LAS DELTAS MUTUAL WATER COMPANY

OPERATION AND MAINTENANCE PLAN

FIREBAUGH, CA
SEPTEMBER 2024

PREPARED BY:
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PROVOST&
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1 SYSTEM DESCRIPTION

Las Deltas Mutual Water Company (LDMWC) is a Class D1 community public water system consisting of a water supply pipeline, storage, pumps, and water distribution pipelines, located in Firebaugh, CA. LDMWC is located within the northwestern region of the County of Fresno. The service area is roughly bounded by Bullard Avenue, Ashlan Avenue, Highway 33, and Washoe Avenue. The system provides water to approximately 375 residents through 107 services connections, which include 96 unmetered residential connections, 10 unmetered commercial connections, and 1 metered commercial connection. The system operates under Domestic Water Supply Permit No. 03-23-11P-045, issued by the State Water Resources Control Board (SWRCB) on October 4, 2011.

LDMWC purchases bulk potable water from the City of Firebaugh (City), which sources its water from groundwater wells and is pumped to a City-owned storage tank where it is then treated. A portion is then delivered to the LDMWC system via a single pipeline that feeds to the LDMWC's water storage tanks located at the intersection of North San Diego and West Shaw Avenues.

A booster pump transfers water from the LDMWC storage tanks through a hydropneumatic tank. LDMWC operates within a single pressure zone. The tank site is secured by a chain link fence and contains three welded steel storage tanks, each with a capacity of approximately 30,000-gallons. Additionally, the site has one 10,000-gallon hydropneumatic pressure tank with a top-mounted air compressor, and a horizontal end-suction booster pump.

1.1 OPERATING PERSONNEL

LDMWC is required to have a certified D-1 Water Distribution System Operator. See the table below for a summary of the operating personnel for the LDMWC water system.

Table 1-1. Operator Information

OPERATOR NAME	DATE OF CERTIFICATION	TYPE OF CERTIFICATION	CERTIFICATION NUMBER	CONTACT INFORMATION
Jason Sherrell, Chief Operator Central California Water Works	-	CA State Licensed Water Treatment and Distribution Operator Grade T3-D3	Contractors License #1037059 Cert#29993	jsherrell@centralcalwaterworks.com (559) 575-5627

2 O&M PROCEDURES

The following sections discuss routine operational procedures for each component of the system. Records of all inspections must be kept by LDMWC administrator (see Appendix A).

2.1 STORAGE TANK INSPECTIONS

The water storage tanks shall be visually inspected monthly to ensure the structures are in satisfactory condition and properly secured. Inspections should document any leaks or damage requiring repair, as well as the operating pressure. Any malfunctions or damage should be scheduled for maintenance as soon as feasible. Records of these inspections must be maintained. Access hatches should remain locked, and all openings to the tanks should be properly screened. Roofs must prevent the entry of contaminants. The Division recommends that the water system inspect the interior of the storage tanks at least once every five years to verify the integrity of the tank coating, assess the condition of the inside surfaces of the tank walls, and clean the tanks if necessary.

LDMWC has three distribution storage tanks and one 10,000-gallon pressure tank. The pressure tank must be checked for water leaks, structural damage, compressor operation, and pressure gauge functionality.

2.2 DISINFECTANT RESIDUAL INSPECTIONS

The water system's sole source of domestic water is treated, purchased water from the City of Firebaugh (Public Water System No. 1010005). LDMWC is not permitted to provide any treatment.

