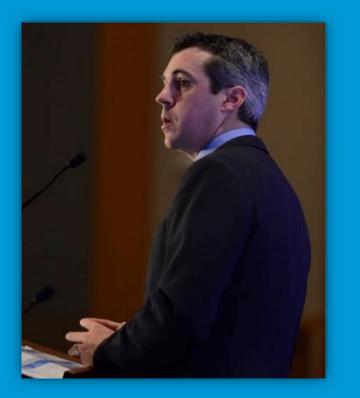
This presentation premiered at WaterSmart Innovations

watersmartinnovations.com



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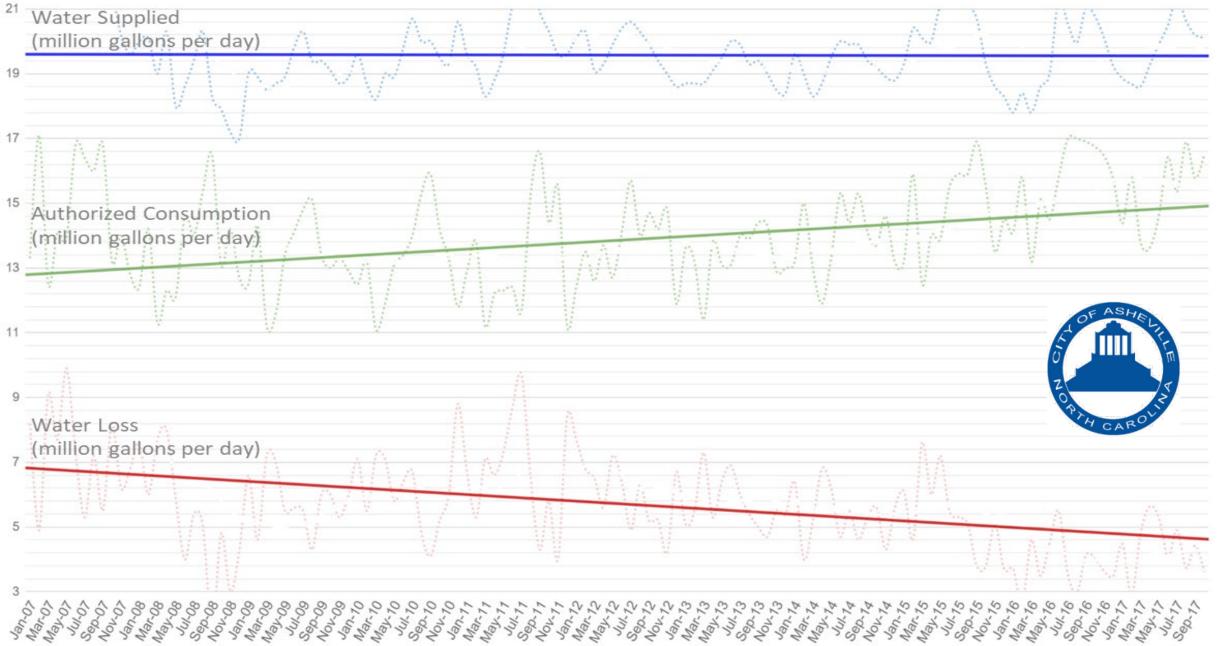


Survey Says: The 2021 AWWA TEC Survey of Governmental Water Loss Policies

Will Jernigan, P.E. Chair / AWWA Water Loss Software Committee Chair / AWWA North American Water Loss Conference CFO, Director of Water Efficiency / Cavanaugh



Cost-Effective Sustainability



AWWA Project Liaison

American Water Works Association

Dedicated to the World's Most Important Resource"

WillJernigan Project Manager

Drew Blackwell Support Staff



Steve Cavanaugh Primary Interviewer



George Kunkel Reporting

Gary Trachtman

Survey Data

Analysis/Reporting

AWWA Project Advisory Committee

Project Team



KUNKEL WATER EFFICIENCY CONSULTING



. Document the water loss policies that agencies are implementing in their jurisdictions and how they are measuring success

. Information that agencies can use to better assess the water loss control needs of utilities within their jurisdiction and develop, implement, and evaluate policies intended to help meet these needs. **2021 AWWA TEC Survey of Governmental Water Loss Policies**









