8 STEELE PARK RESORT

8.1 Waste Water Systems

Ponds:
The wastewater for this facility is treated on a contract basis by Napa County. The treatment plant has three concrete-lined evaporation ponds, and activated sludge process, and spray fields that are located offsite.

Lift Stations:
There are four lift stations for 200 hookups. All the stations in Steele Park have alarms.
LS 1: This station has two 5 hp submersible pumps. The pumps operate in an alternating lead/lag fashion to balance run-time and maximize the life of the pumps. Pump starts and stops are controlled by a float system. The force main is a 4" diameter cast iron discharge pipe. The maintenance staff uses bacteria eaters weekly to control odors.

LS 2: This is the main pump station for this resort. The cottages and motels are tributary users to this station. It also receives gravity feed from the other stations at Steele Park if they encounter any problems. The maintenance crew plans to build a retaining wall around this station. The main duty pump is a 75 HP Vaughan pump with a Baldor Motor. Two older 10HP Moyno pumps are available for backup.

LS 3: This station is for RV use only. There are two pumps but only one is hooked up. There was a bad sewage odor at this station during our inspection.

LS 4: This station is for RV and restaurant use. It is equipped with a 1967 Kennedy pump controlled by new floats. The valves are checked periodically. There is a retaining wall around the pump.

Lift stations need additional reliable pumping capacity, new instrumentation and controls, and standby power facilities in order to be adequate

8.2 Potable Water Systems

Treatment Plant:
Water is supplied by an offsite facility.

Storage Tanks:

Offsite storage tank for 300 hookups.

8.3 Roads/Parking Lots

Pavement Section:
With the exception of the heavily used portion of the road near the resort entrance, pavements are in good condition. For a 20-year design life, areas of alligator cracking in the first 2000 feet of the entry road should be overexcavated and replaced with compacted aggregate base. This section of road should then receive a 3 inch thick asphalt concrete overlay. In all other roadways the areas of severe alligator cracking should be excavated and replaced with compacted aggregate base and a 1-inch thick asphalt patch to match the level of the existing roadway. Collector roads should then receive an asphalt concrete overlay that is 1.5 inches thick. Secondary roads should receive an asphalt concrete overlay that is 1-inch thick.

Geometry:
The main collector roads have adequate width for two-way traffic. After receiving an overlay this road should be striped and signed. Secondary roads typically are either relatively short or can be converted into one-way loop roads. Some fire truck turn-arounds will be necessary but there appears to be ample space for this construction. In the area near locations S5, S6 and S7 (see Plate 6) there appears to be a need for additional parking which could require the removal a few trailers. One curve was noted that needs to have its radius of curvature increased to permit fire truck access. Surveys will be necessary to determine the appropriate roadway and parking geometry in these areas. No areas of overly steep grades were noted. After geometric modifications and an overlay these roads should be signed.

There are additional areas of dwelling units that are served by gravel roads that may have inadequate fire truck access, but these were not included in our study.

Other Considerations:
There are some areas of old fill near the park entrance that have settled, giving the road a hummocky ride.

8.4 Electrical Systems

Most concession buildings have individual PG&E meters and are served by an overhead high voltage distribution system with pole-mounted transformers owned by PG&E that runs through the marina. Some small concession buildings are sub-fed from larger buildings via a resort-owned distribution system. Electrical services ranged from poor to good. Internal wiring condition ranged from fair to good. Generally, the electrical systems are code compliant and adequate for current use, but not adequate for long term use. Several code viloations were noted during the site inspection

8.5 Boat Launch Facilities

The boat launch ramp present at this resort is composed of a 3½-inch thick concrete slab at a 15.6 percent slope. There is sufficient capacity for 10 launch lanes and parking to accommodate the vehicles. The ramp is approximately 187 feet wide and extends 135 feet to the waterline at the time of the site visit. At the time of the assessment, there were three courtesy docks present. The docks have timber decking and non-encapsulated foam billets.

The ramp appears to be in fair condition overall. There are several cracks running perpendicular to the water. The ramp does not appear to be experiencing any erosion of its underlying material. The cracks should be repaired by an epoxy injection method to seal the surface. Curbs may be utilized to define the ramp boundaries.

The Bureau has stated that it is desirable to retain the boat launch ramp to support the slip rentals and marina facilities. The courtesy docks should be discarded as they have deteriorated exposed foam flotation billets and deteriorated timber decking.

8.6 Shoreline Developments

There were a number of retaining structures along the lake perimeter. Most were of wood or treated-wood construction, with some being of masonry block and poured-in-place concrete construction. The walls were at, or very near to the end of their service life, due to deterioration of the wood and failure due to excessive lateral loading. Evaluation of several walls noted that there was no foundation keyway for lateral resistance, or back wall drainage system to control excessive hydrostatic pressures. Some recent wall reconstruction was noted, however, the elements used were all untreated wood, which is expected to have a service life of only a few years.

