

MAINTENANCE PROCEDURES, FORMS, INFORMATION
Updated 8/16/12

CTTA PARK OPERATIONS MANUAL

MAINTENANCE PROCEDURES

MAINTENANCE – CTTA

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Maintenance Duties of Park Maintenance Staff

This park is over 130 acres with 17 comfort stations, two pools, horse shoe pit, two bocce ball courts, baseball diamond, library, playground, laundry room, commissary, kitchen, outdoor Hani, two outdoor barbeques, battery shed, several storage sheds, garage, propane dispensing center, office, teen center, adult center, Black Bart Center for children 12 and under, 5 miles of roads, a water system, and a sewage system and two mobile home units and grounds. There are 500 member camp sites and 25 guest sites all serviced by our maintenance staff. All this needs to be kept clean and maintained in good condition by a very small maintenance staff year around. That's a big order.

Guidelines have been established in this manual to help new maintenance staff become familiar with their job and to remind existing staff of their duties. This manual is, in no way, complete. Maintenance staff are called upon to assist in a variety of projects and park activities as required. Often they are pulled from their assigned daily duties to assist with an emergency situation. The following provides only highlights of the Maintenance Staff's routine tasks.

Daily Work Schedule

(Summer may take more than 1 man depending upon park attendance)

Note: Come to work supplied with enough drinks, water, ice and snacks for breaks for the day. Be ready to go to work at 8:00 a.m. sharp. The park does not supply these for you, although water is available throughout the day.

- 8:00 a.m. Work starts at 8:00 a.m. every day (unless Maintenance Supervisor advises otherwise)
- Vehicle Check
 - Check all fluids on trucks or golf carts - 1 man per vehicle
 - Check air pressure on all tires
 - Keep maintenance records up to date
 - Check battery shelf. (Members leave their batteries that need charging on the shelf in front of the Battery Room) Check every morning and as you pass by throughout the day and put batteries on charger as needed
 - Check hand-held radio
 - Check truck for all tools/supplies needed for job
 - Pool maintenance -1 man (*see duties for Pool and pool area*)
 - Sewer plant for daily maintenance – 1 man (*see duties for sewer plant*)
 - Comfort station rounds – 1 or 2 men in separate vehicles (*see duties for Comfort Station*)
- 12:00 p.m. Lunch
- 1:00 p.m. Fill propane tanks as necessary (*see Propane Tank Distribution*)
- Pump RV holding tanks as requested
 - Other Maintenance tasks as assigned by Park Operations Manager

(includes painting, roof cleaning/repairs, building repairs, water line repair, plumbing and a variety of other maintenance tasks as assigned)

Saturday or as necessary: Gas vehicles – Take along all 5 gallon gas cans and fill at the same time

Monthly

or as needed: Take any dead batteries to Auto Parts store for recycle and collect core fee for the park. Funds are given to office staff (get a receipt) and credited to the “fuel, oils” fund. (Average is \$10.00 per battery)

Comfort Station Maintenance (Summer)

Preparation:

- Paper supplies
- Soap dispenser supplies
- Trash can liners (large outdoor can liners)
- Broom
- Mop
- Mop bucket and cleaner
- Disinfectant
- Glass cleaner
- Rags
- Toilet bowl brush and cleanser
- Wax deodorizer for ladies’ restrooms
- Liners for sanitary napkin containers
- Keys for all buildings and paper or soap dispensers
- Disposable gloves

Duties:

1. Check and fill all paper supplies
2. Sweep floors
3. Clean sinks, mirrors, & toilets – top & bottom and inside & out
4. Pickup shower racks before you mop
5. Check and clean showers - disinfect
6. Empty interior trash receptacles
7. Wipe with damp rag top of all paper dispensers
8. Mop floors, turn off lights
9. Check for cob webs and dirty windows / sills

Comfort Stations – Winter Operations

Rounds and tasks are the same as for summer except many comfort stations may not be in use and can be quickly checked. Always check outdoor trash bins to prevent animals from raiding.

1. Electrical power to the comfort stations, including hot water heaters, will be turned off during the winter months on loops not in use. Members must be notified in advance (in the newsletter). Date will be determined by weather, but no later than **December 1st** of each year.

2. Water to the comfort stations shall remain on (except for repairs) year round.
3. Members must call/contact the Park prior to coming to the Park during winter months to ensure comfort station water heaters are turned on. Park Operations Manager (or duty employee) shall ensure that the hot water heater is turned on upon request from member.
4. Pea traps need to be cleaned out prior to closing for the winter.
5. Place black pins on office map for all comfort stations shut down. Yellow pins for stations open.

Garage Inventory

The garage inventory list is to be maintained by the Maintenance Supervisor. If a new item is purchased by CTTA, it shall be immediately added to the inventory list by office staff paying the invoice. If an item is lost, stolen or broken, remove from inventory immediately and notify office. Once a year, during the off-season, the garage inventory should be taken to make sure all items are accounted for. A copy shall be posted in the garage and a copy given to the office for insurance purposes.

See Garage Inventory - last updated 7/2007 – end of this section on Maintenance.

General Maintenance Reminders

- At the start of each day (each truck) - check radio with the office to be sure communication is good. Your life or the life of another may depend on it.
- Do not turn on heater in the garage unless you are going to be working in there.
- Finish the day on time and prepare for the following day so that you can start your morning assignment without waste of time.
- Use a tool - put it away in first class condition where it belongs.
- Going the correct way on the roads is mandatory. Exception would be when plowing snow, it is necessary to travel down the hills. In this case, be sure roads are closed from opposite direction so that you will not meet another vehicle. Under these conditions, there should be no other traffic on the roads.