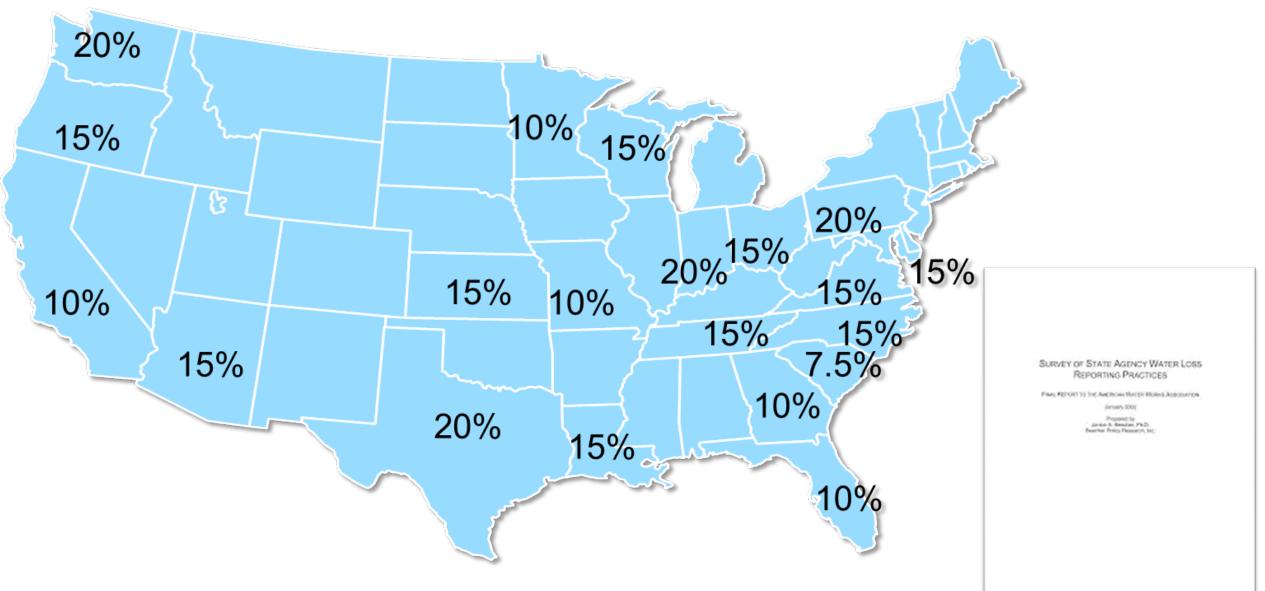


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Analysis & Reporting

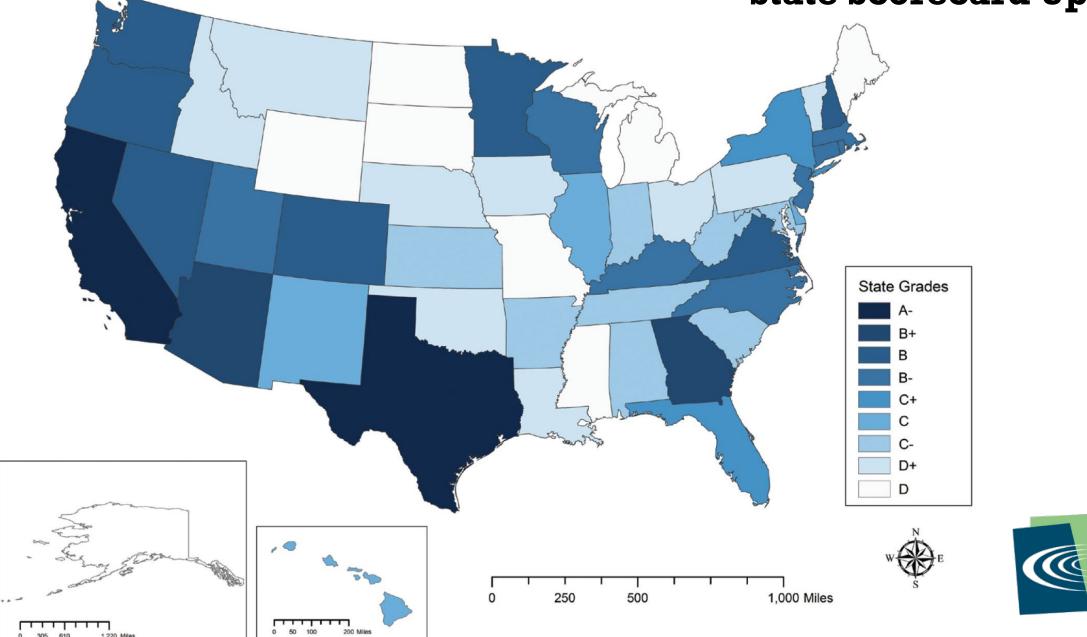
Survey of State Policies & Programs Beecher, 2002



