground were not open for use during Aquatic Design Group's site visit. Columbia Park's aquatics facility consists of one swimming pool and one sprayground with the following dimensions:

- 33-yard x 25-meter L-shaped swimming pool
- 2,912 square foot themed sprayground (approximate measurement)

A sprayground is defined as a pool with no standing water in the splash zone. Staff representing the City of Turlock maintenance department and O'Dell Engineering met with Aquatic Design Group during the site visit.

The following report is a summary of the existing conditions, code violations, deficiencies and proposed improvements for rehabilitation of the Columbia swimming pool, sprayground, and their respective equipment. The scope of this report includes the swimming pool, swimming pool deck areas, sprayground, sprayground deck areas, and swimming pool mechanical equipment. It excludes the structural integrity of the swimming pool shell and appurtenances as well as handicap accessibility in path of travel to the swimming pool area, sprayground area, and within the adjacent buildings. It also excludes mechanical equipment for the sprayground as access to that equipment was not provided during Aquatic Design Group's site visit. It is not improbable that a facility of this age could have underlying issues that have gone unnoticed by staff and are not apparent to a visual inspection; therefore, this report attempts to provide an accurate and realistic assessment of existing conditions. Our observations are based upon the conditions we could observe and information provided by staff. This report should be read in full with no excerpts to be fully representative of the findings and has been prepared exclusively for the City of Turlock. No liability is accepted for any use of or reliance on the report by third parties.

This report identifies any violations of codes that were found. Some of these violations may currently be operating on a grandfathered exemption. It is important to note that though some grandfatherable exemptions by the County Environmental Health Services Department may allow the swimming pool to legally operate in non-compliance of current Title 24 state and county standards, the liability of any health and safety risks to the public may still remain. We therefore recommend that these issues should be reviewed on an individual basis to determine the disposition and possible remedies for each violation.

Certain violations of the State of California Administrative Code may be due to deterioration and material failures in which the code requires that these violations be rectified immediately or the facility is to be shut down. Other violations may be due to modifications to the code over the years. Providing that the violation is not deemed an immediate health or safety risk, the Environmental Health Department may allow the violation to exist as a "grandfatherable condition". These grandfathered conditions are

normally allowed to exist until such time as when the facility is having work done in which the scope of the work will allow for the violation to be remedied. If such work were going to take place, then the Environmental Health Department would demand that the violations be brought into compliance. California Code requires that the County Environmental Health Department review any renovation plans or documents for approval. It is possible that the county health department may require certain, or even all, grandfathered conditions be brought into compliance as part of a renovation project.

In addition to the code violations being of concern to the Environmental Health Department, they may be of concern to the city's Risk Manager as well. If a facility is in violation of the current State Code, the liability exposure alone may warrant the remedy of the violation. Given the subjective nature of the interpretation of the code, violations that may be deemed grandfathered at one point may not be allowed at another time or by a different inspector.

Not included in this report, but an important area to be reviewed, is the requirement for the entire facility to meet the American Disabilities Act (ADA). This includes access to the facility and restrooms, in addition to the swimming pool, sprayground, and decks. To comply, every swimming pool must have a primary means of handicap access into the water. This can include a wheelchair ramp or a handicap lift to allow access to the water. The scope of this report is for the swimming pool, sprayground, and respective decks only. Therefore, access from the street or parking areas to the Columbia swimming pool and sprayground and the adjacent buildings are not covered therein.

The estimated opinion of probable costs identified in the itemized sections of "F" thru "G" of this report includes materials and labor for the repair, but does not include architectural or engineering design costs or complete project soft costs that may occur. Structural analysis of the swimming pool structures, swimming pool mechanical spaces, or other spaces will require destructive testing which is not included in the scope of this report.

Aerial View of Columbia Park Swimming Pool and Sprayground

B. CODES

For the purpose of this report the facility's compliance with current codes will be examined. The current codes that apply are:

- 2018 Uniform Building code
- 2019 California Building Code
- 2019 California Electric Code – Article 680
- 2018 Uniform Fire Code – Article 80
- 2019 California Fire Code – Article 80
- Title 24 of the California Administrative Code (2016)
- Title 22 of the California Health and Safety Code (2016)
- Federal Virginia Graeme Baker Pool and Spa Safety Act
- California AB1020
- Americans with Disabilities Act

Article 680 of the CEC is the electric code that pertains to swimming pools. Article 80 of the UFC & CFC is the article that pertains to hazardous material storage and use. Title 24 of the CA Administrative Code, Chapter 31B provides the regulations for the design and operation of public swimming pools. Title 22 of the CA Health and Safety Code provides health and safety regulations for swimming pools. The Uniform Building Code and California Building Code all have portions that pertain to public swimming pools. The Virginia Graeme Baker Pool and Spa Safety Act and its California counterpart AB1020 regulate suction entrapment concerns.

Columbia Swimming Pool

C. POOL AND SPRAYGROUND DATA

The Columbia swimming pool was built in 1957 and has undergone minor renovations and facility updates since the 1990s. Staff report that the sprayground was added to the park approximately ten years ago. Minor renovation projects and facility updates for the swimming pool since the 1990s include:

Year	Scope of Work
1990	Repairs to deep end of swimming pool
1994	New sand filters
1999	Pump and drain work
1999	Swimming pool re-plaster
2000	New chemical controller
2000	Roof installed over pump room
2009	Main drains replaced for VGB compliance
2011	Main drain redo as a result of recall
2012	Aquatic lifts purchased
2013	Replacement of one circulation pump
2017	Diving board removed

List Provided by O'Dell Engineering

One handdrawn as-built drawing for the swimming pool was provided to Aquatic Design Group. No as-built drawings for the sprayground were provided to Aquatic Design Group. Satellite imaging was used to help approximate swimming pool and sprayground measurements.

Swimming Pool:

- 100-feet long x 83-feet wide (per satellite image measurements and drawing provided by O'Dell Engineering)
- Perimeter: 366 linear feet (per satellite image measurements and drawing provided by O'Dell Engineering)
- Surface Area: 6,220 square feet (per satellite image measurements and drawing provided by O'Dell Engineering)
- Volume: 200,524 gallons (by calculation using satellite image measurements, drawing provided by O'Dell Engineering and deck depth markers observed during site visit)
- Depths range from 1'-0" to 9'-0" (per deck depth markers observed during site visit)
- Plaster and tile finish
- Surface skimmer system with nine (9) skimmers and equalizer fittings
- Wall inlets to distribute filtered and chlorinated pool water
- Three (3) accessible lifts as a means of ingress and egress
- Four (4) ladders with grabrails as a means of ingress and egress
- Two main drains (18" x 18") to draw water from the pool bottom for recirculation

- Design Turnover Rate: 6-Hours (Based on estimated pool volume and 2016 California Building Code requirement for turnover of 6 hours or less)
- Design Flow Rate: 557 Gallons Per Minute (Based on estimated pool volume and 2016 California Building Code requirement for turnover of 6 hours or less)
- Actual Turnover Rate: Unknown (No flow meter present)
- Actual Flow Rate: Unknown (No flow meter present)

The pool deck is a natural gray concrete with a medium broom finish and does not have a dedicated in-deck drainage system. The pool deck appears to drain to perimeter landscaping.

Sprayground:

- 52-feet long x 56-feet wide (per satellite image measurements)
- Surface Area: 2,912 square feet (per satellite image measurements)

The sprayground wet deck is a blue color concrete with a medium broom finish and slopes to two (2) storm drains. The deck that surrounds the sprayground wet deck is a natural color concrete with a medium broom finish and slopes to area drains.