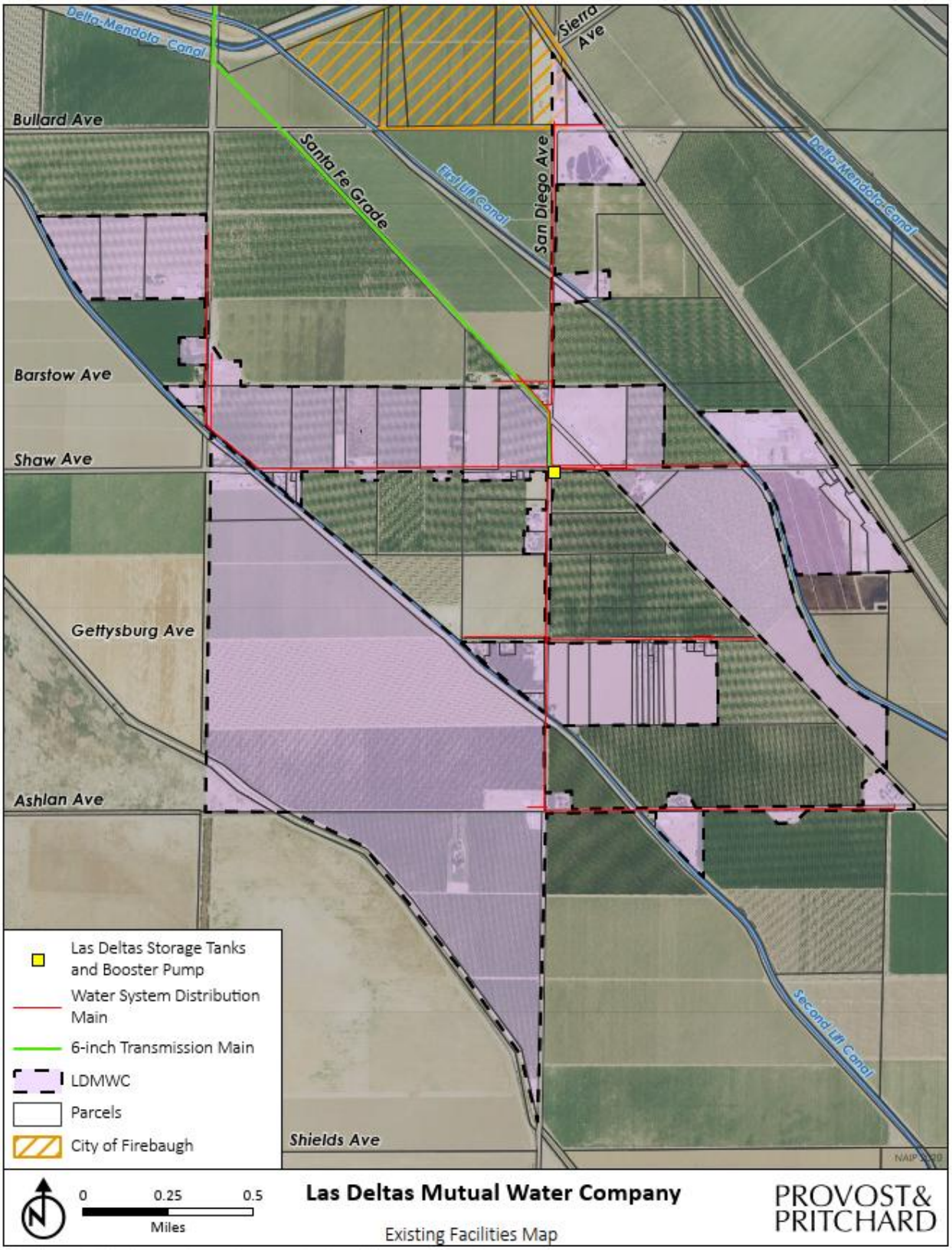
2.3 MAINTENANCE OF GAUGES AND METERS

The operator shall visually inspect all gauges monthly, noting any leaks or damage. Any malfunction or damage must be scheduled for maintenance as soon as feasible. Flow meters must also be inspected monthly upon installation. Routine calibration checks should be scheduled to ensure accurate readings.

2.4 VALVE INSPECTIONS AND EXERCISING

A water system must have adequate valves to isolate portions of the distribution system that require repair. Valves must be maintained in working order. The system's valves shall be visually inspected monthly, with inspections documenting any leaks, damage, or exposure required due to paving operations by others. Valves should be exercised every six months on a rotating basis. Any malfunction or damage must be scheduled for maintenance as soon as feasible. Infrastructure maps will be updated to reflect any new valve installations in the system. See Figure 1 for the LDMWC Existing Facilities Map.