Alliance for Water Efficiency State Scorecard Update 2017

Alliance

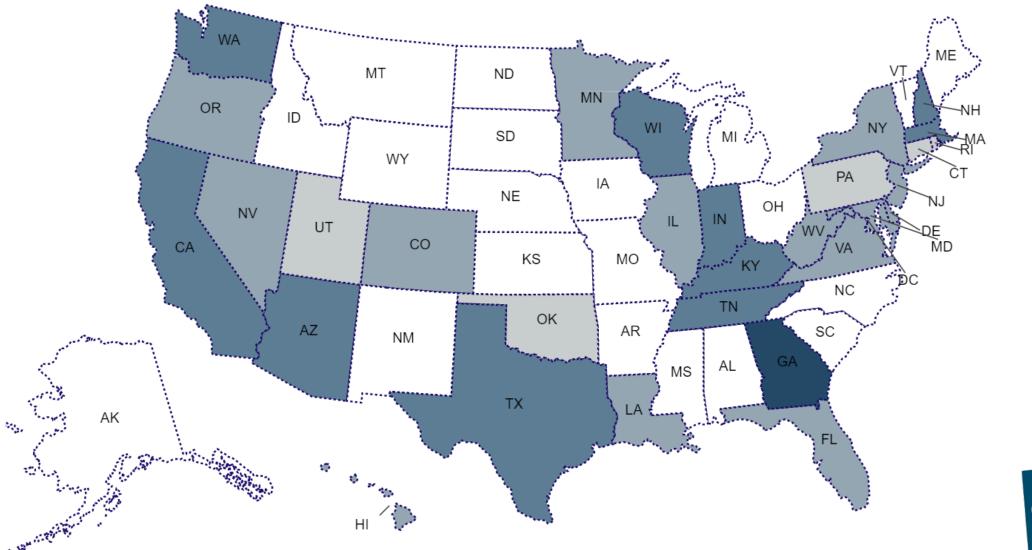
for Water Efficiency



Alliance for Water Efficiency State-Level Water Loss Laws Interactive Map 2019

Alliance

w Water Efficiency



Agency Inventory & Database

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Digital survey

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Dedicated to the World's Most Important Resource[™]