Columbia Park Sprayground

Mechanical and Chemical Systems:

Swimming Pool

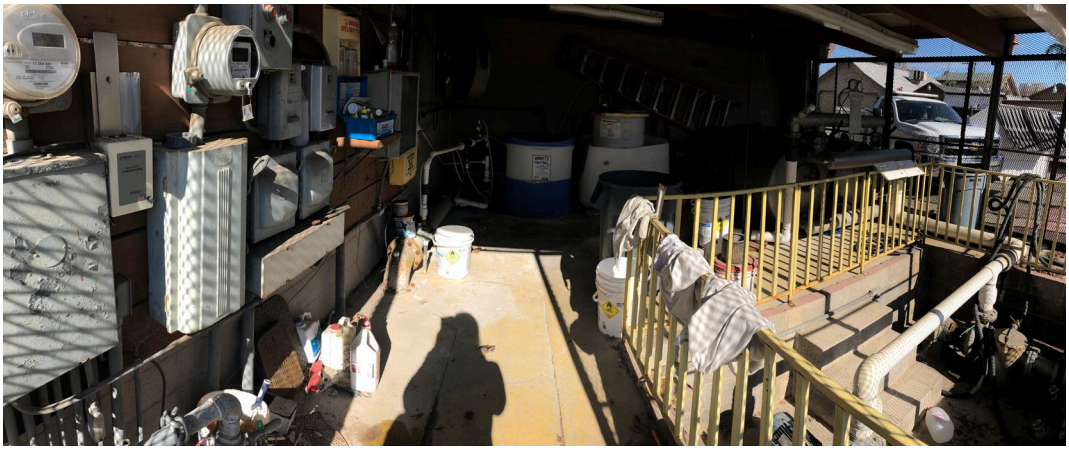
- Hydrokleen stainless steel filter tanks (x2)
- Filter flow rate capacity: Unknown (No flow meter present)
- Flooded-suction pump and motor (x2) (make, model, and horsepower unknown)
- Chemtrol chemical controller
- Sanitation: Tablet Chlorine, Calcium Hypochlorite, with Pulsar IV erosion feed system
- pH Control: Muriatic Acid tank and automated feed system
    - 100 gallon capacity muriatic acid tank (approximation)
    - LMI chemical metering pump

The swimming pool is only in operation during the summer months and the water is not heated by any means other than natural solar energy.

Sprayground

- Water flow capacity: Approximately 219 gallons per minute (by calculation using available feature product information)

The sprayground is a flow through system connected to municipal potable water that runs through water features for recreational play and drains to waste. Because the sprayground utilizes a flow through system it functions with limited mechanical equipment (feature valves) and no chemical equipment. The feature valves for the sprayground were not made available to Aquatic Design Group during the site visit as staff did not have access.



Swimming Pool Mechanical Enclosure

D. PROGRAMMING

Aquatic Design Group interviewed Karen Packwood with the City of Turlock to determine programming needs for the Columbia swimming pool and sprayground. The following programs were identified for service to the Turlock community:

- Learn-to-Swim
- Recreation Swim
- Day Camp Swim and Sprayground Play

Karen Packwood communicated that the programmable season (June-August) at Columbia swimming pool and sprayground has been getting shorter due to local school academic calendars and availability of staff. As a result of the trend for a shorter season, staff indicated no new or additional programming is desired for the Columbia swimming pool and sprayground. Additionally, staff confirmed that the current facility size accommodates existing programs well but also stated that an updated pool smaller in size would accommodate existing programs well.

Entrance to Columbia Swimming Pool

E. OPERATIONAL ISSUES AND EXISTING CONDITIONS

Aquatic Design Group met with City of Turlock maintenance staff to determine the current means of operation at the facility and to target issues and desired changes to the operations of the Columbia swimming pool and sprayground. Staff are interested in identifying options to update systems to keep the facility in operation. Staff report that they are unaware of any pool or sprayground water leaks. Staff identified the following operation issues of the facility:

- Poor condition of swimming pool plaster
- Poor condition of pool deck (noted by health department)
- Poor condition of swimming pool tile (noted by health department)
- Aging mechanical and chemical systems and related piping
- Difficulty finding parts for and servicing the filter tanks

The Columbia swimming pool and sprayground as they stand today are testament to the diligence of staff who truly care about what they do. Without their hard work, overtime, and care, the facility would be in much worse condition. The same level of care combined with strategic fiscal and project planning will ensure the facility can continue to provide crucial services to the community.

The following table summarizes the existing conditions of the swimming pool system components found and identified by Aquatic Design Group.

Swimming Pool

ITEM	CONDITION
Circulation Pumps/Motors	Poor
Filter System	Poor
Chemical Controller	Poor
Plumbing Valves	Poor
Chlorine Pump	Poor
Chlorine Storage	Poor
pH Feed	Poor
pH Storage	Poor

Despite excellent care and maintenance throughout the years, the mechanical and chemical systems are well beyond their useful lifecycles. Approximate ages of system components will be addressed in sections 2.1 and 2.2. The sprayground feature components were not made available during the site visit and therefore existing conditions could not be reported.

F. CODE VIOLATIONS

Aquatic Design Group has determined that the following eighteen items do not comply with current code standards. A description of the condition is given along with a reference to the code that applies. An opinion of probable cost is given for each individual item. These itemized estimates do not include general condition and other costs that are typically added to any project for a complete construction project cost. In the proforma section of this report the itemized costs are totaled to give an example of a complete project cost.

ITEM	DESCRIPTION
1.1	Swimming pool lacks floor inlets
1.2	Swimming pool deck cracking and lacks in-deck drainage
1.3	Swimming pool plaster finish
1.4	Swimming pool lacks code-compliant “no diving” graphic deck markers
1.5	Swimming pool lacks flow meter
1.6	Swimming pool deck lacks proper number of hose bibbs
1.7	Swimming pool area perimeter fencing
1.8	Swimming pool waterline tile failing
1.9	Swimming pool mechanical enclosure lacks proper signage
1.10	Chemical storage areas lack proper signage
1.11	Swimming pool lacks proper safety signage
1.12	Swimming pool mechanical enclosure lacks emergency eyewash shower station
1.13	Swimming pool lacks depth marker indicative of 4’-6” depth
1.14	Swimming pool projections
1.15	Lack of code-compliant restroom fixture count for swimming pool
1.16	Disabled swimming pool access
1.17	Ladder clearance distance from swimming pool wall
1.18	Check main drains for VGBA and AB1020 compliance

1.1 Swimming Pool Lacks Floor Inlets:

The swimming pool has wall inlets and equalizer fittings to distribute filtered and chlorinated water to the pool. California Code requires all swimming pools that are 40-feet wide or wider use floor inlets spaced evenly throughout the pool to assure effective distribution of chlorine for proper disinfection and water quality. The swimming pool is approximately 83-feet wide. The existing wall inlets are in violation of Title 24, Chapter 31B:

3137B.2.4 Floor inlets. Pools that are greater than 40 feet (12,192 mm) in width or 3,000 square feet (278.7 mm²) in surface area shall have floor-mounted return inlets. The number of floor inlets shall be in compliance with Section 3137B.2. All floor inlet fittings shall be located to provide uniform circulation and shall be installed so as to be flush with the surface of the pool bottom.

To install floor inlets in the swimming pool the pool would have to be drained and trenches cut in the pool floor to install new under pool piping. Then floor inlets would be installed and the pool floor concrete replaced. In order to do the trenchwork the pool plaster would have to be removed and replaced. The pool would have to be refilled with water and chemically balanced. The following estimate represents trenchwork, inlets, and pool floor concrete. It is not reflective of pool plaster removal and replacement or costs associated with draining and refilling the pool with water, which are shown in section 1.3 of this report.

(Estimated Cost $77,750.00)

1.2 Swimming Pool Deck Cracking and Lacks In-Deck Drainage:

The swimming pool deck is cracked in numerous places and heaving. Uneven deck surfaces create a safety hazard as someone can easily catch a toe and trip. Additionally, the deck does not have any dedicated in-deck drainage. The deck appears to slope towards perimeter landscape as a means of drainage. A lack of adequate drainage can create standing water, which can pose a safety hazard for both slip and fall injury as well as pathogen growth. Staff report that the health department mentions the failing deck during annual inspections. The deck is in violation of Title 24, Chapter 31B:

3114B.1. General. A minimum continuous and unobstructed 4-foot wide slip resistant, cleanable, nonabrasive deck area of concrete or like material shall be provided flush with the top of the pool coping extending completely around the pool,

3114B.3. Deck slope. The pool's deck surface shall have a slope of no less than 1 percent but no more than 2 percent away from the pool to a deck drainage system and shall be constructed and finished to prevent standing water.

The existing deck is a medium broom concrete finish and the new deck shall be a medium broom concrete finish with new deck drains and ADA compliant slopes of no less than 1 percent and no greater than 2 percent. Required deck depth markers and "no diving" markers indicated in section 1.4 should be added during deck replacement. The following cost estimate includes demo of the existing deck, new medium broom finish concrete decks, new deck anchors, new depth and safety markers, new deck drains, and a new in-deck drainage system. If a connection for an in-deck drainage system cannot be easily made to a nearby storm drain sufficient to handle the capacity of incidental swimming pool and rain water the cost will increase.

