Level 1 Validation Certificate

This document verifies that the Level 1 Validation process was completed. The session details and audit review outcomes are included here.

This certificate is required for submission – alongside the Level 1 validated water audit software file – to the California Department of Water Resources.

Call Date: 9/10/2020

Water Supplier

Supplier Name:	Cambria Community Services District
Supplier Participants:	Melissa Bland, Jim Green, Ray Dienzo

Validator

Validator:	Isabel Szendrey, Water Systems Optimization
Validator Qualifications:	Water Audit Validator Certificate from the AWWA California Nevada Section

Key Audit Metrics

Data Validity Score:	62	
ILI:	0.42	
Real Loss:	8.59	gal / conn / day
Apparent Loss:	1.63	gal / conn / day
Non-Revenue Water as Percent of Cost of Operating System:	1.8%	

Certification Statement by Validator

This water loss audit report has been Level 1 validated per the requirements of California Code of Regulations Title 23, Division 2, Chapter 7 and the California Water Code Section 10608.34.

All recommendations on volume derivation and Data Validity Grades were incorporated into the water audit. ☒

Level 1 Validation – Water Supplier Confirmation

This document confirms participation in and endorsement of the Level 1 Validation as completed.

This acknowledgement is required for submission – alongside your Level 1 validated water audit software file – to the California Department of Water Resources.

Water Supplier Name:	Cambria Community Services District
Water Supplier Public Water System ID:	4010014
Water Audit Period:	CY 2019

Water Audit & Water Loss Improvement Steps

Steps taken in the audit period timeframe to increase data source accuracy, reduce real losses, and/or reduce apparent losses, as informed by the water audit.

During calendar year 2019, the CCSD took steps to improve the Water Department's SCADA system, providing more accurate real-time data regarding flow volume and water quality. In addition, the Water Department has pivoted away from patchwork repairs throughout the distribution system and began a program of service line replacement—both responsive and preventative. A Request for Proposals was drafted in 2019 to obtain the services of a leak detection company to perform a system audit and identify potential sources of real loss. A full-time conservation assistant was hired in 2019 to better support the CCSD's water use efficiency and water loss control programs.

Certification Statement by Water Supplier Executive:

This water loss audit report meets the requirements of California Code of Regulations Title 23, Division 2, Chapter 7 and the California Water Code Section 10608.34 and has been prepared in accordance with the method adopted by the American Water Works Association, as contained in their manual, *Water Audits and Loss Control Programs, Manual M36, Fourth Edition* and in the Free Water Audit Software version 5.

Executive Name (print):	Ray Dienzo, PE
Executive Position:	Utilities Department Manager / District Engineer
Signature:	Raymond Dienzo
Date	9/17/2020

Level 1 Validation Summary Notes

This document includes detailed notes about utility practices as reviewed during third-party level-one water audit validation.

This document is not a required submission to the California Department of Water Resources. It is meant to provide background and documentation of the validation process.

Call Information

Utility	Validator
Utility Name: Cambria Community Services District	Validator: Isabel Szendrey, Water Systems Optimization
Utility Participants: Melissa Bland, Jim Green, Ray Dienzo	Validator Qualifications: Water Audit Validator Certificate from the AWWA California Nevada Section
Call Date: 9/10/2020	

Validation Call Notes

Audit Input	Grade	Audit Input Notes	Data Validity Grade Notes
Volume from Own Sources	5	Source Meter Profile: Source of water are San Simian wells (3 wells) and Santa Rosa wells (3 total, but 2 used for potable water and one for non-potable water). Volume reported for San Simian wells (SS1 – SS3) from individual well meters (Mag Meters). Volume reported for SR 3 well from raw water meter minus metered backwash. Volume reported for SR4 is treated water meter. SR wells calibrated in 2016. Derivation: Manual reads from production meters as reviewed and archived. Comments: Input derivation from supporting documents confirmed. Exclusion of non-potable volumes confirmed.	Approximate Percent of Volume Metered: 100% Approximate Percent Tested and/or Calibrated: 40% Calibration Frequency: Within last 5 years but less than annually. Volumetric Testing Frequency: None. Volumetric Testing Method: n/a. Comments: No additional comments.
Volume from Own Sources Master Meter and Supply Error Adjustment	3	Derivation: Left blank in absence of available test data. Change in Storage Considered: No. Comments: 6 storage tanks with levels continuously monitored. Net storage change could be obtained for futures audits.	Source Meter Read Method: Manual and automatic logging. Source Meter Read Frequency: Continuous. Data Review Practices: Each business day. Real-Time Storage Level Monitoring: Yes. Comments: Net storage change as limiting criteria for DVG.
Water Imported	n/a	Import Meter Profile: No imports	n/a
Water Imported Master Meter and Supply Error Adjustment	n/a	n/a	n/a
Water Exported	n/a	Export Meter Profile: No exports	n/a