Figure 2-1. Existing Facilities Map



2.5 MAINTENANCE OF DISTRIBUTION FACILITIES

The LDMWC operator completes regular visual inspections of the distribution system to identify and address leaks or deficiencies, with corrective action taken as soon as possible. Maintenance responsibilities are clearly divided between LDMWC and individual property owners to ensure proper system management and financial liability.

Water System Responsibilities

LDMWC is responsible for:

- Public Distribution Lines – Maintenance and repairs of transmission mains and service lines located within the Public Right-of-Way (ROW) or other easements under LDMWC's jurisdiction.
- Meter Infrastructure – Upkeep of meter boxes, meters, and all components upstream of the meter used for flow measurements and service.
- System Condition and Regulatory Compliance – Addressing leaks, failures, or deficiencies in the public distribution network to maintain regulatory compliance and water quality standards.

Property Owner Responsibilities

Property owners are responsible for:

- Private Service Lines – Maintenance and repairs of piping extending from the meter box to the building or point of use.
- Unmetered Connections – For properties without a meter, responsibility begins at the parcel or fence line, where the private service line connects to the water system.
- Internal Plumbing and Backflow Prevention – Maintenance of internal plumbing and water system infrastructure on private property to prevent leaks, pressure drops, or cross-contamination risks that could affect the LDMWC system.

This division of responsibility is based on ownership rights, financial liability, and regulatory standards. LDMWC maintains infrastructure in the public ROW, where it has legal access and operational control, while private service lines fall under the jurisdiction of individual property owners. This ensures that costs are addressed by the party responsible, with LDMWC funding public infrastructure maintenance and property owners covering their private property expenses. Water utilities are required to maintain public health standards up to the meter, while private plumbing systems beyond this point should adhere to local plumbing codes. The same division of responsibility applies to cross-contamination risks, backflow issues, and service disruptions, ensuring system integrity.

Exceptions to these responsibilities may be considered on a case-by-case basis, such as in cases of emergency repairs, shared service lines, or pre-existing agreements with property owners.

3 MONITORING AND REPORTING

The following sections describe the bacteriological and chemical monitoring as required by the State Water Resources Control Board, Division of Drinking Water (DDW) on a periodic basis. All sampling data for bacteriological and chemical sampling shall be kept for five years and 10 years, respectively.

3.1 BACTERIOLOGICAL MONITORING

Bacteriological Monitoring Plan (BSSP) including Groundwater Rule compliance is on file with DDW. One sample is collected monthly at the tank inlet and outlet. Three samples are collected in response to a total coliform positive sample, and include the original sample point(s), an upstream sample, and two downstream samples. DDW Fresno District Office must be contacted if positive. Coliform sample results are reported directly by the lab to DDW by the 10th of each month, following sample collection.

If the system is actively being chlorinated the water system is required to collect monthly raw water samples.

3.2 CHEMICAL MONITORING

As required by DDW, the certified laboratory submits results electronically (directly) to DDW. Frequency and status of monitoring is found at LAST AND NEXT SAMPLE REPORT (ca.gov). The Monitoring Schedule is included in Appendix B.

LDMWC is required to conduct routine lead and copper monitoring of its water sources at specified intervals and can be generated using the Drinking Water Watch website found at Next Lead and Copper Sample Due Dates (ca.gov). LDMWC is required to collect five lead and copper samples in a frequency of three years.

California Code of Regulations (CCR) Title 22 Chapter 15.5 requires LDMWC monitor and report disinfection biproducts and residual disinfection levels. The water system is required to continue quarterly monitoring following an exceedance of the Total Trihalomethane (TTHM) MCL in 2016. The approved sample site for TTHM and haloacetic acid five (HAA5) is: 35175 West Shaw Avenue.