(Estimated Cost $458,100.00)

Swimming Pool Deck Has Visible Cracks and No In-Deck Drainage

1.3 Swimming Pool Plaster Finish:

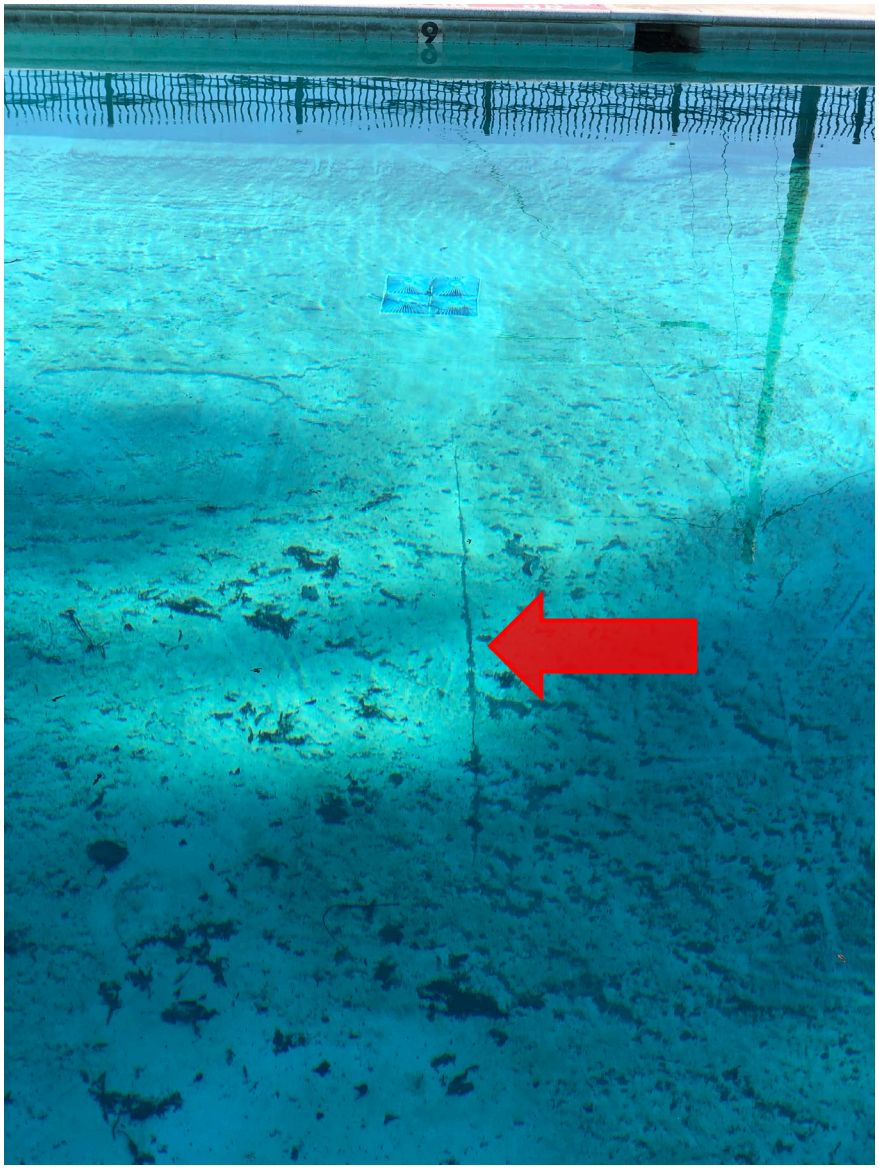
The surface of the swimming pool is showing signs of age. Staff report the surface was last replaced in 1999. The National Plasterers Association states that swimming pool plaster should be expected to last between 12-15 years under normal conditions. In several locations the swimming pool surface has delaminated, spalled, or otherwise separated. This results in unsafe conditions on the surface where sharp edges exist which could result in feet, hands, or other skin being cut or torn when in contact with the surface. The current porous plaster finishes could harbor pathogen growth, creating a further health and safety concern. Lastly, the state of the current plaster may create a condition where water is closer to the underlying structure of the swimming pool shell and could result in further oxidation and deterioration of the steel rebar which can increase the risk of leaks and structural failure of the pool shell. The plaster finish on the swimming pool is in violation of Title 24, Chapter 31B:

3108B.2 Finish. The finished pool shell shall be lined with a smooth waterproof interior finish that will withstand repeated brushing, scrubbing, and cleaning procedures. The interior pool finish shall completely line the pool to the tile lines, coping, or cantilevered deck.

3108B.4 Projections and Recessed Areas. The surfaces of the pool shall not have any projections or recessed areas except for handholds, recessed treads, steps, ladders, stairs, pool inlets and outlets, skimmers, and perimeter overflow systems.

The pool finish should be replaced. The industry standard is to use a quartz-based plaster and tile to finish the pool. The following estimate includes removal of all existing previous pool finish to bare concrete and the installation of a new plaster and tile finish. This estimate also assumes the underlying bare concrete is in good condition and does not need replacing.

(Estimated Cost $354,500.00)



Linear Crack in Plaster Finish

1.4 Swimming Pool Lacks Code-Compliant "No Diving" Graphic Deck Markers

The swimming pool has "No Diving" markers on the deck but is missing code-compliant "No Diving" graphic markers. The code-compliant "No Diving" graphic markers should be next to depth markers in all areas where the water depth is 6-feet or less. The lack of proper "No Diving" graphic markers is in violation of Title 24, Chapter 31B:

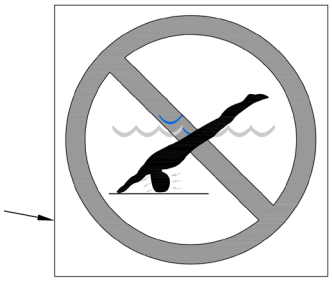
3110B.5 No diving markers. For pool water depths 6 feet (1830 mm) or less no diving markers with the universal symbol of no diving, which is a red circle with a slash through it superimposed over the image of a diver, shall be installed on the deck directly adjacent to the depth markers required by Section 3110B.4.1. No diving markers shall comply with Section 3110B.4.4 (2-3).

Not a code violation but something to note is that safety markers painted directly on the pool deck are a maintenance item that needs to be refreshed every few years. The industry standard for safety markers is 1' x 1' tile laid in the deck. Tile markers are durable, slip-resistant, and resistant to weathering.

Proper "No Diving" tile graphic markers can be installed by bushing down concrete and laying down code-compliant "No Diving" tile graphic markers. If the pool deck is to be completely replaced, these deck safety markers are included in the cost estimate in section 1.2 along with all other required safety markers constructed of 1' x 1' tile laid in the deck. The following estimate is for a retrofitted install of "No Diving" tile graphic markers.

(Estimated Cost $3,300.00)

"No Diving" Marker on Pool Deck



Sample Design of "No Diving" Tile Graphic Marker

1.5 Swimming Pool Lacks Flow Meter:

The swimming pool is missing a flow meter on its circulation system. The missing flow meter is in violation of Title 24, Chapter 31B:

3125B.3. Flow meter. A flow meter shall be provided on each recirculation system accurate to within 10 percent of flow and installed according to the manufacturer's written instructions with increments in the range of normal flow.

A flow meter should be purchased and installed. The following estimate is for a new flow meter and is listed as a range to reflect a cost variance for chosen material.

(Estimated Cost- $200.00 - $800.00)

1.6 Swimming Pool Deck Lacks Proper Number of Hose Bibbs:

The swimming pool facility lacks the code minimum number of hose bibbs. The lack of sufficient hose bibbs is in violation of Title 24, Chapter 31B:

3118B Hose Bibbs. …Hose bibbs shall be provided so that all portions of the pool deck area may be reached with a 75 foot length of hose attached to the hose bibb.

New hose bibbs should be installed to meet code and be evenly distributed around the swimming pool perimeter. The following estimate is for new water lines and hose bibbs. Should a potable water connection not be close by or the existing connection need to be upsized or otherwise altered to accommodate multiple hose bibbs, the cost will increase. The estimate assumes any costs associated with removing and replacing the deck for pipe access are covered in section 1.2.