Water Exported Master Meter and Supply Error Adjustment	n/a	n/a	n/a
Billed Metered Authorized Consumption	5	Derivation: Bi-monthly billing report Customer Meter Profile: Read Frequency: Bi-monthly. Reading Technology: AMR. Approx 20% read manually due to register/encoder malfunction. Age Profile: Most meters are 15 years old Comments: Lag-time correction is not employed in input derivation. Input derivation from supporting documents confirmed. Exclusion of non-potable volumes confirmed. Total consumption from billing report does not include consumption from accounts that started/stopped in that billing period. This total obtained from Deletion Report and added to Billing report totals.	Approximate Percent Metered: 100% Small Meter Testing Practices: Reactive - complaint based or flagged-consumption testing only. Number of Small Meters Tested: 4-6/ year Large Meter Testing Practices: Reactive - complaint based or flagged-consumption testing only. Number of Large Meters Tested: Not specified General Replacement Practices: Meters have generally not failed. Replacements generally upon property remodel/upgrade. Registers/encoder are more likely to fail and those cannot be replaced. Once an encoder fails, meter is then ready manually. Billing Data Review: Standard billing QC, plus review of volumes by use type each billing cycle. Comments: No additional comments.
Billed Unmetered Authorized Consumption	n/a	Profile: No unmetered accounts	n/a
Unbilled Metered Authorized Consumption	10	Profile: Their own facilities' uses and two unbilled accounts. Everything metered and read monthly. Derivation: Direct from meter readings. Obtained from billing report.	Policy for Billing Exemptions: Own facilities plus two exemptions.
Unbilled Unmetered Authorized Consumption	5	Profile: Operational uses and flushing and fire department usage not currently tracked. CA Default input applied. Comments: No additional comments	Comments: Default grade applied.
Unauthorized Consumption	5	Comments: Default input applied.	Comments: Default grade applied.
Customer Metering Inaccuracies	4	Derivation: Rudimentary estimate. Comments: 4 customer meters were tested this audit period to investigate error in meters. *See BMAC comments regarding meter testing & replacement activities.	Customer Meter Testing: Limited (upon request AND consumption flag only). Customer Meter Replacement: Limited (upon failure only). Comments: No additional comments.
Systematic Data Handling Errors	5	Comments: Default input applied.	Comments: Default grade applied.

Length of Mains	8	Derivation: Totaled from GIS based map from 2004. No significant changes in system since then. Hydrant Laterals Included: Yes. Comments: No additional comments.	Map Format: Digital. Asset Management Systems: In place and integrated with GIS system. Map Update Process: Accomplished through normal work order processes. Comments: No additional comments.
Number of Service Connections	8	Derivation: Standard report run from billing system. Basis for Query: Account ID - non-premise based. Comments: Number of accounts considered a very close estimate for number of services. Less than 1% may have multiple accounts to one service.	Field Validation: Accomplished via specific efforts for service inventory, outside of normal meter reading processes. Estimate of Error: 1%. Comments: No additional comments.
Average Operating Pressure	4	How Pressure is Maintained: Several tanks, PRVs, and pump stations separating 8 different pressure zones. Pressure Range: 40 - 120 Derivation: Inferred from observations of pressure readings in field obtained during 2016 at 368 hydrants. Comments: No additional comments.	Pressure Data Collection: Instant hydrant pressures Real-Time Monitoring: Basic - telemetry or pressure logging at boundary points (supply locations, tanks, PRVs, boosters). Hydraulic Model: None currently in place. Comments: No additional comments.
Annual Operating Cost	10	Derivation: From official financial reports. Comments: Confirmed costs limited to water only, and water debt service included.	Auditing Practices: Annually by a third party CPA. Comments: No additional comments.
Customer Retail Unit Cost	10	Rate Structure: Tiered structure with different rates for customer classes Derivation: Total consumptive revenue divided by Billed Metered Authorized Consumption. Sewer charges are based on water meter readings. Sewer revenues are incorporated into calculation. Also incorporated Sustainable Water Facility charge. Comments: No additional comments.	M36 Review: Input calculations have been reviewed by an M36 water loss expert in 2018. Comments: No additional comments.
Variable Production Cost	5	Primary Costs: Own sources only. Secondary Costs: None currently included. Comments: Included Electricity and treatment costs.	M36 Review: Primary costs only. Input calculations have not been reviewed by an M36 water loss expert. Comments: No additional comments.

Infrastructure & Water Loss Management Practices:

Infrastructure age profile: Original system from the 1960's. Most infrastructure was replaced to PVC and AC pipes during the 1980's.

Infrastructure replacement policy (current, historic): Replacing service lines in problematic areas due to large leak rates.

Estimated main failures/year: 0 in 2019 Estimated service failures/year: ~80 per year

Extent of proactive leakage management: 1/3 of the system is surveyed every quarter

Other water loss management comments: Residential leak detection program