



SOUTH COAST WATER DISTRICT

Providing Quality Water and Wastewater Services to the Coastal Communities

LIFT STATION

QUARTERLY MAINTENANCE PROCEDURES

IMPORTANT NOTE: The proper confined space entry procedures must be followed and a Confined Space Entry Permit must be filled out before entering the wet well. All necessary safety equipment must be in place and used correctly. Proper ventilation must be established and maintained and three people must be present whenever a worker is in the wet well, an entrant, an observer and a supervisor.

- 1) Check grease lubricated bearings. If the grease is whitish in color, water or some other fluid is leaking past the bearing shaft seal causing saponification. When saponification occurs, wash out the bearings with kerosene and replace the grease with the proper type as recommended by the pump manufacturer.
- 2) Grease the pumps and drivelines.
- 3) Remove and replace odor pellets in manhole next to lift station at south side of building.

WET WELL CLEANING

Wet well cleaning is to be done under low peak flow conditions, i.e. midnight. (No exceptions.)

- 4) Enter the station through Ritz Cove. To open gate, push key symbol twice then enter the security code.* Drive down to the station.
- 5) Open the double gate with the Schlage key and park next to the lift Station.
- 6) Check the outer perimeter of the lift station for security breaches.
- 7) Notify the answering service that you will be entering the lift station and will call back after you have completed your work. They will then know that you have tripped any entry alarms they receive.
- 8) Unlock the door with the key stamped "Lift Station 6" and enter the lift station.
- 9) Flip the switch on the right to turn on the lights.

- 10) Do not proceed without a Confined Space Entry Permit sheet. Two people must be present, the worker that will enter the wet well and an attendant.
 - Write the location, date and time on the Confined Space Entry Permit.
 - Remove the hatch cover and test the atmosphere of the wet well for oxygen (O₂), methane (CH₄), hydrogen sulfide (H₂S) and carbon monoxide (CO) and enter the readings on the Confined Space Entry Permit.
 - After you have established that it is safe to enter the wet well, set up the ladder. The entrant will wear a harness with lifeline.
 - Climb down the ladder into the wet well.
 - Take atmospheric readings in the wet well every 15 minutes.
- 11) Remove the railing and covers from the wet well.
- 12) Pump the wet well all the way down to the floor.
- 13) Isolate all three pumps by turning the HAND/OFF/AUTO switch to the HAND setting.
- 14) Use two 12-inch plugs to stop flow into the wet well.
- 15) Monitor the upstream manhole with standby vacuum truck.
- 16) Set up the vacuum truck and start vacuuming.
- 17) Wash down the entire wet well and scrape the walls as necessary.
- 18) Inspect the bubbler system to be sure that pipes and hoses are secured and not cracked or broken.
- 19) Flush the inlet piping to the pump room and visually inspect the piping for foreign matter or debris.
- 20) Remove all tools and equipment from the wet well.
- 21) Remove the plugs that isolate the wet well.
- 22) Allow the water level to rise high enough to bleed all the pumps.
- 23) One at a time, run test each pump by setting the HAND/OFF/AUTO switch to the OFF position. Then switch from the VFD setting to constant speed and let the pump run at full speed for 20 seconds. Observe the wet well level dropping to verify that the pump is working and return the VFD switch to the AUTO setting.
- 24) If everything is ok, set the HAND/OFF/AUTO switch on all three pumps back to the AUTO setting.
- 25) Reset all alarms.
- 26) Return wet well covers and railings to their proper places.
- 27) Contact the answering service to let them know you are finished with the maintenance.
- 28) Remember to turn off the lights and lock the gates as you leave the station.