(Estimated Cost $9,500.00)

1.7 Swimming Pool Area Perimeter Fencing:

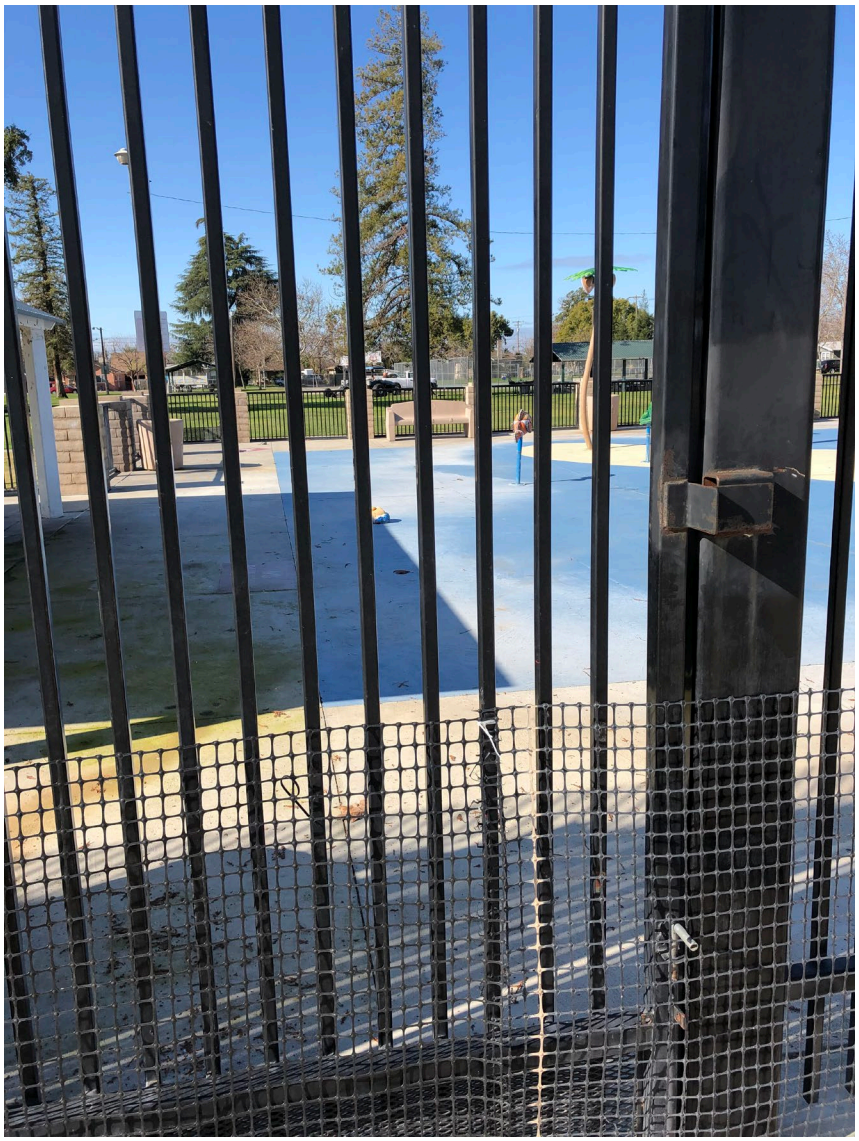
The perimeter fence for the facility is a tubular steel fence that staff report was last replaced in 2005. The current gates for the fence do not have self-closing and self-latching devices and open towards the swimming pool instead of away from the swimming pool. The gates are therefore in violation of Title 24, Chapter, 31B:

3119B.2. Gates. Gates and doors opening into the pool enclosure also shall meet the following specifications:

Gates and doors shall be equipped with self-closing and self-latching devices. The self-latching device shall keep the gate or door securely closed. Gates and doors shall open outwardly away from the pool except where otherwise prohibited by law.

The lack of self-closing and self-latching devices and the opening direction of the gates poses a safety risk. The gates should be updated to open away from the swimming pool and be fitted with self-closing and self-latching devices. The following estimate is for three (3) new gates to meet Title 24 enclosure and gate requirements.

(Estimated Cost $45,000.00)



Gate on Swimming Pool Perimeter Fencing

1.8 Swimming Pool Waterline Tile Failing:

Waterline tile on the swimming pool is cracked, chipped, and missing in numerous places. The sharp edges pose a potential safety hazard. Staff report the health department mentions the failing tile during annual inspections and expresses that the swimming pool could be forced to close as a result of the failing tile. The broken waterline tile is in violation of Title 22, 116043:

116043 Every public swimming pool, including swimming pool structure, appurtenances, operation, source of water supply, amount and quality of

water recirculated and in the pool, method of water purification, lifesaving apparatus, measures to insure safety of bathers, and measures to insure personal cleanliness of bathers shall be such that the public swimming pool is at all times sanitary, healthful, and safe.

Furthermore, the waterline tile is heavily stained by both water and organic materials. Even with a diligent cleaning the waterline tile would look unsanitary. All waterline tile is beyond its useful lifecycle and should be replaced. The tile work would best be completed during installation of a new pool surface (see section 1.3). As such, the estimate for tile work is included in section 1.3.

Chipped / Missing Swimming Pool Waterline Tile

1.9 Swimming Pool Mechanical Enclosure Lacks Proper Signage:

The mechanical enclosure houses calcium hypochlorite and muriatic acid. Calcium hypochlorite is classified as a class 3 oxidizer and a reactive substance. It is also classified as both a health hazard and a physical hazard and has the ability to support a fire. There is no placard sign on the door to the mechanical enclosure warning of the presence of calcium hypochlorite. Muriatic acid is classified as a class 2 corrosive and a health hazard. There is no placard sign on the door to the mechanical enclosure warning of the presence of muriatic acid. The lack of signage is in violation of Title 24, Part 9:

5003.5 Hazard identification signs. Unless otherwise exempted by the fire code official, visible hazard identification signs as specified in NFPA 704 for the specific material contained shall be placed on stationary containers and above-ground tanks and at entrances to locations where hazardous materials are stored, dispensed, used or handled in quantities requiring a permit and at specific entrances and locations designated by the fire code official.

The required signage should be purchased and installed. The following estimate is for signage.

(Estimated Cost $1,000.00)

Swimming Pool Mechanical Enclosure

1.10 Chemical Storage Areas Lack Proper Signage:

The chemical storage areas house calcium hypochlorite (briquettes) and muriatic acid (jugs). As noted in section 1.9, both chemicals are hazardous and require signage to communicate the hazards that these chemicals pose. There are no placard signs on the doors to the chemical storage areas warning of the presence of calcium hypochlorite and muriatic acid. The lack of signage is in violation of Title 24, Part 9:

5003.5 Hazard identification signs. Unless otherwise exempted by the fire code official, visible hazard identification signs as specified in NFPA 704 for the specific material contained shall be placed on stationary containers and above-ground tanks and at entrances to locations where hazardous materials are stored, dispensed, used or handled in quantities requiring a permit and at specific entrances and locations designated by the fire code official.

The required signage should be purchased and installed. In addition to signage, double containment is required for muriatic acid and recommended for calcium hypochlorite tablets. Aquatic Design Group could not verify the existence of double containment in the chemical storage areas as access was not provided during the site visit. Double containment for muriatic acid was verified in the mechanical enclosure. Furthermore, cohabitation of acid and chlorine is dangerous and not recommended. The two chemicals can mix and create mustard gas, which is a highly toxic gas that can cause injury and death. Separation of chemicals themselves and separation of chemicals from mechanical equipment will be covered in sections 2.1 and 2.2 in further detail. The following estimate is for signage.

(Estimated Cost $1,000.00)

Chemical Storage Areas on Pool Deck

1.11 Swimming Pool Lacks Proper Safety Signage:

During Aquatic Design Group's site visit no code-required safety signage was visible at the facility other than a pool user capacity sign. It is possible safety signage is put out at the beginning of every season and removed for the off-season. The required signage is listed in Title 24, Chapter 31B (3120B.1 – 11) and includes:

- Pool User Capacity Sign
- No Diving Sign
- No Lifeguard Sign
- Artificial Respiration and Cardiopulmonary Resuscitation Sign
- Emergency Sign (stating name and address of facility)
- No Use After Dark Sign
- Keep Closed Sign
- Diarrhea Sign

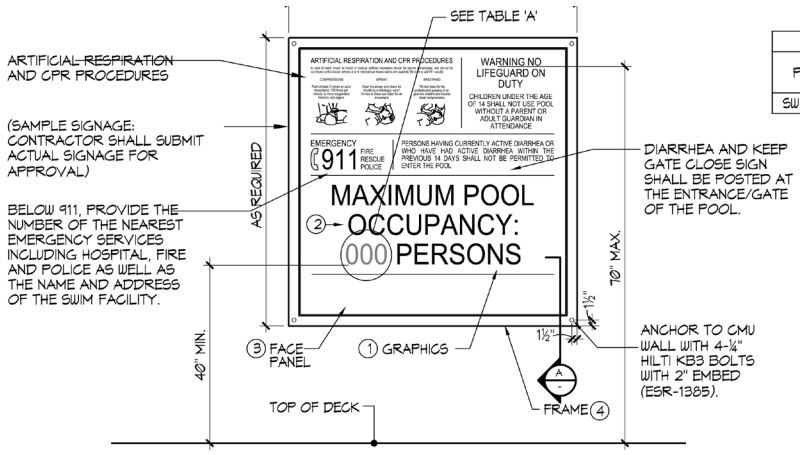
All signs shall comply with 3120B.1:

All signs shall have clearly legible letters or numbers not less than 4 inches high, unless otherwise required in this section (3120B), affixed to a wall, pole, gate or similar permanent structure in a location visible to all pool users.

