



California  
Department of  
Health Services  
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Director

State of California—Health and Human Services Agency  
**Department of Health Services**



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Governor

## Operations Plan Requirements

As a minimum, a description of the following items should be included in your operations plan

1. Name, grades, operator certification number and phone numbers (home and work) of all plant operations personnel.
2. Mission statement with an optimization of a plant procedure for reduction of cryptosporidium.
3. Raw water monitoring schedule.
4. Frequency of grab sample monitoring and the points in the treatment process where the samples are to be taken. A schedule for the following grab sample monitoring should be included.
  - a. turbidity
  - b. pH
  - c. temperature
  - d. chlorine residual
  - e. coliform bacteria
  - f. plate counts
  - g. other
5. A plan for monitoring disinfectant contact time and determining log inactivation of viruses and Giardia.
6. A plan for monitoring the distribution system for chlorine residual and plate counts.
7. A summary of the continuous monitoring, alarms and automatic shutdown capabilities.
8. Increased monitoring that may be provided as an alternative reliability feature.



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[www.consumerenergycenter.org/flex/index.html](http://www.consumerenergycenter.org/flex/index.html)

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1350 Front St., Room 2050, San Diego, CA 92101  
(619) 525-4159; (619) 525-4383 fax  
Internet Address: [www.dhs.ca.gov/ps/ddwem/](http://www.dhs.ca.gov/ps/ddwem/)

9. Standardization procedures for all monitoring equipment.
10. Methods for determining appropriate chemical dosages including jar test procedures.
11. Procedures for adjustment of chemical dosages and methods of accurately monitoring chemical feed equipment.
12. Points of application and concentrations of all chemicals fed on a regular basis.
13. Additional chemical feed capability.
14. Start-up and shut-down procedures.
15. A summary of the flow variations through the plant and hours the plant is operated. This should include the proposed maximum flow through the plant and address the maximum filtration rates.
16. Frequency of backwash, criteria for length of filter runs, and filter backwash procedures.
17. A description of the treatment and, detention time provided for solids removal for recycled backwash water.
18. Dates, frequency and procedures for filter media inspection and replacement.
19. A summary of .the operating records maintained.
20. A description of how and when each unit process is operated. This should include any special action taken to compensate for design deficiencies.
21. Preventative maintenance program.
22. A summary of the supply of chemicals available for use.
23. Names and addresses of chemical and equipment suppliers whose products are used regularly.
24. Frequency and dates of clearwell cleaning activities.
25. Emergency response plan for treatment plant and watershed emergencies.
26. Emergency plan for disinfection failure.