Snow Plowing

Get info from Park Operations Manager

Honey Bucket Procedure

CTTA does not have individual site sewer systems. Only the comfort stations and buildings have a sewer system. Member's RVs are pumped out by Park Maintenance Staff. Staff will be provided with rubber gloves and disposable gloves. Staff must have received their Hepatitis shots prior to using the Honey Bucket truck. No exceptions.

Members request their RVs to be pumped out by stopping in the office, paying the fee and filing out a request. Requests are placed on the counter near the cash register. After completing propane dispensing Maintenance Staff will go to the office to pick up the Honey Bucket pump out requests. Place requests in order by loop and begin your route. Members need not be present for pump outs, although most prefer to be present.

1. Park honey bucket as close as possible and as safe.
2. Put on gloves.
3. Take the hose off the rack completely.
4. Start the pump.
5. Hook up hose to dump valve on trailer.
6. Open dump valve on RV being careful with caps and valves which are fragile plastic.
7. Begin pumping.
8. When the holding tank is empty, disconnect the hose. Make sure all liquid is out of the hose before replacing it on the rack on the back of the truck.
9. Shut off the motor.
10. When finished with the days pump requests or when Honey Bucket tank is full (whichever comes first) drive to dump station across from playground and dump contents. Rinse tank and hose.

Note: Report any spills immediately to Park Operations Manager.

Pool Maintenance

One of the most loved places in the park during summer are the Pools. Their maintenance is a high priority all summer. Members like their pools comfortably warm, crystal clear and free of debris. Members have access to the pool from 10:00 a.m. to dusk every day beginning on Memorial Day Weekend and running through Labor Day weekend. (weather permitting, the Board of Directors may request the pool to remain open until the end of September).

The standard summer first duty of the day for Park Maintenance Staff is to go to the pool building and begin preparing the pool for members. The following procedures are “in general” but should be a help to new Maintenance Staff or staff filling in for regular pool maintenance staff.

The pool covers must be removed and the pool area cleaned of any trash. Near the gate at the entrance of the pool is an ashtray that needs to be cleaned as well. The pool area can be hosed down and washed as necessary.

Pool Filter Backwash Procedure

1. Stop pump.
2. Ensure that the suction and backwash lines are open so that water is free to come from the pool and flow out the backwash line. Set control valve position as follows:
 - a. If using Multiport valve, set valve to backwash position.
 - b. If using Two Position Slide Valve, push handle down to backwash position and engage lock by twisting handle.
3. Stand clear of filter and start pump.

4. Backwash filter for approximately 3 to 5 minutes or until backwash water is clean.
5. Stop pump.
 - a. If using Multiport valve, set valve to rinse position and continue with remaining steps.
 - b. If using Two Position Valve, skip to step 8.
6. Stand clear of filter and start pump.
7. Rinse filter for approximately 30 seconds.
8. Stop pump and set valve as follows:
 - a. If using Multiport valve, set valve in filter position,
 - b. If using Two Position Slide Valve, raise handle to filter position and engage valve lock by twisting handle.
9. Ensure that pool return line is open so that water may freely flow from the pool back to the pool.
- 10. Open manual air bleeder on Triton II Closure. Stand clear of filter and start pump.**
11. Close manual air bleeder of the Closure when all the air is removed and a steady stream of water emerges from the bleeder.
- 12.** The filter has now started its filtering cycle. You should ensure that water is returning to the pool and take note of the filter pressure.
- 13.** The filter pressure in step 12 above should not exceed the pressure originally observed on the filter when it was initially started. If after backwashing, the pressure is 4 to 6 PSI above the start condition it will be necessary to chemically clean the sand bed.

Pool Chemical Cleaning Procedure

1. It is recommended that one of the following cleaners be used:
FILTER-CLEANSE - Great Lakes Biochemical
FILTER-FREE – Hydrotech Chemical Corp.
KLEEN-IT – Bio Lab Inc.
These cleaners will remove oils, scale and rust from the sand bed in one cleaning operation.
2. Mix a solution following the manufacturers instructions on the label.
3. Backwash the filter as outlined above.
4. If filter is below pool level, shut off pump and close appropriate valving to prevent draining the pool.
5. Shut off pump, open filter drain and let filter drain., Place valve in backwash position .
6. After filter has drained, close filter drain and remove the pump strainer pot lid.
7. Ensure that the backwash lines are open.
8. Turn the pump on and slowly pour the cleaning solution into the pump strainer.
9. Continue adding solution until the sand bed is saturated with cleaning solution. Replace lid on pump.
10. Shut off the pump and leave filter in backwash position. Allow filter to stand overnight (12 hours).
11. Replace the pump lid and follow backwash procedure outlined above.
12. Do not allow the cleaning solution to get into the pool.

Pool Solar Panel Procedure

START: 10:00AM Stop:4:00PM or until no sun is on panels.

Pool #1

1. Open outside valve marked #1 flow valve (wide open) allowing heated water to flow into the pool.

2. Inside pool room open #1 control valve approx. 1/8 of a turn. This allows a measured amount of pool water to flow into solar panels.
3. To shut down, reverse above procedure.