All signage should be purchased and installed if the facility does not already

possess the required signage. Signs can be individualized or combined depending on the City's preference and determination for most effective delivery method for communication. For example, the required sign for diarrhea can be a stand-alone sign or incorporated into a sign that covers many sign requirements. The following estimate is for signage.

(Estimated Cost- $2,000.00 - $5,000.00)



Design Example of Combined Signage

1.12 Swimming Pool Mechanical Enclosure Lacks Emergency Eyewash Shower Station:

The mechanical enclosure, which houses muriatic acid and calcium hypochlorite, lacks an emergency eyewash shower station. An emergency eye wash is present, however it is a portable unit with finite water. OSHA standards require an emergency eyewash shower station for facilities and employers whose staff come into contact with hazardous chemicals on a regular basis or during a foreseeable accident. Such stations are to be located via a clear path within 10 seconds of the area (typically considered within a maximum of 55-feet). Should it not be possible to install a station inside the enclosure one can be installed directly outside the enclosure. The chemical storage areas also need appropriate access to an emergency eyewash shower station. The chemical storage areas may have a portable eyewash unit but Aquatic Design Group could not verify as access was not provided during the site visit. As stated before though, any eyewash unit the chemical storage areas likely have is not sufficient to satisfy OSHA requirements and provide an appropriate level of safety to staff who handle hazardous chemicals. The following estimate is for an emergency eyewash shower station plumbed to a potable water source.

(Estimated Cost $4,000.00)

Emergency Eye Wash in Mechanical Enclosure

Sample of An Emergency Eyewash Shower Station

1.13 Swimming Pool Lacks Depth Marker Indicative of 4'-6" Depth:

The swimming pool has a tile line on the pool floor to indicate a depth of 4'-6" but lacks a waterline tile to indicate such a depth. The missing waterline tile is in violation of Title 24, Chapter 31B:
3110B.4.1. Location. The water depth shall be clearly marked at the following locations:

5. At the break in the bottom slope between the shallow and deep portions of the pool

3110B.4.2. Position. Where required by Section 3110B.4.1, depth markers shall be located in the following locations:

For pools with skimmer systems the depth markers shall be high at the waterline which typically will result in the depth markers being submerged approximately 50 percent.

Waterline tile on both sides of the swimming pool at the 4'-6" depth should be installed. An estimated cost for this item is included in section 1.3.

1.14 Swimming Pool Projections:

The swimming pool has a dividing wall within the confines of the pool separating the 1'-0" depth area from the rest of the pool (depths that range from 3'-0" to 9'-0"). The purpose of this wall is to create a wading pool for young swimmers. The top surface of the wall is very narrow and poses a risk for physical injury as patrons could easily fall into shallow water while walking across the top of the wall. The wall is considered a projection and is in violation of Title 24, Chapter 31B:

3108B.4. Projections and recessed areas. The pool shell shall not have projections or recessed areas except for pool inlets and outlets as specified in Section 3137B.

Exception: This section shall not apply to handholds, recessed steps, ladders, stairs, handrails, skimmers or perimeter overflow systems.

In addition to the above violation of code and risk for injury, the projection can be considered a perimeter end of pool and when qualified as such it must be a minimum of 4-feet wide. The projection is in violation of Title 24, Chapter 31B:

3114B.1. General. A minimum continuous and unobstructed 4-foot wide slip resistant, cleanable, nonabrasive deck area of concrete or like material shall be provided flush with the top of the pool coping extending completely around the pool.

The City of Turlock must decide whether the amenity that the wall provides (a wading pool) is a desired component of the facility. If it is desired, a separate wading pool would need to be constructed with its own mechanical and chemical equipment in a major renovation project. In addition, a separate pool would require at least 6 feet of deck between bodies of water per section 3114B.2 of Title 24, Chapter 31B:

Where multiple pools and/or spas are built adjacent to each other, the deck width separating them shall be a minimum of 6 feet.

If a wading pool is not desired, the wall could be removed and the floors resloped to be code-compliant. Removal of the wall and pool floor resloping would best be done during a pool surface and deck replacement project.

The swimming pool has an additional projection in violation of Title 24, Chapter 31B Section 3108B.4. There is a projection running the length of the south pool wall in the 3'-0" to 4'-0" depth range. The projection poses a risk for injury, particularly as patrons enter and exit the swimming pool in that area.

If the deck and pool surface are replaced it is highly unlikely the Health Department will allow the swimming pool to operate with projections that are direct violations of code. These projections are likely being allowed as grandfathered exemptions and the risk of injury remains despite the exemptions. Further clarification could be provided by speaking directly with the health inspector. After review of this draft by the City of Turlock, Aquatic Design Group can update this section of the report with the City's preferred means of addressing this violation complete with a cost estimate.

Wall Within Swimming Pool

Projection on South Wall of Swimming Pool

1.15 Lack of Code-Compliant Restroom Fixture Count for Swimming Pool:

The swimming pool has the following restroom fixtures for men:

- One (1) Toilet
- Two (2) Urinals
- One (1) Lavatory
- Four (4) Showers

The swimming pool has the following restroom fixtures for women:

- Three (3) Toilets
- One (1) Lavatory
- Four (4) Showers

The swimming pool has two (2) drinking fountains that are ADA compliant.

Title 24, Chapter 31B of the California Building Code dictates a fixture count based on the following criteria from Section 3116B:

1. One bather for every 15 square feet of pool water surface area.
2. One toilet and one urinal for every 75 men.
3. One toilet for every 50 women.
4. One lavatory for every 80 bathers (either sex).
5. One shower for every 50 bathers (either sex).

Based on the criteria from Section 3116B the swimming pool should have the following fixture count:

Total Water Surface Area:		6,220					
Total Bather Load*		415					
Bathers, Men		207					
Bathers, Women		207					
Men's Toilets	**Men's Urinals**	**Men's Lavs**	**Men's Showers**	**Women's Toilets**	**Women's Lavs**	**Women's Showers**	**Drinking Fountains**
3	**3**	**3**	**4**	**4**	**3**	**4**	**2**

The swimming pool is lacking the following number of restroom fixtures:

- Three (3) Toilets
- One (1) Urinal
- Four (4) Lavatories

Staff report the restroom facilities were renovated in 2005. They are showing signs of age. In addition to age, the restrooms are not fully enclosed. No roofs exist to provide patrons with both privacy protection and protection from the elements. A renovation is recommended to achieve proper restroom fixture counts, improve patron privacy, and bring new life to an aging part of the facility. If additional bathers from the sprayground utilize the restrooms at the swimming pool a higher load is placed on the fixtures. The sprayground has a system which discharges water to waste rather than recirculates water. Due to this fact the sprayground does not have to follow California Building Code for fixture counts or follow Health Department regulations. It is advised however, to be able to absorb the load on restrooms appropriately as a service to users. Using California Building Code requirements as a guide, an approximately 2,912 square foot sprayground would add 194 bathers. 194 bathers would dictate the following fixtures:

- One (1) toilet for men
- One (1) urinal for men
- One (1) lavatory for men
- Two (2) showers for men
- Two (2) toilets for women
- One (1) lavatory for women
- Two (2) showers for women

- One (1) drinking fountain

The City of Turlock may weigh the decision to increase the fixture count beyond the required number for the swimming pool. Any restroom fixtures serving to satisfy code requirements for the swimming pool must be within 300 feet of the swimming pool.

Other restroom facilities are located in the park which can accommodate sprayground users, they are just not located in as close proximity as the pool restrooms are to the sprayground. After review of this draft by the City of Turlock, Aquatic Design Group can update this section of the report with the City's preferred means of addressing this violation complete with a cost estimate.

Men's Lavatory

1.16 Disabled Swimming Pool Access:

The swimming pool has three battery-operated ADA lifts, which more than satisfies the code required number of lifts. Although a lift is installed in the 1-foot deep area of the swimming pool, due to the pool depth in that area it is in violation of CBC Section 1141A:

6. *Be positioned so that, if the pool has water of different depths, it will place the operator into water that is at least 3 feet deep.*

7. *Be capable of lowering the operator at least 18 inches below the surface of the water.*

The pool would need to be modified in a renovation project to provide accessibility to that area. If the wall did not exist there would already be accessibility to that area by way of the two other ADA lifts that are attached to the pool deck. Removing the dividing wall in the swimming pool and resloping the pool floors would be the best solution to eliminate the need for a third ADA lift. As noted in section 1.14, a renovation of this kind would best be done during a pool surface and deck replacement project. Also noted in section 1.14, the Health Department would likely request the wall be removed during a pool surface and deck replacement project. Further clarification could be provided by speaking directly with the health inspector. After review of this draft by the City of Turlock, Aquatic Design Group can update this section of the report with the City's preferred means of addressing this violation complete with a cost estimate.

