

Two Years & Counting: A Review of Water Loss Audit Reports in California

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CALIFORNIA DEPARTMENT OF
WATER RESOURCES

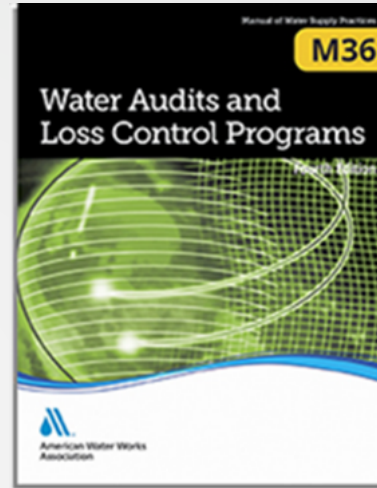
History of Water Loss Audits in California

- ❖ 1991 – MOU Regarding Urban Water Conservation in California
- ❖ SB 1420 (2014) – required UWMPs to include water loss audits
- ❖ SB 555 (2015) – requires annual submittal of validated water loss audit reports
- ❖ Rulemaking Complete Feb 22, 2018
- ❖ VWLA Reports Submitted October 2017 and October 2018

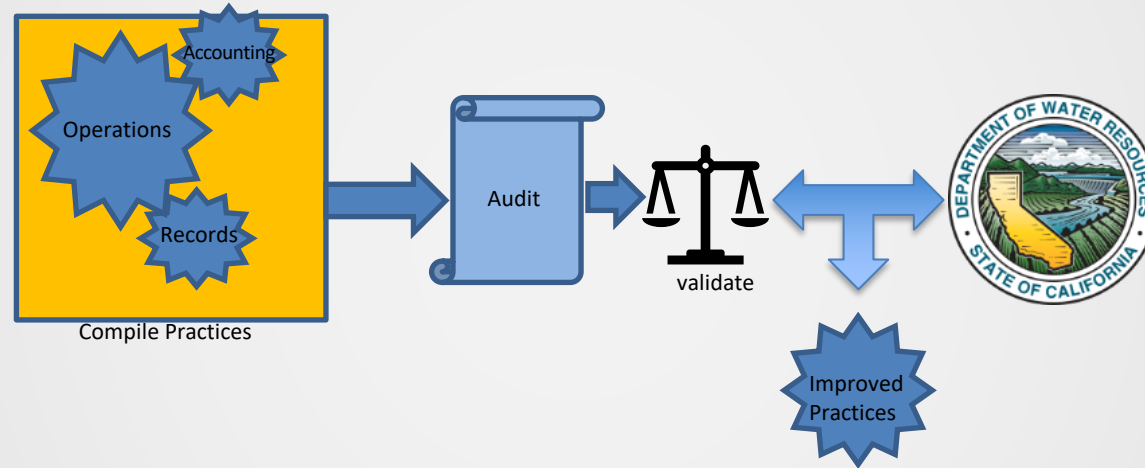


Methodology

- * AWWA M36 (IWA too) :
 - ❖ Water Audits and Loss Control Programs
- * Audit Software:
 - ❖ Excel Spreadsheet-based Tool
- * Includes:
 - ❖ Data Grading Scores
 - ❖ Performance Measures
 - ❖ Improvement Recommendations



WATER LOSS REPORTING



2016 Validated Water Loss Audit Reports

- ❖ Performed on 2016 data (Reported 2017).
- ❖ SWRCB Funded CA-NV AWWA Water Loss TAP Guidance and Validation
- ❖ Oct. 2017 Reports: 396 Received, 23 Outstanding
- ❖ 136 denied on initial review
 - 66 missing PWSID in Audit Spreadsheet (not critical)
 - 26 missing a report page
 - 31 missing steps
 - 13 with signature mistakes, validation problems, real losses



2016 Water Data Results

Category	Value Acre-Ft	Median Data Grade
WS Own Sources	3.6 Million	5
WS Import	1.7 Million	5
AC Billed Metered	4.6 Million	6
AC Billed Unmetered	82 Thousand	TBD
AC Unbilled Metered	19 Thousand	5
AC Unbilled Unmetered	16 Thousand	5
WL Real	316 Thousand	
WL Apparent	109 Thousand	



2016 Performance Indicators

Indicator	Median Value
Data Validity Score	60
Infrastructure Leakage Index	1.5
Real Losses Gallons per Connection per Day	25
Real Losses Gallons per Mile of Main	802
Apparent Losses Gallons per Connection per Day	8.3
Percent Loss	Not a useful indicator!!!



2017 Validated Water Loss Audit Reports

- ❖ Performed on 2017 data (Reported 2018).
- ❖ Without CA-NV AWWA Water Loss TAP
- ❖ Oct. 2017 Reports: 381 Received, 36 Outstanding
- ❖ Still under initial review (more initial approvals)
 - missing a report page
 - missing steps
 - validation problems
 - real losses



2017 Water Data Results

Category	Value Acre-Ft	Median Data Grade
WS Own Sources	3.8 Million	3
WS Import	2.2 Million	5
AC Billed Metered	5.3 Million	7
AC Billed Unmetered	79 Thousand	TBD
AC Unbilled Metered	28 Thousand	9
AC Unbilled Unmetered	20 Thousand	5
WL Real	325 Thousand	
WL Apparent	112 Thousand	



2017 Performance Indicators

Indicator	Median Value
Data Validity Score	63
Infrastructure Leakage Index	1.5
Real Losses Gallons per Connection per Day	27
Real Losses Gallons per Mile of Main	744
Apparent Losses per Connection per Day	8.2
Percent Loss	Not a useful indicator!!!



Validated Water Loss Audit Access

- Individual validated water loss audits:

https://wuedata.water.ca.gov/awwa_plans

- Coming Soon to Open Data at:

<https://data.cnra.ca.gov/dataset>



Urban Wholesale Water Loss Report

- CWC Sec 10608.35
- Report due January 1, 2020
- In consultation with the SWRCB
- Stakeholder Involvement Required

- Kickoff: June 5, 2019



Overall Take-A-Ways

- * Data is changing as agencies become more knowledgeable of process
- * DWR needs to improve guidance for audit reports
- * Outstanding work by the CA-NV Section of AWWA and the State Water Resources Control Board provided a strong starting point
- * Still some data housekeeping issues to address to improve data accessibility