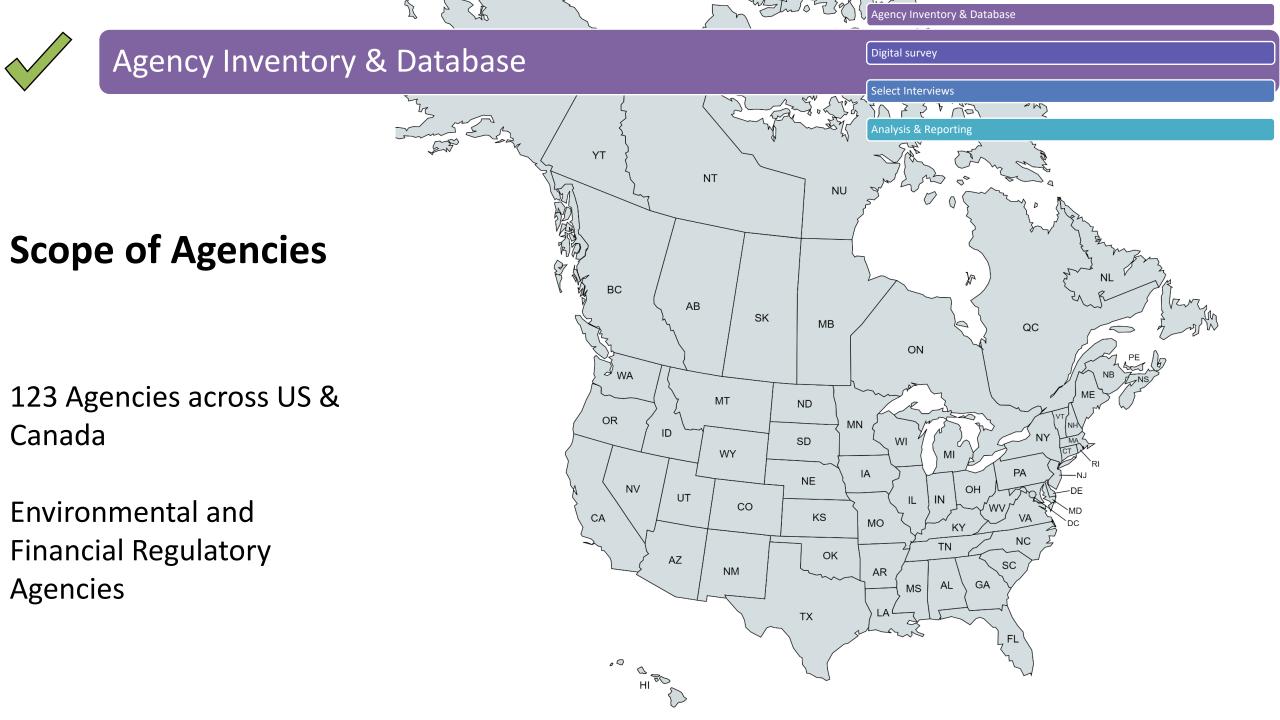
Project Team contact database

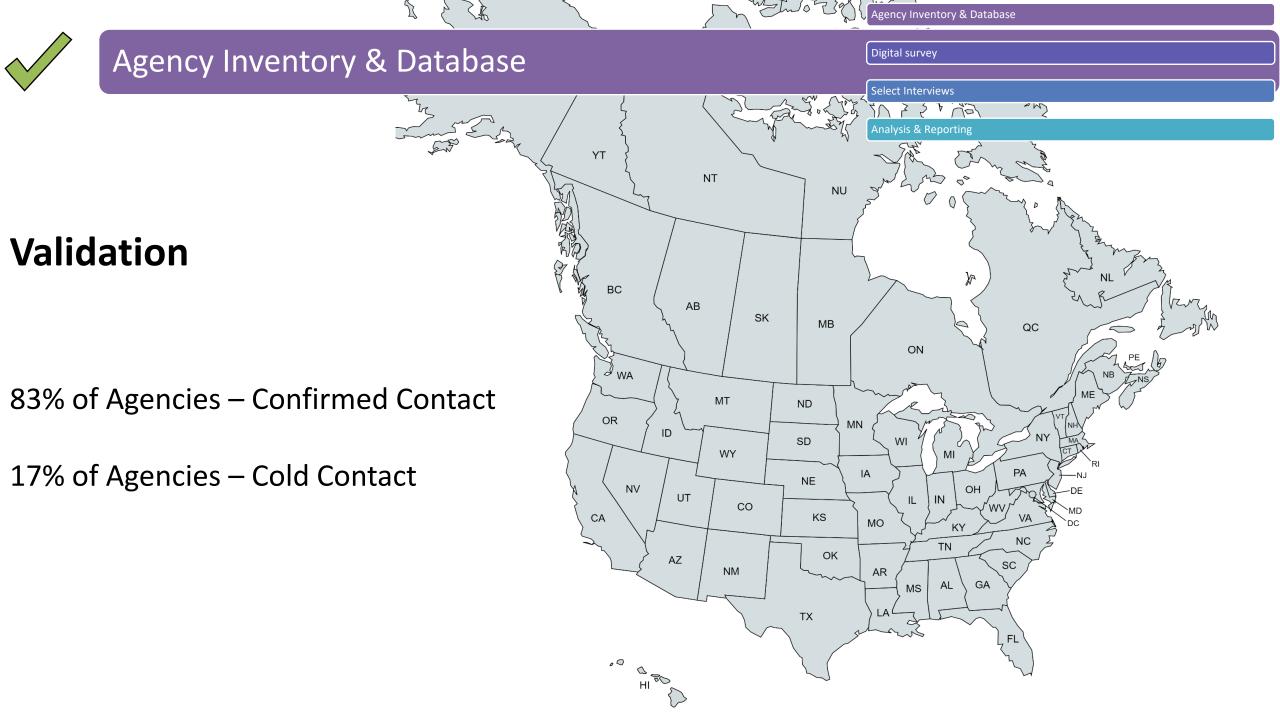


PAC contact database



Project Contact database





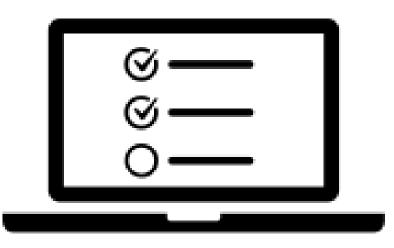


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Digital	survey
	Survey

	merican Water	Works				
Ded	licated to the World's Mos	t Important Resource [™]				
		AWWA TEC Pro	ject: Governmental Policies for Drinkin	g Water Utility Water		
		About this surve	у			
		A comprehensive wa al, 2001).	ater loss survey of this nature has not been performed	in 20 years' time (Beecher et.		
			completing this survey, AWWA will acknowledge yo eing your agency's key contact and survey participa			
		We will also deliver t	o you the Survey Report once it is completed.			
		Two important instr	uctions for the survey:	2		
	AWWA TEC	Project: Governmenta	l Policies for Drinking Water Utility Water	n at bottom of page (do not		
	Loss Contro			t later, you must use the		
	Water Loss F	Reporting			_	
Are wate entity?			Utility Water			
	🔿 Yes	LUSS CONTIN				
	○ No					
		* Please indicate below some additional information about <u>which utilities</u> submit annual water loss reporting. 오				
		Approximate number				
		of utilities that are subject to reporting:		13		
		Utility type (publicly-				
owned, inves		owned, investor-				
		owned, both):				