ADA Lift in 1-Foot Deep Area of Swimming Pool

1.17 Ladder Clearance Distance From Swimming Pool Wall:

Ladders in the swimming pool have unsafe clearance distances from the ladders themselves to the pool walls. The clearance distances are in violation of Title 24, Chapter 31B:

311B.2. Ladders. Ladders shall be corrosion resistant and shall be equipped with slip resistant tread surfaces. Ladders shall be rigidly installed and shall provide a clearance of not less than 3 inches or more than 5 inches between any part of the ladder and the pool wall.

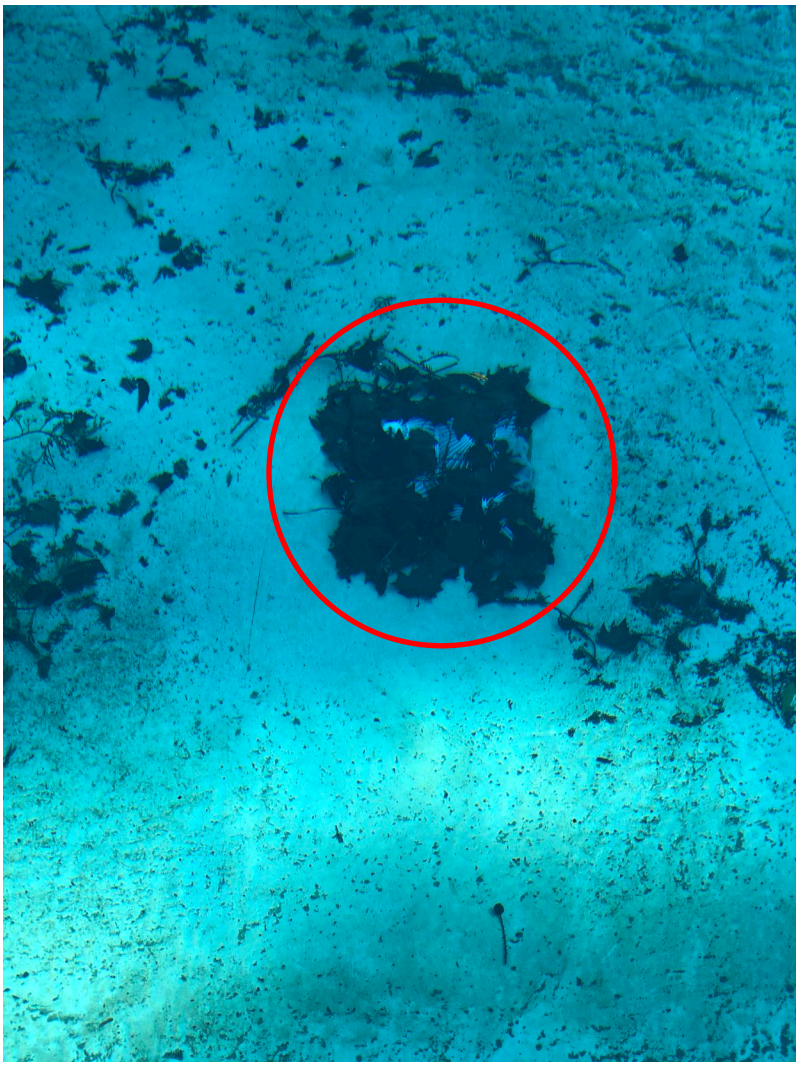
At least one of the ladders has a clearance distance of less than 3 inches at the rounded bottom portion of the ladder. All ladders have steps with clearance distances greater than 5 inches. Code-compliant ladders should be installed. If the pool surface was renovated, recessed steps could be constructed. Modifications to the deck would be required to properly install new ladders. Ladder installation would best be done during a deck replacement project. The following estimate is for replacement ladders that comply with code.

(Estimated Cost- $4,400.00)

Ladder with More than 12 Inches of Clearance From Swimming Pool Wall

1.18 Check Main Drains for VGBA and AB1020 Compliance

No as-built drawings for under pool piping were provided. Staff report that main drain grates were replaced in 2009 and then recalled in 2011. Staff also report that main drains are currently out of compliance. It is unclear whether this is related to drain cover expiration, incorrect drain cover equipment, or under pool piping being out of compliance. Based on the age of the swimming pool and the information provided about minor renovations it is likely that main drain interior sump dimensions are not in compliance. Further investigation would be required to identify issues and possible resolutions.



Main Drain for Swimming Pool

G. ADDITIONAL SUGGESTED IMPROVEMENTS

The following five items are suggested improvements for maintenance and operations at the Columbia swimming pool and sprayground. An estimate of probable costs is given for each individual item, where applicable. These itemized estimates do not include general condition costs that are typically added to any construction project. In the proforma section of this report the itemized costs are totaled.

ITEM	DESCRIPTION
2.1	Replace all swimming pool mechanical equipment
2.2	Replace and relocate swimming pool chemical equipment
2.3	Resurface sprayground wet deck
2.4	Repaint sprayground features
2.5	Swimming pool steel piping rusting and corroding

2.1 Replace All Swimming Pool Mechanical Equipment:

Section "E" of the report notes that all of the mechanical equipment for the swimming pool is in poor condition. The newest system component as reported by staff is a circulation pump and motor, replaced in 2013. Since there are two pumps and motors the age of the other pump and motor is unknown. The table below shows system components, condition, and approximate age based on information provided by staff.

ITEM	CONDITION	AGE
Circulation Pumps/Motors	Poor	7 - ? Years [1]
Filter System	Poor	26 Years
Chemical Controller	Poor	18 - 20 Years [2]
Plumbing Valves	Poor	Unknown

1. The swimming pool has two pumps and motors. The age of one of the pumps and motors is unknown.
2. Staff report 18 years of age. List provided by O'Dell Engineering reports 20 years of age.

One circulation pump and motor was replaced in 2013. Without gallons per minute information for the specific pumps and motors as well as piping plans it is difficult to assess whether the circulation system is keeping up with demand or meeting code compliant standards for turnover rate. Staff report no water quality issues. Even with limited information the circulation pumps and motors are well beyond their useful lifecycles, as are the pump strainers and circulation piping and piping components. An overhaul of the system is recommended. The following estimate is for new circulation system equipment and is listed as a range because of unknown information about pool piping.

(Estimated Cost- $30,000.00 - $80,000.00)

One of Two Swimming Pool Pumps, Motors, and Strainers

The sand filters were replaced in 1994. They are stainless steel Hydrokleen filters. Gallons per minute and filter surface area are unknown to Aquatic Design Group. Swimming pool filter tanks usually last about 20 years. The Hydrokleen filters are well beyond their lifecycle and staff report an inability to find replacement parts. As a result, staff fabricate their own parts for repair of the existing filter tanks. A new filter tank system and related piping is recommended. The following estimate is for a new high rate sand corrosion resistant filter tank system.

(Estimated Cost- $120,000.00)

Swimming Pool Filter Tank System

The chemical controller was replaced in 2000. Staff report that it functions well but acknowledge it has no modern capabilities such as data logging, safety features, and remote monitoring. Installing a modern chemical controller as part of a complete mechanical room renovation is recommended. The following estimate is for a new chemical controller.

(Estimated Cost- $25,000.00)

Swimming Pool Chemical Controller

Valves and piping in the mechanical room have unknown ages but are well beyond their useful lifecycle. During an overhaul of major systems all piping and valves can be replaced and estimated costs for valves and piping have been included within costs for major systems.

2.2 Replace and Relocate Swimming Pool Chemical Equipment:

Section " E" of the report notes that all of the chemical equipment is in poor condition. The table below shows system components, condition, and approximate age based on information provided by staff.

ITEM	CONDITION	AGE
Chlorine Pump	Poor	Unknown
Chlorine Storage	Poor	Unknown
pH Feed	Poor	Unknown
pH Storage	Poor	Unknown

The chemical equipment for the swimming pool is currently housed in the mechanical enclosure. The current chemical equipment consists of a Pulsar IV tablet chlorine erosion feed system utilizing calcium hypochlorite and a 100 gallon (approximation) muriatic acid tank and LMI diaphragm pump feed system. Staff handpour muriatic acid from 1-gallon jugs into the tank. Both systems are automated by the chemical controller. The chlorine and acid systems should not cohabitate nor be inside the mechanical enclosure. Cohabitation of chlorine and acid increases the potential for the chemicals to mix and create a highly toxic gas known as mustard gas. Mustard gas can cause injury and death. In effort to protect staff and patrons chlorine and acid should not cohabitate.