Pool #2

1. Open outside valve marked #2 flow valve (wide open) allowing heated water to flow into the pool.
2. Inside pool room open #2 control valve approx. 1/8 of a turn. This allows a measured amount of pool water to flow into solar panels.
3. To shut down, reverse above procedure

Polaris Procedure

Pool #1

1. Connect Polaris sweep hose to connector in # 1 pool, tighten approx. ¼ turn to secure, put Polaris in pool.
2. Inside pool room, open valve marked #1 Polaris. Turn on wall switch marked pool #1 to start motor.
3. Shutdown: Turn off wall switch #1. Close # 1 Polaris valve. Disconnect Polaris hose from pool. Remove Polaris from pool and store in pool room.

Pool #2

1. Connect Polaris sweep hose to connector in # 2 pool, tighten approx. ¼ turn to secure, put Polaris in pool.
2. Inside pool room, open valve marked # 2 Polaris. Turn on wall switch marked pool #2 to start motor.
3. Shutdown: Turn off wall switch # 2. Close # 2 Polaris valve. Disconnect Polaris hose from pool. Remove Polaris from pool and store in poolroom.

Pool Vacuum Procedure

Open vacuum control valve # 1 located inside pool room. Take vacuum equipment to pool. With rod connected to vacuum, submerge vacuum head just under water surface.

Turn on water hose and fill vacuum hose line with water. When full turn water off and submerge vacuum hose into pool then place hose in vacuum head inlet. Vacuum is now ready to use.

Pool Vacuum Shut Down Procedure

Pool #1

Close vacuum control valve # 1. Remove vacuum cleaner from pool and store.

Pool #2

Close vacuum control valve # 2. Remove vacuum cleaner from pool and store.

Various Pool Forms and Tables

Various pool forms and tables are available at the pool house. The following forms and tables are simply examples of the forms used daily at the pool house.

DAILY POOL TESTING SHEET

(sample form) These forms are at the Pool House

DAILY												WEEK		DAILY		Chemicals Added Other Action
Date	Time	Flow		Alkalinity		Water Temp		Chlorine		PH		Cal.		Filter Pressure		
		#1	#2	#1	#2	#1	#2	#1	#2	#1	#2	#1	#2	#1	#2	

Pool Winter Shut Down Procedure

- 1) Check Ph level and adjust to recommended water parameters 7.2 – 7.8
Ideal – 7.4 – 7.6
- 2) Check total alkalinity recommended water parameters 60 to 180 ppm
Ideal – 80 – 120 ppm
- 3) When both of the above are in the proper range, shock pool with 30 ppm chlorine.
- 4) Add recommended amount of algae removal solution per instructions on bottle.
- 5) Back flush filters for 5 minutes, rinse for 30 seconds. Reverse back flush procedure and filter for one (1) hour. Shut off filter system.
- 6) Cover pools.
- 7) During the winter when the weather is real cold, filters could be run to keep pipes from freezing. Also check the chlorine level about once a week. Adjust as needed.

POOL CHEMICAL TABLES

All Tables are in a manual at the Pool House. This is a copy of the same.

TABLE A

Amount of Chlorine Compound to
 Introduce 1 ppm Chlorine*

% Available Chlorine*	Volume of Water			
		34,000 gallons		42,000 gallons
5%		5.44 pts.		6.72 pts.
10%		43.52 fl. oz.		53.76 fl. oz.
12%		36.38 fl. oz.		44.97 fl. oz.
35%		12.99 oz.		16.04 oz.
60%		7.58 oz.		9.37 oz.
65%		6.97 oz.		8.61 oz.
75%		6.02 oz.		7.43 oz.
90%		5.03 oz.		6.22 oz.
100%		4.56 oz.		5.63 oz.

TABLE B

30 ppm Shock Table for Algae Removal*

% Available Chlorine*	Volume of Water			
		34,000 gallons		42,000 gallons
5%		20.4 gal.		25.2 gal.
10%		10.2 gal.		12.6 gal.
12%		8.5 gal.		10.5 gal.
35%		24.31 lbs.		30.03 lbs.
60%		14.18 lbs.		17.51 lbs.
65%		13.09 lbs.		16.17 lbs.
75%		12.00 lbs.		14.83 lbs.
90%		9.45 lbs.		11.68 lbs.
100%		8.50 lbs.		10.50 lbs.

*NOTE: Chlorine products contain different amounts of available chlorine.
 See Treatment Table Tips in Chapter IX.

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TABLE C

To Decrease Free Chlorine Using Sodium Sulfite

Desired decrease in ppm	Volume of Water			
		34,000 gallons		42,000 gallons
1ppm		8.06 oz.		9.95 oz.
2ppm		16.15 oz.		19.95 oz.
3ppm		24.21 oz.		29.90 oz.
4ppm		32.27 oz.		39.86 oz.
5ppm		40.46 oz.		49.98 oz.
10 ppm		5.03 lbs.		6.22 lbs.
15ppm		7.58 lbs.		9.37 lbs.
20ppm		10.10 lbs.		12.47 lbs.
30ppm		15.13 lbs.		18.69 lbs.
50ppm		25.23 lbs.		31.16 lbs.

TABLE D

To Increase pH Using Soda Ash
 (Sodium Carbonate, 100%)
 with the Taylor Base Demand Procedure

Drops of Taylor Base Demand Reagent	Volume of Water			
		34,000 gallons		42,000 gallons
1 drop		17.96 oz.		21.55 oz.
2 drops		35.02oz.		43.26 oz.
3 drops		52.36 oz.		64.68 oz.
4 drops		4.35 lbs.		5.38 lbs.
5 drops		5.44 lbs.		6.72 lbs.
6 drops		6.53 lbs.		8.06 lbs.
7 drops		7.62 lbs.		9.41 lbs.
8 drops		8.70 lbs.		10.75 lbs.
9 drops		9.79 lbs.		12.10 lbs.
10 drops		10.88 lbs.		13.44 lbs.

