

CITRUS HEIGHTS WATER DISTRICT

Disinfection/Sampling Procedure

Adopted: October 28, 2014

Revised: April 30, 2018

General:

The Contractor shall use a licensed Chlorination Specialist for the process of introducing a chlorine solution into the new water system. Said specialist shall maintain an Active C36 (Plumbing) and C55 (Water Conditioning) license with the California State Licensing Board.

Chlorine shall be introduced into the system at a minimum of 50 PPM and a maximum of 100 PPM. The Inspector shall be provided with proof of uniform chlorination throughout the system within the stated range using an approved test procedure. All requirements of the current American Water Works Association standard C651-XX (Disinfecting Water Mains) shall be followed.

Chlorinated water shall be properly disposed of using dechlorination procedures outlined in the current American Water Works Association standard C651-XX (Disinfecting Water Mains) and shall comply with all regulations including the District's Storm Water Discharge Permit. The Inspector shall be provided with proof of uniform dechlorination at a minimum of 10 minute intervals during disposal using an approved test procedure. Dechlorination shall be maintained at 0.0 PPM at all times during any disposal of any water into a drainage system.

Before project construction begins:

1. CHWD Water Quality personnel shall sample for both Coliform (Presence/Absence) and Heterotrophic Plate Count (HPC) on mains adjacent to the project. (SimPlate may be substituted for HPC)

During project:

2. CHWD Project Management personnel will provide a 24-hour notice to the Regional Water Quality Control Board for all flushing events.
3. The newly constructed mains shall be filled by the contractor and purged to remove any trapped air using the District-approved and tested backflow prevention device specification. All best management practices shall be followed to insure no sediment or chlorine reaches any drain inlet or creek.
4. The newly constructed mains shall pass the District pressure check requirements.
5. The mains shall be chlorinated between 50-100 ppm for a minimum of 24 hours by the contractor using an approved chlorination specialist.
6. The chlorine concentration shall be checked after 24 hours and a minimum residual of 25 ppm must be present throughout the new mains.
7. The mains shall be flushed by the contractor until the chlorine concentration matches the normal system residual. All best management practices shall be followed to insure no sediment or chlorine reaches any drain inlet or creek.

8. CHWD Project Management personnel shall submit a sampling plan to the Operations Manager for approval.
9. CHWD Water Quality personnel, when practical, will collect Coliform and HPC samples according to the approved sampling plan. The sampling schedule will be submitted to the Operations Manager and the Water Quality Supervisor with at least a 24-hour notice.
10. Samples shall be taken for both Coliform and Heterotrophic Plate Count (HPC) at 24 and 48 hour intervals after completion of flushing.
11. CHWD Project Management personnel shall submit negative sample documentation to Operations Manager for acceptance prior to the any connections to the CHWD distribution system. Sample result documentation generally takes 3-5 business days after samples are delivered to lab.
12. CHWD Water Quality personnel will sample mains downstream of project for Coliform and HPC after the new main is connected to the CHWD distribution system.

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Timetable for Disinfection/Sampling Procedure

Adopted: October 28, 2014

The Contractor shall allow 8-10 business days for the Disinfection/Sampling Procedure prior to any connection to the District's distribution system. Larger systems will require additional time for chlorination and flushing. Bacteriological samples shall only be collected between 8:00am and 2:00pm Monday through Thursday. Any positive results on any sample taken shall require a repeat of the Disinfection/Sampling Procedure until all samples test negative. HPC samples require a plate count of less than 500 on any sample taken.

1. DAY 1 - Chlorinate new mains to 100 PPM and complete to allow flushing time on following day.

---24-hour chlorine detention period---

2. DAY 2 - Flush new mains to normal residual and complete before 2:00pm. (Similar to system residual)

---24-hour sampling detention period---

3. DAY 3 - Obtain first Coliform and HPC samples before 2:00pm.

---24-hour sampling detention Period---

4. DAY 4 - Obtain second Coliform and HPC samples before 2:00pm.

---3 to 5 business days for laboratory testing and review---

5. DAY 7-9 - Sample documentation provided to Operations Manager and customer notification of shut-down

---24-hour notification period---

6. DAY 8-10 - Connection to CHWD distribution system only after clearance from Operations Manager is received.