Furthermore, chlorine and acid are corrosive substances and cause corrosion to mechanical equipment. Constructing an alternative location for both systems is recommended to both increase safety and equipment lifespan, thus decreasing liability. Although age information is unknown both systems are at the end of their lifecycles.

Handpouring muriatic acid is hazardous to staff and both a labor and time intensive process. Even with safe handling practices risks are still present, especially with current conditions of cohabitation and a lack of a proper emergency eyewash shower station. A recommended replacement system would be a bulk liquid muriatic acid tank and automated feed system located in its own chemical room. Acid delivery would be done by a 3rd party bulk chemical delivery company and the system would be automated and controlled by the chemical controller. In addition, a carbon dioxide tank and automated feed system is also recommended. The carbon dioxide tank can cohabitate with the muriatic acid tank, the chemical be delivered by a 3rd party bulk chemical delivery company, and the system automated and controlled by the chemical controller. The combination of these two systems is standard in the industry for pH and alkalinity control. These systems are highly accurate for balancing water chemistry, reduce staff time and increase staff safety. Carbon dioxide controls pH but lowers total alkalinity. Muriatic acid increases total alkalinity. These two chemicals work in conjunction to balance the pool water chemistry and these suggested systems protect staff from handling hazardous chemicals.

Reloading a tablet chlorine system is both a labor and time intensive process. Buckets of tablets have to be lifted and poured into the system. Even with safe handling practices risks are still present, especially with current conditions of cohabitation and a lack of a proper emergency eyewash shower station. In addition, the tablets themselves have to be stored on site. A recommended replacement disinfection system (chlorine) would be a bulk liquid sodium hypochlorite tank and automated feed system located in its own chemical room. Chlorine delivery would be done by a 3rd party bulk chemical delivery company and the system would be automated and controlled by the chemical controller. This suggested system, like the suggested pH and alkalinity systems, reduces the handling of and exposure to hazardous chemicals for staff.

The following estimates are for bulk tank and delivery systems. Estimated costs for construction of chemical rooms is excluded.

(Bulk Acid and Carbon Dioxide Systems Estimated Cost- $30,000.00)
(Bulk Chlorine System Estimated Cost- $20,000.00)

Chlorine System in Mechanical Enclosure

Acid System in Mechanical Enclosure

2.3 Resurface Sprayground Wet Deck

The existing sprayground deck color has faded and the surface itself is becoming slick and slippery in many areas. Resurfacing the sprayground in the near future is recommended to improve safety and bring new life to the sprayground. There are many resurfacing options available including completely removing the existing deck and replacing it with new concrete, scarifying the existing deck and applying a new top coat, or scarifying and adding a new surface on top of the existing deck. New surfaces such as LifeFloor are gaining popularity in the industry because they excel at slip resistance, chemical resistance, cleanability, impact attenuation, UV stability, and impermeability in sprayground environments. After review of this draft by the City of Turlock, Aquatic Design Group can update this section of the report with the City's preferred means of addressing this maintenance item complete with a cost estimate.

Existing Sprayground Surface

2.4 Repaint Sprayground Features

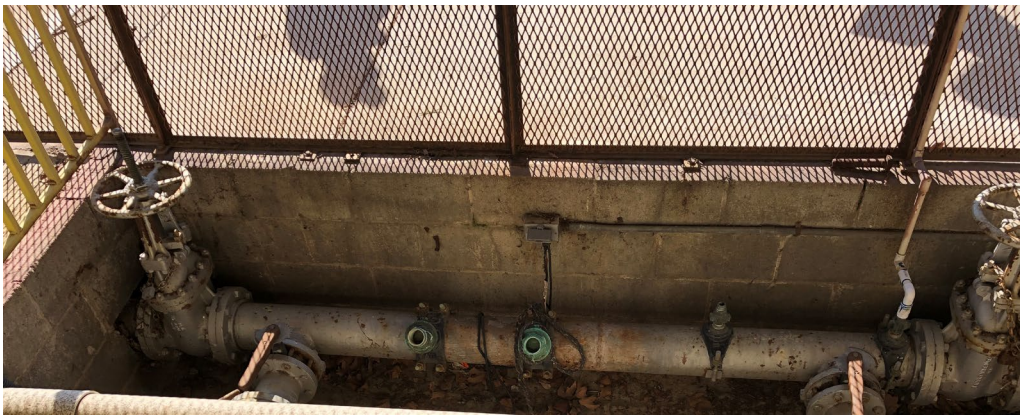
The existing sprayground features are faded and could be revitalized by adding a new coat of paint. Most manufacturers recommend repainting features every 3-5 years. Costs can range depending on chosen method and materials. The following estimate is for repainting of sprayground features and is listed as a range to reflect the cost variance for chosen method and materials.

(Estimated Cost- $10,000.00 - $20,000.00)

Faded Sprayground Feature

2.5 Swimming Pool Steel Piping Rusting and Corroding:

Piping for the swimming pool in the mechanical enclosure is a mix of materials that include: PVC, stainless steel, and steel. The steel piping, including the cast-iron piping, is rusting and corroding. With time the steel piping and connections will fail. Additionally, as the steel piping corrodes dissolved metal goes into the pool water and stains the pool surface. All steel piping should be replaced. Aquatic Design Group recommends schedule 40 PVC below grade and schedule 80 PVC above grade. An estimated cost for replacement piping is included in section 2.1 as piping would be replaced in concert with mechanical equipment replacement to ensure proper piping selections and pipe sizing.



Steel Piping Corroding and Rusting

H. POTENTIAL ENHANCEMENTS

The following three proforma budgets of the Columbia swimming pool and sprayground provide estimated costs to help the City of Turlock determine options for the longevity of the swimming pool and sprayground. The three budgets / scenarios are titled “Swimming Pool and Sprayground Repairs”, “New Swimming Pool With Updated Configuration” and “New Sprayground”. In the “Swimming Pool and Sprayground Repairs” budget / scenario, code and maintenance issues are the focus. In the “New Swimming Pool With Updated Configuration” budget / scenario, a smaller sized swimming pool with a different shape and depths is constructed along with updated mechanical and chemical equipment and a new bathhouse. The new swimming pool would be designed and constructed to current code standards. In the “New Sprayground” budget / scenario, the swimming pool and existing sprayground are removed and replaced with a large sprayground. The proforma budgets begin on the following page.

Columbia Swimming Pool and Sprayground
Swimming Pool and Sprayground Repairs
Proforma Budget Estimate Opinion of Cost

ITEM	DESCRIPTION	QTY	UNIT PRICE
1.0	CODE ISSUES		
1.1	Swimming Pool Lacks Floor Inlets (*install floor inlets*)		$ 77,750.00
1.2	Swimming Pool Deck Cracking and Lacks Drainage (*remove and replace pool decking with drainage*)		$ 458,100.00
1.3	Swimming Pool Plaster and Tile Finish (*install plaster and tile finish*)		$ 354,500.00
1.4	Swimming Pool Lacks Code-Compliant "No Diving" Tile Graphic Deck Markers (*install tile graphic markers*)		$ 3,300.00
1.5	Swimming Pool Lacks Flow Meter (*install flow meter*)		$ 800.00
1.6	Swimming Pool Deck Lacks Proper Number of Hose Bibbs (*install hose bibbs*)		$ 9,500.00
1.7	Swimming Pool Area Perimeter Fencing (*install gates*)		$ 45,000.00
1.9	Swimming Pool Mechanical Enclosure Lacks Proper Signage (*install signs*)		$ 1,000.00
1.10	Chemical Storage Areas Lack Proper Signage (*install signs*)		$ 1,000.00
1.11	Swimming Pool Lacks Proper Safety Signage (*install signs*) [3]		$ 5,000.00
1.12	Swimming Pool Mechanical Enclosure Lacks Emergency Eyewash Shower Station (*install station*)		$ 4,000.00
1.13	Swimming Pool Lacks Depth Marker Indicative of 4'-6" Depth (install marker) [4]		$ -
1.14	Swimming Pool Projections [5]		$ -
1.15	Lack of Code-Compliant Restroom Fixture Count for Swimming Pool [6]		$ -
1.16	Disabled Swimming Pool Access [7]		$ -
1.17	Ladder Clearance Distance From Swimming Pool Wall (*install ladders*)		$ 4,400.00
1.18	Check Main Drains for VGBA and AB1020 Compliance [8]		$ -
	TOTAL COSTS		**$ 964,350.00**
2.0	MAINTENANCE ISSUES		
2.1	Replace All Swimming Pool Mechanical Equipment (*install equipment and piping*) [9]		$ 225,000.00
2.2	Replace and Relocate Swimming Pool Chemical Equipment (*replace equipment*)		$ 50,000.00
2.3	Resurface Sprayground Wet Deck [10]		$ -
2.4	Repaint Sprayground Features [11]		$ 20,000.00
2.5	Swimming Pool Steel Piping Rusting and Corroding [12]		$ -
2.6	**TOTAL MAINTENANCE COSTS**		**$ 295,000.00**
3.0	SOFT COSTS		
3.1	General Contractor Mark-Up/Overhead	15%	$ 188,902.50
3.2	Construction Contingency Costs	10%	$ 125,935.00
3.3	Design Contingency	5%	$ 62,967.50
3.4	Time/Inflation Escalation Index	0%	$ -
3.5	Architectural & Engineering Fees	12%	$ 151,122.00
3.6	**TOTAL SOFT COSTS**		**$ 528,927.00**
4.0	**TOTAL ESTIMATED PROJECT COST**		**$ 1,788,277.00**

The cost information above depicts what it would cost today to bring the facility up to code, safety, and maintenance standards.