NOTE: Taylor 2000 Test block uses R-0006 Base Demand Reagent (BDR)
 Taylor #4024 Test Cell uses R-0862 Base Demand Reagent (BDR)

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TABLE E

To Decrease pH Using Muriatic Acid
(20° Baume/31.45% HCl)
with the Taylor Acid Demand Procedure

Drops of Taylor Acid Demand Reagent	Volume of Water			
	34,000 gallons	42,000 gallons		
1 drop		31.14 oz.		38.47 oz.
2 drops		3.91 pts.		4.83 pts.
3 drops		5.85 pts.		7.22 pts.
4 drops		3.91 qts.		4.83 qts.
5 drops		4.86 qts.		6.01 qts.
6 drops		5.85 qts.		7.22 qts.
7 drops		6.80 qts.		8.40 qts.
8 drops		7.79 qts.		9.62 qts.
9 drops		8.77 qts.		10.84 qts.
10 drops		9.72 qts.		12.01 qts.

TABLE F

To Decrease pH Using Dry Acid
(Sodium Bisulfate, 93.2%)*
with the Taylor Acid Demand Procedure

Drops of Taylor Acid Demand Reagent	Volume of Water			
	34,000 gallons	42,000 gallons		
1 drop		41.82 oz.		51.66 oz.
2 drops		5.24 lbs.		6.47 lbs.
3 drops		7.85 lbs.		9.70 lbs.
4 drops		10.47 lbs.		12.94 lbs.
5 drops		13.09 lbs.		16.17 lbs.
6 drops		15.71 lbs.		19.40 lbs.
7 drops		18.33 lbs.		22.64 lbs.
8 drops		20.94 lbs.		25.87 lbs.
9 drops		23.56 lbs.		29.11 lbs.
10 drops		26.18 lbs.		32.34 lbs.

*Sodium Bisulfate may vary. See Treatment Table Tips in Chapter IX.
NOTE: Taylor 2000 Test Block uses R-0005 Acid Demand Reagent (ADR)
Taylor #4024 Test Cell uses R-0853 Acid Demand Reagent (ADR)

TABLE G

MAINTENTANCE PROCEDURES, FORMS, INFORMATION
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To Increase Alkalinity Using Baking Soda
 (Sodium Bicarbonate, 100%)

Volume of Water				
Desired Increase In ppm		34,000 gallons		42,000 gallons
10ppm		4.76 lbs.		5.88 lbs.
20ppm		9.52 lbs.		11.76 lbs.
30ppm		14.28 lbs.		17.64 lbs.
40ppm		19.04 lbs.		23.52 lbs.
50ppm		23.80 lbs.		29.40 lbs.
60ppm		28.59 lbs.		35.32 lbs.
70ppm		33.35 lbs.		41.20 lbs.
80ppm		38.08 lbs.		47.04 lbs.
90ppm		42.84 lbs.		52.92 lbs.
100ppm		47.60 lbs.		58.80 lbs.

TABLE H

To Decrease Alkalinity Using Dry Acid
 (Sodium Bisulfate, 93.2%)

Volume of Water				
Desired decrease In ppm		34,000 gallons		42,000 gallons
10ppm		7.31 lbs.		9.03 lbs.
20ppm		14.62 lbs.		18.06 lbs.
30ppm		21.93 lbs.		27.09 lbs.
40ppm		29.21 lbs.		36.08 lbs.
50ppm		36.38 lbs.		44.94 lbs.
60ppm		43.86 lbs.		54.18 lbs.
70ppm		51.00 lbs.		63.00 lbs.
80ppm		58.48 lbs.		72.24 lbs.
90ppm		65.62 lbs.		81.06 lbs.
100ppm		73.10 lbs.		90.30 lbs.

TABLE I

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To Decrease Alkalinity Using Muriatic Acid
(20° Baume/31.45%)

Volume of Water				
Desired decrease In ppm		34,000 gallons		42,000 gallons
10ppm		5.44 pts.		6.72 pts.
20ppm		5.44 pts.		6.72 pts.
30ppm		8.16 qts.		10.08 qts.
40ppm		10.88 qts.		13.44 qts.
50ppm		13.57 qts.		16.76 qts.
60ppm		4.08 gal.		5.04 gal.
70ppm		4.76 gal.		5.88 gal.
80ppm		5.44 gal.		6.72 gal.
90ppm		6.12 gal.		7.56 gal.
100ppm		6.80 gal.		8.40 gal.

TABLE J

To Increase Calcium Hardness Using
Calcium Chloride (77%)*

Volume of Water				
Desired increase In ppm		34,000 gallons		42,000 gallons
10ppm		4.08 lbs.		5.04 lbs.
20ppm		8.16 lbs.		10.08 lbs.
30ppm		12.27 lbs.		15.16 lbs.
40ppm		16.35 lbs.		20.20 lbs.
50ppm		20.43 lbs.		25.24 lbs.
60ppm		24.51 lbs.		30.28 lbs.
70ppm		28.58 lbs.		35.32 lbs.
80ppm		32.67 lbs.		40.36 lbs.
90ppm		36.72 lbs.		45.36 lbs.
100ppm		40.80 lbs.		50.40 lbs.

*Calcium Chloride percentage may vary. See Treatment Table Tips in Chapter IX.

