American Water Works Association
California-Nevada Section

Validator Provided

CA-NV AWWA Water Loss Technical Assistance Program

Wave 4 Water Audit Level 1 Validation Document

Audit Information:

Utility: San Jacinto PWS ID: 3310032 System Type: Potable Audit Period: Calendar 2016

Utility Representation: Rita Ramirez (accounting), Crystal Yanez (billing), Art Mullen (operator)

Validation Date: 7/27/2017 Call Time: 10a Sufficient Supporting Documents Provided: Yes

Validation Findings & Confirmation Statement:

Key Audit Metrics: Data Validity Score: 51 Data Validity Band (Level): Band III (51-70) ILI: -0.51 Real Loss: -10 (gal/conn/day)

Apparent Loss: 11 (gal/conn/day) Non-revenue water as percent of cost of operating system: 2.3%

The results of the audit present negative losses, which are not plausible. The audit has been Level 1 validated, with confirmation of methodology and examination of summary supporting records. The underlying error(s) creating implausible metrics has not been determined from the summary data, which means the error(s) exist within raw data or measurement instrumentation. Advanced validation beyond Level 1 is required to resolve underlying error(s). The validator's opinion of priority areas needing investigation to resolve underlying error(s) are noted below:

- Level 2 validation on raw data for Billed Metered Authorized Consumption to determine and resolve any instances of potable volume duplication or non-potable volume inclusion.
- Level 3 validation for improved understanding of Supply Meter (Own or Import) Master Meter Error: consider adopting or increasing the rigor of a source meter volumetric testing and calibration program, informed by the guidance provided in AWWA Manual M36 – Appendix A.
- Level 2 validation to confirm temporal alignment of Billed Metered Authorized Consumption with Water Supplied: account level pro-rating the first and last billing cycles of the audit period to better align consumption with actual dates of use, and using read date as basis for reporting.

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. ☒

Validator Information:

Water Audit Validator: Kris Williams / Carolyn Prescott (support) Validator Qualifications: Contractor for CA-NV AWWA Water Loss TAP

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Water System Name: **Water System ID Number:** **Water Audit Period:** Select

Water Audit & Water Loss Improvement Steps:

Steps taken in preceding year to increase data validity, reduce real loss and apparent loss as informed by the annual validated water audit:

<<Information to be completed by Utility>>

Certification Statement by Utility 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.

Dan Mudrovich Water Utility Superintendent 9-26-17