Certified Laboratories:

BSK Associates
California – Fresno Laboratory
687 N. Laverne Avenue
Fresno, CA 93727
Phone: 559-497-2888
Fax: 800-877-8310

In addition to lab results being reported directly to DDW (electronically for samples with a PS code), the following reporting is required for the Las Deltas Mutual Water Company water system:

Table 3-1. Required Reporting

REPORT OR PUBLIC NOTICE	RECIPIENT	FREQUENCY
Quarterly Progress Reports	DDW: Public Notifications (PN), Proof of Public Notifications (PON) and Quarterly Progress Reports (QPR) Customers: Public Notifications	Quarterly
Consumer Confidence Report	Customers & DDW	Annual: Customers must receive a copy by July 1 of each year and a CCR Certification is due to DDW by October 1 of each year (with a copy of the CCR distributed).
Electronic Annual Report	DDW	Annual
AIR Clearinghouse Reporting	DDW	Data entered monthly in Drought Conservation Reporting, submitted as a report annually

3.3 RETENTION OF RECORDS

Records shall be maintained as follows:

Table 3-2. Record Keeping

RECORD TYPE	TIME	REFERENCE
Records of Microbiological Analyses	5 years	Section 64470(b)(1)
Records of Chemical Analyses	10 years	Section 64470(b)(1)
Communications Related to Sanitary Surveys	10 years	Section 64470(b)(3)
Copies of Public Notices	3 years	Section 64470(b)(5)

4 EMERGENCY OPERATIONAL PRACTICES

A draft Emergency Response Plan is included. The Plan will be revised within six months of the start of the 2024 Administrator Order (No. 23-E1-24R-001). The plan is to provide response guidance, information, and tools to protect the lives and well-being of employees, customers, and contractors; minimize damage to property, while restoring service as soon as possible; protect the environment; and provide emergency public information concerning water quality as soon as possible. The ERP is an all-hazards response plan whether it is a natural disaster or manmade.

4.1 CROSS – CONNECTION AND BACKFLOW PREVENTION

LDMWC does not have a comprehensive Cross Connection Control Program (CCCP) to protect the system from contamination due to backflow events.

The system is required to conduct a cross-connection control survey. The survey will include the identification of any cross-connection and backflow hazards, the mitigation of those hazards through the installation of appropriate backflow prevention assemblies, and the routine testing of those assemblies by qualified testers.

5 OPERATIONAL REQUIREMENTS

5.1 TREATMENT PLANTS

There are currently no treatment plants serving the LDMW. Water is supplied to the LDMWC from the City of Firebaugh water system. The City of Firebaugh water system provides water treated for iron, manganese, and arsenic.

5.2 MAINTAINING DISTRIBUTION SYSTEM PRESSURE

Distribution systems must always be maintained under pressure to prevent contamination from entering the system. System pressure is checked whenever the operator is on site. One hydropneumatic tank provides pressure to maintain >25 psi throughout the distribution system during peak demand.

5.3 RESPONDING TO LOSS OF PRESSURE

If the distribution system is depressurized, the water system operator must promptly restore pressure and take corrective action to monitor and restore water quality. Corrective action includes reporting the event to management and water quality staff. The Compliance Officer will communicate with DDW as appropriate and may direct additional water quality monitoring.

A loss of pressure below 5 psi requires Tier 1 public notice (Boil Water Notice) and bacteriological sampling per DDW recommendation. If pressure drops below 5 psi, DDW and the system operator must be contacted immediately.

5.4 MAIN DISINFECTION PROGRAM

In accordance with AWWA Standard C651-05, new mains are disinfected and sampled for bacteriological quality. Main repairs that result in loss of pressure will also be disinfected and tested as described in the AWWA Standard.

5.5 SYSTEM FLUSHING PROGRAM

There is no hydrant or blow-off at the end of the distribution system and so system flushing cannot be conducted.

5.6 DISTRIBUTION SYSTEM MAP

Each water system should maintain an accurate map of the distribution system piping and valves. The map should be sufficiently detailed to enable maintenance personnel to promptly locate facilities for repair or operational purposes. All valves and pipes are shown on the system's plans. They are updated as repairs are made. Fixed facilities are also be shown on the map.

Las Deltas does not have historical records or drawings documenting the existing locations of the subsurface system components.

In 2022, Provost & Pritchard were consulted by LDMWC to conduct an infrastructure study and develop an infrastructure map due to concerns about the existing system. Utility locating services were provided by Bess Test Labs (BTL), utilizing ground-penetrating radar to locate water lines. This effort, combined with a topographic survey, aerial imagery, and local informant consultation (Miguel's Plumbing), resulted in an infrastructure map that is intended to be a living document.