Fast Attack Fire Truck Operation

Though seldom used, the Fast Attack Fire Truck has been a park fixture for many years. Ebbetts Pass Fire Department is our first responder. In most cases, we never use our fire truck because Ebbetts Pass responds almost immediately. There are times, however, when the Fast Attack Fire Truck may be a help to keep a fire from spreading before the fire department arrives. Staff and some members have received training in the use of the fire truck. Maintenance Staff may be called upon to use the truck in an emergency and should be trained in its use. The truck is to be maintained in running condition (battery fully charged) and full of gas and water at all times during fire season.

Oil type SEA 30 (crankcase holds about one quart)
Gasoline unleaded regular or above 85 octane
Keep water tank full during fire season

Procedure for Operation Fast Attack Fire Truck

Before starting pump

Make sure tank is full and drain valve to pump is open (starting the pump dry can damage the seals)

1. Check for gasoline shut off valve to open position.
2. Set choke to full choke on cold days.
3. Move throttle to fast.
4. Turn starter key to on for pull start or turn to start for electric start (run starter for no more than 15 seconds at a time).

After the engine is started

- Turn the hose line reel valve to on.
- Run throttle to 3/4 throttle.
- Open red line nozzle BY (twisting the end of it) It will go to straight stream first then to fog pattern.

During pumping keep water tank from going empty.

Do not run pump for long times without water from outlet. (The pump will heat up and destroy the seals)

To shut down the pump:

- Shut down red line nozzle.
- Shut off red line valve.
- Shut off fuel valve after throttling back on the throttle.
- After the engine has run out of fuel shut key off and put everything back for next use.
- Refill water tank, check fuel tank for full and check oil level in pump engine.

Maintenance of Fire Truck:

- Weekly
 1. Check pickup oil, water, fuel and tire pressure
 2. Check water tank for full
 3. Check pump for fuel level
- Monthly
 1. If the pump has been used in excess of 25 hours, change pump engine oil and clean air cleaner.
- Yearly - in December or after fire season
Lower tank water level to about one half of a tank to reduce weight on the frame.

Maintenance Schedule Fast Attack Fire Truck

Daily

Check fuel level on pick up gauge
Check tires for air
Check portable lights for batteries

Weekly

Check fuel
Engine oil
Water in tank
pump engine
Fuel in pump engine
Oil in pump engine
drained after fire season – usually December 1st of each year.

Monthly

Check oil in pickup engine
Check water in cooling system
Check tire pressure
Check fuel in pump engine
Check oil in pump engine

Yearly

Drain tank to half tank of water to lighten Fuel in load on springs after fire season.
Drain oil & change it in pump engine after fire season. **Note:** Water tank and pump must be

Propane Tank Distribution

Members deposit their empty propane tanks in the Distribution Center prior to 1:00 p.m. for refilling. Maintenance staff then fill the bottles. Maintenance writes a tag to bill the member and places the yellow copy inside the top of the propane bottle and moves the propane tanks to the area where member picks them up. The white copy of the bill is taken to the office to bill member.

There is no smoking in the Propane Distribution area.

Propane Tank Re-certification

Propane tanks must be re-certified after twelve (12) years from date of manufacture and every five years thereafter. Tanks needing recertification will be placed in a specific area at the Propane Distribution Center and our park supplier will pick them up and re-certify them. They submit a bill to the Park Office who, in turn, bills the member.

As of October 1, 1998 all 5, 7 and 10 gallon propane tanks needing certification must have an OPD (Over Protection Device) valve installed. We can not fill propane bottles without the new valve.

Propane State Inspection

The California Department of Weights and Measures checks our Propane Distribution annually to make certain that our gauges are correct and we are dispensing accurately measured propane. A certificate will be given to Maintenance Staff or the office at the time. The certificate will be posted in the office on the wall and a copy will be posted at the Propane Distribution Center as well.

Sewer Plant Operation

Revised 7-16-99 per Robert Jenkins, Waste Water Treatment Facility Operator

Daily Routine:

1. Check and record daily flow readings.
2. Check the final tank surface to see that the skimmer is moving the scum out properly. The floating portion may have to be cleaned or tapped a few times to free it from heavy buildups.
3. Hose down the piping and the tank walls. If water is not available, a broom or brush can be dipped into the final tank contents and used to scrub the walls and piping.
4. Take a sample at the discharge end of the sanuril wastewater chlorinator and check the amount of residual chlorine. Between 1 and 2 mg/l is desirable, but local regulations usually fix the amount. A simple color comparison test kit comes with the sanuril wastewater chlorinator package.
5. Check that all mechanical equipment is functioning properly and keep track of lubrication schedules for the mechanical equipment.
6. When you are working with the COMPLETEIRE plant or walking on it, be careful to safeguard against accidents. A peculiar feature with sewage treatment plants is that when the tanks are empty and falling would mean an 8' to 10' drop to a solid steel floor, it appears that the necessity to have a firm footing is greater than when the tanks are full and the water surface is only a few inches below your feet. **DON'T BELIEVE IT**

Spray System

Depending upon the time of year and climatic conditions, the treated effluent will flow by gravity either to the pond or pump station.

During the summer months the treated effluent will flow directly to pump station where it will be stored in the wet well which is equipped with a Automatic Liquid Level float Switch. When the liquid rises to the Turn On Level the pump will automatically come on and pump the effluent into the sprinkler system at a rate of 200 g.p.m. for four minutes at a precipitation rate of 0.11 inches per hour. If weather conditions are not conducive to spraying, the treated effluent will be diverted directly into the sewerage pond for storage and future spraying.