The following is a listing of retaining structures that appear to be acceptable structures, having a reasonable design life, if properly maintained:

- No significant structures noted.

8.7 Marinas and Fuel Systems

8.7.1 Dock Facilities

There are a total of ten docks at this resort. The docks at this resort utilize a combination of flotation devices. There are non-encapsulated foam billets, plastic encapsulated floats and one-piece float/decking docks (EZ-Dock).

Dock #1 is approximately 296 feet long, contains 50 berthing uncovered slips and has timber decking and non-encapsulated foam billets. The timber decking appears to in fair to poor condition due to its exposure to the environment. The access walkway from the main walkway has composite deck with open-cell non-encapsulated foam floats.

Dock #2 is the fuel dock. Access to the fuel dock from the main walkway is provided by a 44-foot long ramp topped with timber decking. Plastic encapsulated floats provide the ramp's buoyancy. The fuel dock is approximately 68 feet long and contains two fuel dispensers. The fuel dispensers are covered by a roof structure. The dock was timber decking and plastic encapsulated floats. A hand winch located at the end of the dock controls the dock position.

Dock #3 consists of the main 163-foot long walkway, providing access to Dock #1 and Dock #2 and the Bait shop (Dock #3A). Adjacent to the Bait shop is a two-slip berth. Dock #3 has composite decking and a galvanized steel frame with plastic encapsulated floats. It appears to be in good condition. The Bait shop is located on a dock with timber decking and non-encapsulated foam floats. The adjacent berths are located within a dock with timber decking and closed-cell non-encapsulated foam floats.

Dock #4 is located adjacent to the boat launch ramp. It is constructed of one-piece polyethylene hollow modular sections. It is anchored in position with vertical lines at the end of the fingers. The dock is approximately 70 feet long and contains four slips with capacity for eight small boats. The dock appears to be in good condition. The access ramp from the shore is a simple plywood sheet.

Dock #4A is a 32-foot long, four berth dock. It is constructed of timber decking and non-encapsulated foam floats. It appears to be in fair condition.

Dock #5 and #6 are of similar construction and configuration, each being approximately 290 feet in length and containing 52 covered berthing slips. There is a locked gated entry. The roofing structure consists of light gauge metal framing with a sheet metal roof. The docks have timber decking and plastic encapsulated foam floats. The access ramps of a similar construction. The docks appear to be in fair condition with some of the decking showing deterioration. The gangways leading to main walkways appear to be in poor condition.

Dock #7 has identical construction to #5 and #6. It is 172 feet in length and contains 32 covered berthing slips. There is a gated entry at this location also. The dock is in a similar condition to #5 and #6.

Dock #8 is similar in construction to the composite modular dock #4. It is approximately 90 feet long and contains eight slips for small boats.

At the time of the site visit, there were four docks located on the northern section of the resort adjacent to the restaurant. These were constructed of the composite modular system found on Dock #4 and #8. It was not evident whether these are privately owned.

8.7.2 Fueling Services

There is one fuel dock here with a two dispensers located on the end of a single dock. There is a store located on a walkway perpendicular to the fueling dock. There is a double compartment storage tank on shore. The tank holds regular unleaded gasoline and diesel fuel. There is a dispenser at each end of the storage tank for ground vehicles. The tank is piped to the two dispensers on the dock and the dispensers at the tank. The dispensers on the dock are for gasoline. Each dock dispenser has a hose and service station type nozzle.

The storage tank is located on shore across from the restaurant. This is paved area. The storage tank is an above grade, horizontal, cylindrical double wall tank that sits on a concrete slab. The tank has two compartments. The compartment for unleaded regular is 11,155 gallons and the compartment for diesel fuel 877 gallons. Tank appurtenances for each compartment include a primary vent, emergency vent, fill line, gage hatch, product dispensing pump, and suction line to the ground fuel dispenser and sight gage. In addition, the 11,155-gallon compartment contains a secondary emergency vent, manhole and vapor recovery line. and a piping connection for the dispenser at the tank. There is no ladder for access to the top of the tank. There is a leak detection monitoring system for the tank. There is no containment parking area for the tank truck and ground vehicles.

The diesel compartment has a 3-inch fill line and 1-inch fuel line to the ground fuel dispenser.

The gasoline compartment has a 3-inch fill line, 3-inch vapor line, 2-inch product dispensing pump and 1 inch fuel line to the ground fuel dispenser. The fill line has a coupler, shut off valve and containment sump with a hand pump to return spills to the tank. The vapor line has a coupler. The pump dispensing line contains an on/off solenoid valve.