EXCLUSIONS:

1. Bathrooms and locker room improvements (if required) excluded.

2. Campus path of travel ADA upgrades (if required) excluded.

ASSUMPTIONS:

1. Cost shown for a retrofitted install of markers. Cost for markers also included in 1.2.

2. Cost shown is at the high end of the cost range.

3. Cost shown is at the high end of the cost range.

4. Cost included in 1.3.

5. Further information from client needed to determine estimated cost.

6. Further information from client needed and design work required to determine estimated cost.

7. Further information from client needed to determine estimated cost.

8. Further investigation is required to determine estimated cost.

9. Cost shown is at the high end of the range.

10. Further information from client needed to determine estimated cost.

11. Cost shown is at the high end of the range.

12. Cost included in 2.1.

Columbia Swimming Pool and Sprayground
New Swimming Pool With Updated Configuration
Proforma Budget Estimate Opinion of Cost

ITEM	DESCRIPTION	QTY	UNIT	UNIT PRICE	EXTENSIONS
1.0	CONSTRUCTION COSTS				
1.1	Site Preparation/Demolition	1	Lump Sum	$ 200,000.00	$ 200,000.00
1.2	Utility Allowance	1	Lump Sum	$ 25,000.00	$ 25,000.00
1.3	25-Yard Swimming Pool & Mechanical Equipment	3,750	Sq. Ft.	$ 215.00	$ 806,250.00
1.4	Pool Deck and Deck Drainage	12,650	Sq. Ft.	$ 45.00	$ 569,250.00
1.5	Site Lighting	0	Lump Sum	$ -	$ -
1.6	Fencing	0	Lump Sum	$ -	$ -
1.7	Mechanical / Chemical Space Improvements	1	Lump Sum	$ 150,000.00	$ 150,000.00
1.8	New Bathhouse/Mechanical Building	5,005	Sq. Ft.	$ 500.00	$ 2,502,500.00
1.9	**TOTAL CONSTRUCTION COSTS**				**$ 4,253,000.00**
2.0	EQUIPMENT COSTS (FF&E)				
2.1	Deck Equipment	5%	Lump Sum		$ 212,650.00
2.2	**TOTAL EQUIPMENT(FF&E) COSTS**				**$ 212,650.00**
3.0	SOFT COSTS				
3.1	General Contractor Mark-Up/Overhead	15%			$ 669,847.50
3.2	Construction Contingency Costs	10%			$ 446,565.00
3.3	Design Contingency	5%			$ 223,282.50
3.4	Time/Inflation Escalation Index	0%			$ -
3.5	Architectural & Engineering Fees	11%			$ 491,221.50
3.6	**TOTAL SOFT COSTS**				**$ 1,830,916.50**
4.0	**TOTAL ESTIMATED PROJECT COST**				**$ 6,296,566.50**
EXCLUSIONS:					
1. Campus path of travel ADA upgrades (if required) excluded.					
2. Competitive equipment excluded.					

The cost information above depicts what it would cost today to replace the existing swimming pool with a smaller swimming pool that services current programs and has the following dimensions:

- Surface Area: 3,750 square feet (75’ x 50’, 6 25-yd lanes)
- Perimeter: 250 feet
- Depths: 3’-6” to 5’-0”
- Volume: 112,349 Gallons

The swimming pool facility as planned above would have expansive deck space, utilize existing site lighting and fencing, incorporate improvements to the existing mechanical and chemical spaces, and have a bathhouse with restroom fixture counts that comply with code. In addition, the new swimming pool would be designed and constructed to current code standards. No changes to the sprayground are reflected in this budget / scenario.

Columbia Swimming Pool and Sprayground
New Sprayground
Proforma Budget Estimate Opinion of Cost

ITEM	DESCRIPTION	QTY	UNIT	UNIT PRICE	EXTENSIONS
1.0	CONSTRUCTION COSTS				
1.1	Mobilization and General Conditions	1	Lump Sum	$78,000.00	$ 78,000.00
1.2	Site Preparation/Demolition	1	Lump Sum	$ 215,000.00	$ 215,000.00
1.3	Utility Allowance	1	Lump Sum	$ 40,000.00	$ 40,000.00
1.4	Play Structure	1	Lump Sum	$ 250,000.00	$ 250,000.00
1.5	Sprayground, Piping and Circulation Equipment	1	Lump Sum	$ 450,000.00	$ 450,000.00
1.6	Underground Surge Tank	1	Lump Sum	$ 52,000.00	$ 52,000.00
1.7	Enhanced Deck Surface Treatment (option)	4,000	Sq. Ft.	$ 20.00	$ 80,000.00
1.8	Play Structure Installation	1	Lump Sum	$ 50,000.00	$ 50,000.00
1.9	Pavement and Surfacing	1	Lump Sum	$ 230,000.00	$ 230,000.00
1.10	Site Features / Walls and Fencing	1	Lump Sum	$ 345,000.00	$ 345,000.00
1.11	Planting and Irrigation	1	Lump Sum	$ 25,000.00	$ 25,000.00
1.12	**TOTAL CONSTRUCTION COSTS**				**$ 1,815,000.00**
2.0	EQUIPMENT COSTS (FF&E)				
2.1	Deck Equipment	0	Lump Sum	$ -	$ -
2.2	Building Equipment	0	Lump Sum	$ -	$ -
2.3	**TOTAL EQUIPMENT(FF&E) COSTS**				**$ -**
3.0	SOFT COSTS				
3.1	General Contractor Mark-Up/Overhead	15%			$ 272,250.00
3.2	Construction Contingency Costs	10%			$ 181,500.00
3.3	Design Contingency	5%			$ 90,750.00
3.4	Time/Inflation Escalation Index	0%			$ -
3.5	Architectural & Engineering Fees	11%			$ 199,650.00
3.6	**TOTAL SOFT COSTS**				**$ 744,150.00**
4.0	**TOTAL ESTIMATED PROJECT COST**				**$ 2,559,150.00**

The cost information above depicts what it would cost today to remove the existing swimming pool and sprayground and replace them with a new sprayground with the following features:

- Over 5,000 square feet of surface area
- Play structure
- Varied spray features
- Enhanced deck surface for fall attenuation

The sprayground as planned above would have expansive deck space, a recirculating system and be designed and constructed to current code standards.

I. SUMMARY

The Columbia swimming pool and sprayground have provided the City of Turlock with many years of service. The swimming pool and sprayground are in need of renovation to safely and effectively serve the community. This document provides an assessment of the facility's existing conditions, recommendations for action, and options that can be weighed by the City of Turlock to ensure the facility can continue to provide services to the community. It is important to note that this document is based strictly on empirical data, observations made while on site, and from conversations with staff members. In addition, the structure of the swimming pool and its below grade piping are assumed to be sound as noted previously in this report without any destructive testing to confirm.

With the correction of code violations and incorporation of the suggested improvements the swimming pool and sprayground will operate more efficiently and be safer for both patrons and staff while providing the same level of programming currently offered. It must be kept in mind that even though repairs and enhancements can be made to rectify code violations, the comparative cost to repair versus replace the swimming pool and / or sprayground and the risk associated with renovation work should be carefully evaluated. A decision should be made as to whether the capital investment needed provides an acceptable return in a cost benefit analysis of any renovation versus replacement.

On behalf of all of us at Aquatic Design Group we look forward to continuing to help the City of Turlock in any way we can to ensure continued success at the Columbia swimming pool and sprayground.

Sincerely,

AQUATIC DESIGN GROUP, INC.