No spraying will take place during the winter months. All treated effluent will be stored in the pond for future spraying.

Robert Jenkins, Waste Water Treatment Facility Operator

Date

SEWER PLANT DAILY LOG

MONTH:

DATE	CHLORINE		GREASE	SLUDGE	COMMENTS
	OK	ADD			
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					

SEWER/WASTEWATER

PLANT MAINTENANCE SCHEDULES

A. COMMINUTOR

1. Check oil level – once a week.
2. Change oil – every 1500 hours.
3. Ball bearings –every 5 years or when needed.
4. Sleeve bearings – every 2 years or when needed.
5. Check, drain and clean Comminutor housing daily or every other day.

B. BLOWERS

1. Check oil level daily.
2. Drain oil first 500 hours, thereafter every 1500 hours.
3. Lubricate bearings on drive end of blower every 500 hours.
4. Clean air filter every 4 months.

C. CHLORINATOR

1. Lubricate once a year.
2. Use mixture of 1 gallon of liquid chlorine to 30 gallons of water (mixture can be adjusted if necessary).

D. TRAVALIFT

1. Check oil level daily in chain case.
2. Lubricate with LPS silicone lubricant on exposed moving parts.
3. Lubricate external chain and trolley wheel and track with grease.

E. AEROBIC DIGESTER AND AERATION TANK

1. Have tanks pumped by outside agency as needed when density of the sludge becomes apparent. (do not remove more than 1,000 gallons maximum)

*** Lift station cleaning to be done by our personnel before calling outside septic pumping company

Approved by Robert Jenkins 11-11-2000

Fencing around the aeration tanks has been installed. It is now permissible for one man to go the Sewer Plan for daily maintenance. He must let the office personnel know when he is going and when he leaves. Check on him if no contact from him within 15 minutes.

SEWER PLANT CONTINGENCY PLAN IN CASE OF EXTENDED POWER FAILURES

- 1) Close all restrooms except #1, #2, #3 and #5 which have gravity flow to the Sewer Plant.
- 2) Turn all motors off at Sewer Plant and lift stations until power is restored, to prevent a power surge or drag when power is restored.

When power is restored, place all facilities back on automatic or timer as required and reopen the restrooms.

If further information or instructions are necessary, call Bob Jenkins at 916-456-5038.

Water Supply System Information

Water is supplied to CTTA by Calaveras County Water District. There is a storage tank across Sheep Ranch Road. The water is gravity fed to the Park.

Check the level of the water in the tank monthly. Check the level weekly during the summer and especially just before a holiday weekend.

If the indicator is at the top of the tank is at the 1, the tank is empty and the Park has no water. The water starts going off at the top end of the Park first as it is gravity fed. Usually the resident mobiles are the first to be alerted that there is a problem.

If the water level drops notify CCWD immediately. There is a pumping relay down Sheep Ranch Rd. approx. ¼ mile on the right hand side of the road. It is green. If the breaker for the pump gets thrown, the tank stops being filled.

We have a problem about once a year when the tank may run dry so that is why we monitor it. Once we make the call to alert them we usually have water within an hour.

During the summer it is especially important to monitor the tank because of the danger of fire.

There is also an alert to them if the level drops a specific number of gallons in an hour. This tells them that we have a broken pipe or some problem that is causing us to use water at a higher rate than normal. If this happens CCWD will alert us.

Water lines throughout the park etc. (See Dennis Olson)

Spring Season Opening Procedure for Maintenance Staff

(April - May, weather permitting)

- Remove all outside tables, benches, lounges, etc. from winter storage locations. Check for conditions, make any necessary repairs.
- Inspect all vehicles - mule, dump truck, pick ups and make any needed repairs.
- Inspect "bitch" pot, check to see that motor operates efficiently
- Replace all P traps at the comfort stations.
- Turn on ice machines. Check condition. Notify Jack Frost Ice if any problems as the machine belong to them.
- Verify with SEI in Arnold our start date for our standing order for dumpsters for the summer.
- Clean pool area. Check all equipment for pool and make any necessary repairs. Check supply of chemical and purchase what is necessary.
- Remove pine needles/leaves from all roofs of all buildings.
- All buildings must have 30' clearance of all burnable materials.
- Fire extinguishers must be re-certified.

Fall Procedures for Maintenance Staff

After Labor Day

- Close pools and perform winterizing tasks. (See Winter Time Pool Shut Down Procedure in maintenance manual.) Chlorine is to be added monthly and pumps run when temperatures drop to keep from freezing.
- Put all pool furniture (clean first if necessary) into dressing rooms
- Put furniture from deck of Commissary inside building.
- Remove P traps from all comfort stations before rains/snow.
- Turn off electricity to water heaters in comfort stations - remind members to call ahead when coming
- Check snow chains for proper fit and condition
- Inspect snow plow for needed repairs and get in top shape
- Put all tables, benches, etc. under Hani for storage
- Clean ditches/culverts
- Clean Green Belt (Fire Reduction Plan) as scheduled
- Repair/Replace/Paint road signs, walkway signs
- Paint buildings, including comfort stations as needed.
- Repair buildings including window caulking, roofs, siding, whatever is necessary
- Place foam in swamp cooler in Commissary – cover
- Split and stack firewood for Winter

Continuous - all year

- Replace bumper logs as needed
- Remove dead limbs over roads and around comfort stations, buildings as needed

Safety For Maintenance Staff Various Locations

Safety of our personnel is of major concern to CTTA. A hand-held radio shall be with staff at all times. The following guidelines are written to help prevent injury to our staff as they perform maintenance duties in all areas of the park. Safety instruction by Maintenance Supervisor shall be given weekly, documented and kept in file in the park office. When a specific task is assigned which may present a specific safety issue, Maintenance Supervisor shall take the time to remind staff to wear protective gear or take extra precaution. The following are standard safety requirements for various locations:

Garage, Workshop and Firehouse:

What is Done There: Miscellaneous jobs in performance of maintenance, repair, and or fabrication of items used for park operations.