5.7 DISTRIBUTION SYSTEM RECORD KEEPING

At a minimum, the following records are maintained for three years after occurrence:

- Date, time and cause of any system pressure loss
- Corrective action taken in response to system pressure loss
- Distribution system repairs and maintenance, including the date, location and reason for repairs

5.8 WATER USAGE RECORDS

The production meter readings shall be taken monthly and maintained for eAR reporting. The city of Firebaugh has installed a master meter to track water usage by Las Deltas Mutual Water Company. Water systems are required to meter all service connections by 2032.

6 RESPONSE TO VIOLATIONS

The SWRCB DDW has issued the following citations to LDWMWC:

- *Citation No. 03_23_17R_003 for MCL exceedance of TTHM locational running annual average (LCRAA)*
- *Citation No. 03_23_21C_061 for failure to submit Consumer Confidence Report (CCR) and Certification Form to the SWRCB*
- *Citation No. 03_23_21C_020 for failure to submit Annual Report in 2020.*

6.1 PUBLIC NOTIFICATION PROCESS

Customers of the water system will be notified of any water quality violation through quarterly notification reports, and annual Consumer Confidence Reports. If the violation is of a primary constituent or poses a health risk, the customers will be notified in accordance with the Emergency Response Plan (see **Appendix D**).

The notification will include a description of the problem, how it is being addressed and corrected, and a timeline of when the correction should be effective. A copy of the notification shall be sent to the DDW Fresno District office and posted to the water system's website.

7 COMPLAINT RESPONSE PROCEDURE

LDMWC shall record all consumer complaints and take appropriate action to remedy the situation, if warranted. The complaint procedure includes the following steps:

1. *Receipt of Compliant Form (see* Appendix A*)*
2. *Record in complaint log (name, address and nature of the problem)*
3. *Investigate the complaint*
4. *Verify or dismiss the complaint*
5. *Record the steps taken to address or correct the problem*
6. *Notify complainant of action taken*
7. *Manager reviews the action taken and identifies if a follow-up is required*
8. *Records of complaints and corrective actions are maintained*
9. *Report in the Electronic Annual Report (eAR)*

APPENDIX

APPENDIX A: STANDARD FORMS

PROVOST&PRITCHARD
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455 W Fir Ave • Clovis, CA 93611 • (559) 449-2700
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LAS DELTAS MUTUAL WATER COMPANY

Location: Firebaugh, CA **PWS#:** CA1000054 **Completed by:** Central Cal WW Inc.

INSPECTION FORM					
1.	DATE	TIME	PRESSURE VESSEL INFO Pressure: Visual Inspection:	STORAGE TANK INFO Visual Inspection:	DISTRIBUTION SYSTEM INFO Visual Inspection:
2.	DATE	TIME	PRESSURE VESSEL INFO Pressure: Visual Inspection:	STORAGE TANK INFO Visual Inspection:	DISTRIBUTION SYSTEM INFO Visual Inspection:
3.	DATE	TIME	PRESSURE VESSEL INFO Pressure: Visual Inspection:	STORAGE TANK INFO Visual Inspection:	DISTRIBUTION SYSTEM INFO Visual Inspection:
4.	DATE	TIME	PRESSURE VESSEL INFO Pressure: Visual Inspection:	STORAGE TANK INFO Visual Inspection:	DISTRIBUTION SYSTEM INFO Visual Inspection:

https://us-partner-integrations.egnyte.com/msoffice/wopi/files/cb2312d6-6bba-46e5-bd58-9419772d671f/WOPIServiceId_TP_EGNYTE_PLUS/WOPIUserId_258.ppeng.egnyte.com/Inspection Form.docx

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LAS DELTAS MUTUAL WATER COMPANY

Date: Date **Time:**

COMPLAINT FORM

NAME OF PERSON SUBMITTING COMPLAINT
Name:

CONTACT INFO
Phone Number:
Address:
Email:

NATURE OF COMPLAINT

RESULT OF INVESTIGATION

ACTION TAKEN

DATE COMPLAINANT CONTACTED
Date:

