Validator Provided

Certified Water Audit Level 1 Validation Document

Audit Information:

Water Supplier Name: **City of Redlands – Water System**

PWS ID: **CA 3610037**

System Type: **Potable**

Audit Period: **Calendar Year 2018**

Utility Representation: **Cecilia Griego**

Validation Date: **11/25/2019** Interview Time: **1330hrs - 1630hrs** Sufficient Supporting Documents Provided: **YES**

Validation Findings & Confirmation Statement:

Key Audit Metrics:

Data Validity Score: **65** Data Validity Band (Level): **Band III (51-70)**

ILI: **0.73** Real Loss: **15.78 (gal/conn/day)** Apparent Loss: **15.50 (gal/conn/day)**

Non-revenue water as percent of cost of operating system: **2.6%**

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.
YES

Validator Information:

Water Audit Validator: **Steve Dennis**

Validator Qualifications: **Water Audit Validator Certificate issued by the CA-NV Section of the AWWA**

M.E. SIMPSON Co., Inc.

Certified Water Audit Level 1 Validation Document

Utility Provided

Water Supplier Name: City of Redlands **Water Supplier ID Number:** CA 3610037 **Water Audit Period:** Calendar 2018

Water Audit & Water Loss Improvement Steps:

The City of Redlands has demonstrated a recognition of the importance of gaining a better understanding of, and addressing, the water losses within their system. This audit validation (2018 calendar year) has shown a much closer review and oversight of key data input values. It is clear that key focus areas as identified in the 2017 audit have been internally emphasized. The utility now has a greater understanding of programmatic improvements they plan to pursue which should result in reducing water losses moving forward. The following areas for improvement have been identified/recommended and will be studied or pursued for implementation within the coming year. Continued recommendation for utility to conduct annual volumetric accuracy tests and annual meter signal calibration tests on all supply/production meters. The utility plans to volumetrically test all supply meters during the 2019 calendar year. Clear management of all meter testing and calibration records continues to be very important. The recommendation to conduct annual accuracy testing on all large customer meters remains. Close review of all metered accounts and totalized meter consumption numbers has improved an should continue. It is recommended that the utility conduct pressure surveys across the system to update record data from an earlier system model effort of 2013. Continued recommendation for consideration to institute an active leak detection program which should begin with a system-wide leak survey.

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 Audit and Loss Control Programs, Manual M36, Fourth Edition* and in the Free Water Audit Software version 5.

Executive Name (Print)	Executive Position	Signature	Date
Cecilia Griego	Water Resources Specialist	Cecilia Griego	11/27/19

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