		Size threshold for reporting (e.g., volume supplied, number of				
		connections or population served):				
		Other thresholds for reporting (i.e. only water systems who currently have State funding, only water systems applying for permits other):				

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Digital survey
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Water Loss Reporting and Validation

Performance Requirements

Support for Utility Water Loss Programs

Evaluation Means and Methods



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Digital survey

12 In 0 7 391

Select Interviews

$D \rightarrow 1$ ٢ 1 1-Analysis & Reporting ΥT NT NU \bigcap \sim BC AB SK MB QC ON) wa MT ND OR MN ID SD WY IA PA NE NV OH DF UT IN IL. СО KS CA МО TN OK ΑZ NM AR GA AL MS ΤХ

Response Rate

Responses from 99 of 123 Agencies (80%)

49 States / Provinces

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٦ Analysis & Reporting ΥT NT NU JA. BC AB SK MB QC ON & WA ΜT ND OR MN ID SD WI WY MI IA PA NE NV OH UT IN IL CO KS CA МО KY NC ΤN OK ΑZ SC AR NM AL GA MS LA ТΧ FL 00

Selection Criteria

Range of establishment Mix of environmental and financial regulatory agencies

Interview Goals

Origin story Path ahead

2

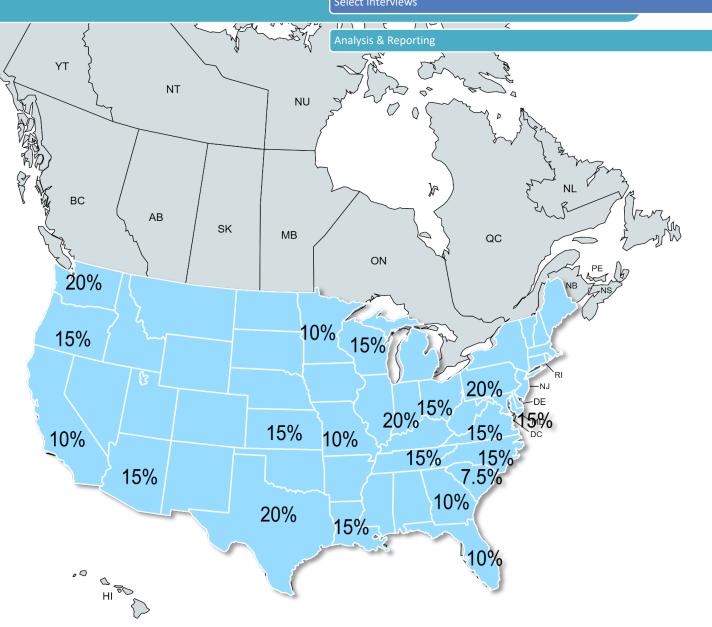
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Digital survey Select Interviews Analysis & Reporting