Safety Requirements:

1. Safety glasses shall be worn whenever any work is being done that could possibly cause eye injury. Recommend wearing safety glasses whenever you are in the garage, workshop or firehouse regardless of the work you are doing.
2. Leather gloves shall be worn whenever there is a possibility that a hand injury could occur (welding, sanding, etc.).
3. Leather apron and welding goggles and helmet shall be worn when using welding equipment for prevention of clothes catching fire, and blindness.
4. Welding of any type shall be done in a well-ventilated area only.
5. Spray liquids or volatile substances should be used only in well-ventilated area. The side door shall be open to provide a cross draft for fresh air, if above application/use of liquids cannot be used outside.
6. Use a mask to prohibit breathing in floating debris while doing various jobs, when necessary.
7. "No smoking" is to be observed in any area while above substances and/or other flammable liquids are being used.
8. Use of safety guards on all equipment is mandatory.
9. Safe lifting techniques must always be followed.
10. Earplugs should be used whenever cutting, drilling, or use of any equipment that causes loud noise.

Battery Room

What is Done There: Receive uncharged batteries and charge them. Handle batteries with acid enclosed.

Safety Requirements.

1. No smoking in the battery charge area at any time.
2. Eyewash should be present before any charging is started.
3. Safety glasses and gloves must be worn when handling batteries.
4. Acid neutralizer must be present in case of spillage, before any recharging takes place.

5. Apron should also be worn to minimize acid splash or liquid from getting on work clothes.

Sewer Plant

What is Done There: Cleaning, painting, maintenance and repair of equipment at each station.

Safety Requirements:

1. Eye, ear, and hand protection should be used as required.
2. Proper lifting techniques need to be followed.
3. All safety devices on machinery should be used.
4. No one should be in the plant alone. Revised 11-2000 to read - After installing fencing around aeration tanks, it is permissible for one man to perform the necessary maintenance.
5. Let someone know you are going to the Sewer Plant.
6. Always have radio with you.

Comfort Stations

Work Done There: Cleaning, painting, maintenance and repair of equipment at each location.

Safety Requirements:

1. When using cleaning substances, safety glasses and gloves must be used.
2. When repairing or maintaining equipment located in the comfort stations, use the appropriate items to prevent injury to yourself or to others.

Burn Location

Work Done There: Burn brush and debris collected throughout the park . Operate fire hose and/or other equipment used to prevent fire from spreading from designated burn area. Use of rakes, pitchfork, shovel or hand tools.

Safety Requirements:

1. Safety glasses shall be worn to prevent eye injury while doing any work at location.
2. Use a mask to prohibit breathing in floating debris and smoke.
3. Personnel should stay upwind from burn area whenever possible while monitoring the fire burning. If the need is to stay down wind for any extended period of time, the proper equipment should be worn; this may include wearing breathing apparatus.
4. Gloves should be worn to prevent hand injury.
5. If loud machinery, namely a chain saw, needs to be used, then earplugs are to be worn.
6. Proper lifting techniques are to be followed.

Pool Area and Pump Room

Work Done There: Miscellaneous maintenance, repair, and use of pool chemicals. Unrolling or rolling up pool cover, hosing down area, moving furniture.

Safety Requirements:

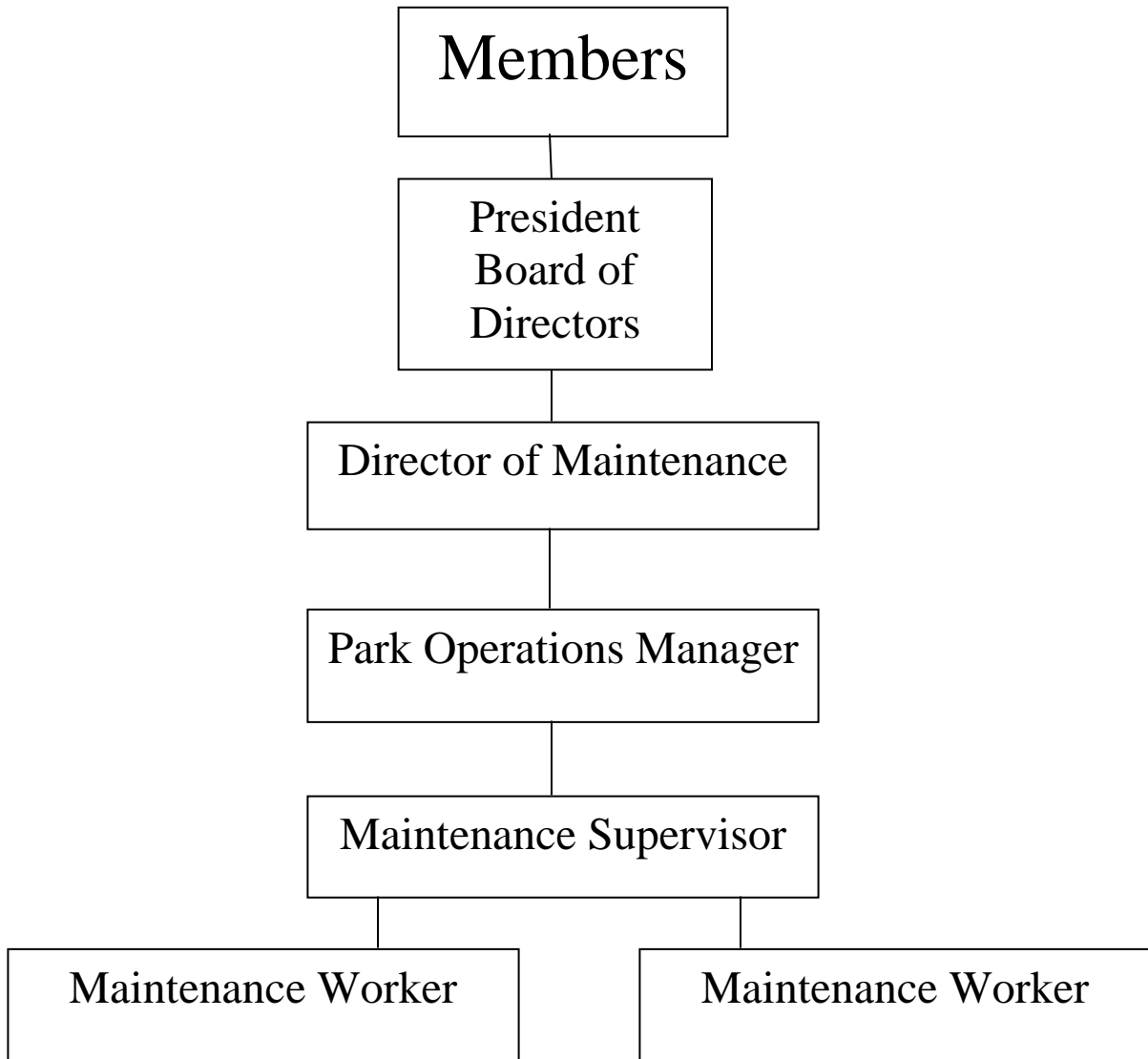
1. The use of safety glasses, gloves, ear plugs, protectors, safety shields, masks and any other safety devices as needed to safely perform the job, is mandatory.
2. Proper shoes shall be worn while working in the pool area or pump room. No sandals, or thongs.

Other Duties as Assigned

Park Maintenance Staff are assigned various duties throughout the day depending on the need. Some of the “other duties” are described below.

- Assist in setting up chairs or tables for a park event.
- Playground cleaning and maintenance
- Green Belt areas maintenance for fire safety – including weed eating, raking
- Baseball field and grassy areas around park may need mowing
- Laundry room is cleaned and maintained
- Library is cleaned and maintained
- Commissary cleaned and maintained
- All buildings, including office need windows washed routinely
- Resident Housing may need repairs or maintenance
- Tool Shed needs must be maintained inside and out
- Storage Sheds must be maintained inside and out
- Fire House must be maintained inside and out
- Guest Sites are cleaned annually and checked periodically throughout summer season
- Grounds in entrance and pond area are maintained regularly
- Parking lots and roadways are maintained regularly
- Pine needle removal
- Teen Center, Black Bart, Adult Center must be maintained inside and out
- Assist members with propane tank lifting as necessary
- Look-out area may need weed-eating or cleaning
- Common areas throughout the park are to be maintained
- Propane storage tanks throughout park need occasional cleaning
- Moving furniture in office or buildings may be required

The list is endless. Maintenance Staff are here to serve the members of the park, although they are not directed by the members. Maintenance Staff are directed by a specific chain of command. (See Flow Chart on the following page)



As you can see by the flow chart, there is a specific chain of command. Members do not direct maintenance staff nor are other Board Members permitted to direct maintenance staff.

If a member requests something of a Maintenance Supervisor or Maintenance Worker, they should be polite and state they will be happy to assist them, but they must first ask the Park Operations Manager. He then will direct the Maintenance Supervisor who will direct his staff accordingly.

VEHICLE MAINTENANCE

Each vehicle in the park (including golf carts) is maintained by the Maintenance Staff. The charts below are a sample of the forms used to record that maintenance. All vehicles are to be maintained in a neat and clean condition.

76 DODGE DUMP TRUCK

	Date	Date	Date	Date	Date	Date
Motor Oil						
Brake Fluid						
Trans Fluid						
Radiator & Hoses						
Fan Belts						
Battery						
Power Steering Fluid						
Completed by						

86 FORD HONEY BUCKET

Date						
Motor Oil						
Brake Fluid						
Trans Fluid						
Radiator & Hoses						
Fan Belts						
Battery						
Power Steering Fluid						
Completed by						

MAINTENTANCE PROCEDURES, FORMS, INFORMATION
Updated 8/16/12

89 GMC

	Date	Date	Date	Date	Date	Date
Motor Oil						
Brake Fluid						
Trans Fluid						
Radiator & Hoses						
Fan Belts						
Battery						
Power Steering Fluid						
Completed by						

MAINTENANCE PROCEDURES, FORMS, INFORMATION
 Updated 8/16/12

91 DODGE

	Date	Date	Date	Date	Date	Date													
Motor Oil																			
Brake Fluid																			
Trans Fluid																			
Radiator & Hoses																			
Fan Belts																			
Battery																			
Power Steering Fluid																			
Completed by																			