The gasoline is routed underground in a double wall line toward the fueling dock. It comes out of the ground in a valve box. An above grade 1 ½ inch galvanized steel line continues down the shoreline toward the fueling dock. A transition is made to a hose, which connects to galvanized piping on the dock. The piping is attached to a perimeter wooden walkway to the store and fuel dock There are three hose connections made at transitions. The piping is routed on top of the fueling dock to the dispensers in a wooden tunnel. Shut off valves are located at the hose connections. There is an emergency shut off switch on the fueling dock.

This is a two compartment tank. Provide overfill alarms to sound an alarm at 85 percent of tank capacity in accord with California Fire Code, Appendix ll-F 5.4 Overfill Prevention. The tank is

allowed to be filled to 90 percent, but there is a warning at 85 percent. The fill line has a shut off device at 90 percent full.

A permanent sign should be provided at the fill point for the tank documenting the filling procedure in accord with California Fire Code, Appendix ll-F 5.4 Overfill Prevention. The filling procedure should require the person filling the tank to determine the amount required to fill it to 90 percent of capacity before commencing the filling operation.

All docks with the exception of the gas dock, Dock #3 (main walkway to gas dock), and Dock #5, #6 and #7 should not be retained. These docks all utilize non-encapsulated foam floats that have deteriorated and have decking showing wear.

The dock piping does not conform to the California Fire Code, Section 5202. The piping is 1 ½ inch Schedule 40 galvanized steel pipe with threaded joints. Valves are bronze, threaded. The threaded joints are corroded and are not made up properly. Threaded pipe should be gauged to check for conformance to American Standard taper pipe threads before being made up. Bronze valves are a low melt material. This piping is suitable for potable water, but not for fuel piping. Connection to shore piping is made with fuel hose. Hose couplings are threaded. The piping is connected to the side of the first two floating docks. The piping is inadequately supported. The piping is in a covered piping trough on the floating fuel dock and is accessible.

Suitable fuel piping for this service would be flexible double wall pipe in a ducted metal jacket. Leak detection is not required. Final connection to the dispensers would be made in a sump box. This type of piping is specially designed for marina installations.

It is recommended that Dock #3, Dock #2 (fuel dock) and Docks #5, #6 and #7 be retained for future use. All of these docks contain plastic encapsulated foam floats and appear to be in at least fair condition. The decking at Docks #5 through #7 may need to be replaced as the timber continue to deteriorate. The future replacement may utilize plastic composite decking which has a lower maintenance cost.

8.8 Preliminary Environmental Assessement

A site visit was conducted to assess and photograph present site conditions. Mr. David Hanson, resort manager, was interviewed regarding site history and operations. Results of the interview and site observations are presented in the following table. Results of the preliminary environmental assessent are summarized in the following site observations table:

SITE OBSERVATIONS

General Observations	Remarks	Observed	Not
Current Use	Resort with motel, restaurant, store, boat facilities and mobile homes	X	
Past Use			X
Structures	Numerous buildings, restrooms, kiosks, office, restaurant, store	X	
Terrain	Varied	X	
Interior and exterior observations or environmental conditions that may involve the use, storage, disposal or generation of hazardous substances or petroleum products.		**Observed**	**Not Observed**
Hazardous chemical and petroleum products in connection with known use. Fill dirt from an unknown source.			X
Aboveground storage tanks (ASTs)		X	
Underground storage tanks (USTs)			X
Odors			X
Pools of Liquid			X
Drums	.		X
Hazardous chemical and petroleum products in connection with unknown use.			X
Unidentified substance containers			X

SITE OBSERVATIONS (CONTINUED)

Interior and exterior observations or environmental conditions that may involve the use, storage, disposal or generation of hazardous substances or petroleum products.		**Observed**	**Not Observed**
Chemical storage or agricultural chemical mixing areas			X
Asbestos, and lead based paints	Not assessed		
Polychlorinated biphenyls (PCBs)			X
Pits, Ponds, or Lagoons	Waste water ponds.	X	
Stained soil or pavement			X
Stressed vegetation			X
Hazardous Waste Storage			X
Solid Waste			X
Waste Water	Waste water ponds	X	
Process waste water			X
Wells			X
Dry wells			X
Surface water	Waste water ponds	X	
Storm basins/catch			X

SITE OBSERVATIONS (CONTINUED)

Interior and exterior observations or environmental conditions that may involve the use, storage, disposal or generation of hazardous substances or petroleum products.		**Observed**	**Not Observed**
Storm drains			X
Drains and sumps			X
Septic system			X
Loading and unloading areas			X
Burned or buried debris			X

In summary, the environmental survey did not reveal recognized environmental conditions at the site.