

PALOMINO LAKES MUTUAL WATER COMPANY (PLMWC)
EMERGENCY POWER POLICY

Rev: 20 May 2021

The following policy will be used in concert with the PLMWC By-laws and CC&R's.

Regulatory Authority:

The PLMWC will follow and adhere to the regulations set forth by the primacy agencies governing the operation of the potable water distribution system and all other regulations concerning the administration and execution of an Emergency Power policy for the system. This policy and program will be modified as needed by changes in law and regulation specific to Emergency Power Supplies for potable water systems to assure compliance with any and all said regulations and laws.

Primacy agencies

- United States Environmental Protection Agency
- California Department of Health Services / Division of Drinking Water
- Sonoma County Permit & Resource Management Department
- Sonoma County Health Department

Specific Regulations

The specific regulations to be adhered to, but not limited to, are the following:

- California Title 22, Division 4, Chapter 15
- https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/documents/lawbook/dwregulations-2016-09-23.pdf, page 25
- https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/documents/security/ddw_emergency_guidelines_0215.pdf

Industry Publications

Further industry publications referenced as guidance documents are:

- AWWA (<https://www.awwa.org/about-us/policy-statements/policy-statement/articleid/198/electric-power-reliability-for-public-water-supply-and-wastewater-utilities.aspx>) and Emergency Power Source Planning for Water and Wastewater (ISBN 9781583213216)

Definition:

“Power Emergency” means the normal power grid (i.e., PG&E) has been partially or completely interrupted for more than two days. If the normal power grid is sporadic or is expected to remain intermittent for several days, PLMWC may execute this policy after an initial interruption of one day.

Notification of Power Emergency:

Once PLMWC personnel have determined that a power emergency is in progress, the board will follow the emergency notification policy to contact all PLMWC customers.

The notification message will contain, at minimum, the following points:

- Reduce the use of water during the emergency in order to conserve system capacity, including prohibitions of using PLMWC water for the following:
 - Plant watering
 - Pool and hot-tub filling
 - “Swamp coolers”
 - Car, boat, other vehicle, and driveway washing
 - Use of more than 150 gallons of water per household per day

- Make sure that any electrically-operated water valves are (and remain) in the Off position during the power failure.

Backup Power Supplies:

Backup power supplies are needed for SCADA system elements, and are expected to run for several days off significantly enlarged backup batteries. The backup power supplies are automatic and fully charged whenever there is PG&E power.

For the generators and other system elements, a set of generators have been installed with full automatic failover and SCADA monitoring and control.

In case of generator and battery failure, all valves and other operations may have to be done manually. Step-by-step procedures will be developed by the system operator.

Backup Power Supply Regular Test and Maintenance:

For any batteries or DC solar panels, the devices will be inspected for corrosion and their output voltage will be tested under load twice a year, to identify items needing repair or replacement. The batteries’ fluid levels will be checked and topped up with distilled water on a quarterly basis. The batteries will probably have to be replaced every 3-5 years.

Generators will be exercised at least once every two weeks via an automated process. Generators will be maintained and refueled (with fuel stabilizer) at least once every year.

The generators’ usage intervals will be recorded on at least a monthly basis. These times may be kept as a spreadsheet or hard-copy logs, and are required by the local air quality management district.

Expected outages and length of water availability:

Although very short power interruptions have historically occurred several times a year in this area, water system operations are essentially unaffected. For longer power outages, the generator and battery system has been designed to automatically keep the system fully operational for at least a week without the need for refueling.

Although there are no records about water usage during extended outages, it is expected that usage would drop significantly even if all households did not obey the prohibitions listed above. With an overall capacity of 150,000 gallons, it is anticipated that the system should be able to run for at least a week even if the generator system were to completely fail.