INTIALS OF PERSON INVESTIGATING COMPLAINT

INITIALS OF PERSON TAKING COMPLAINT

https://us-partner-integrations.egnyte.com/msoffice/wopi/files/37b9674a-000f-4f73-8a4b-1366cb6e3ada/WOPIServiceId_TP_EGNYTE_PLUS/WOPIUserId_258.ppeng.egnyte.com/Complaint Form.docx

APPENDIX B: MONITORING SCHEDULE

LAS DELTAS MUTUAL WATER SYSTEM - 35175 W ...* (1000054-901)

LAST AND NEXT SAMPLE REPORT

PS Codes	Group Name	Analyte Number	Analyte Name	Detected Level	Less Than	RL	Unit	MCL	DLR	Last Sampled	Frequency	Next Due	Notes
CA1000054_DST_901	DISINFECTION BYPRODUCTS-202104	2943	BROMODICHLOROMETHANE	7.500		1.000	UG/L		1	01-13-2021	3	2021/04	DUE NOW
CA1000054_DST_901	DISINFECTION BYPRODUCTS-202104	2942	BROMOFORM	58.000		1.000	UG/L		1	01-13-2021	3	2021/04	DUE NOW
CA1000054_DST_901	DISINFECTION BYPRODUCTS-202104	2941	CHLOROFORM		<	1.000	UG/L		1	01-13-2021	3	2021/04	DUE NOW
CA1000054_DST_901	DISINFECTION BYPRODUCTS-202104	2454	DIBROMOACETIC ACID	19.000		1.000	UG/L		1	01-13-2021	3	2021/04	DUE NOW
CA1000054_DST_901	DISINFECTION BYPRODUCTS-202104	2944	DIBROMOCHLOROMETHANE	41.000		1.000	UG/L		1	01-13-2021	3	2021/04	DUE NOW
CA1000054_DST_901	DISINFECTION BYPRODUCTS-202104	2451	DICHLOROACETIC ACID	1.100		1.000	UG/L		1	01-13-2021	3	2021/04	DUE NOW
CA1000054_DST_901	DISINFECTION BYPRODUCTS-202104	2456	TOTAL HALOACETIC ACIDS (HAA5)	23.000			UG/L	60		01-13-2021	3	2021/04	DUE NOW
CA1000054_DST_901	DISINFECTION BYPRODUCTS-202104	2453	MONOBROMOACETIC ACID	2.300		1.000	UG/L		1	01-13-2021	3	2021/04	DUE NOW
CA1000054_DST_901	DISINFECTION BYPRODUCTS-202104	2450	MONOCHLOROACETIC ACID		<	2.000	UG/L		2	01-13-2021	3	2021/04	DUE NOW
CA1000054_DST_901	DISINFECTION BYPRODUCTS-202104	2950	TTHM	98.000			UG/L	80		01-13-2021	3	2021/04	DUE NOW
CA1000054_DST_901	DISINFECTION BYPRODUCTS-202104	2452	TRICHLOROACETIC ACID		<	1.000	UG/L		1	01-13-2021	3	2021/04	DUE NOW

APPENDIX C: EMERGENCY CONTACT INFORMATION

Emergency Contact Information

NAME	POSITION/ROLE	PHONE NUMBER
Hamish Kellam	Provost & Pritchard, Project Manager	559-449-2700
Heather Bashian	Provost & Pritchard, Principal Engineer	559-449-2700
Shay Bakman	Bakman Water Company	(559) 255-0324
Jason Sherrell	President, Chief Operator, Central California Waterworks	(559)575-5627
Fresno County Public Works	Office	(559) 621-8650
Fresno District Office	Office	559-447-3300
Rakel Hairabedian	SWRCB DDW Fresno District Office, Water Resources Control Engineer	(559) 447-3394
Sudarshan Poudyal	SWRCB DDW Fresno District Office, Water Resources Control District Engineer	(559) 447-3396
Firebaugh Fire Department	Fire Protection	911 (559) 659-3051 Dispatch
Fresno County Sherriff's Office	Law Enforcement	911 Phone: (559) 600-3111
BSK Associates California – Bakersfield Laboratory	Laboratory	Phone: 661-327-0671 Fax: 800-366-0671