Reporting & Performance Requirements (Beecher, 2002)

20 States / Provinces

1,



ΥT

BC

2 WA

OR

CA

NV

, Agency Inventory & Database

Digital survey Select Interviews Analysis & Reporting NT NU AB SK MB QC ON MT ND MN ID SD WY MI IA NE OH UT CO KS MO KΥ OK ΑZ SC NM LA ΤХ

Reporting & Performance Requirements (AWWA, 2021)

37 States / Provinces

۱,

2,5

~29,000 Water Systems

5

The state of the s

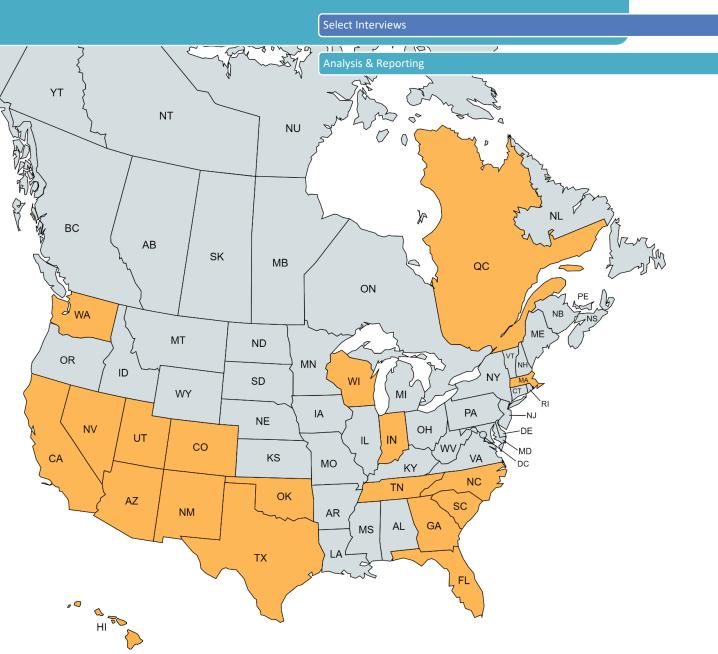
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Active Funding and Other Support for Utility Water Loss Programs

(AWWA, 2021)

19 States / Provinces



* Do water utilities voluntarily submit

any kind of annual water loss reporting

to your governmental entity?

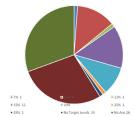


Digital survey

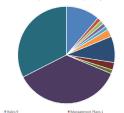
Select Interviews

Analysis & Reporting

What are the required target levels (i.e., what numeric value)?

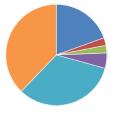


What are the target levels based on or how calculated (i.e. cited in rules, based on formula, other)?



Management Plans 1 Commission Decision 1 Number of Connections (Size) 1 Economic Model Pending 1 Numeric Target 2 Industry Data including AWWA M-36 2 Formula 7 Performance Studies 1 None 29 No Ans 26

What timelines are used in assessing targets (i.e., 1-year, 3-year, 5-year)?



Conter (1-yr/3-yr 1, 2-5-yr 1, 7-10-yr 1, 10-yr 1)

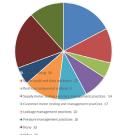
Grants 15

Rate Adjustments 9

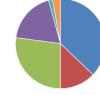
Asset Management Loans 1

Water Audits 1

* For what topics does your governmental entity provide water utilities with water loss training and technical assistance to increase capacity development (technical, managerial, financial)? Check all that apply

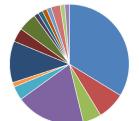


How does your governmental entity provide training and technical assistance to water utilities (i.e. directly, through third-party TA



Internal 26 Third Party (e.g., Rural Water Assoc, Conservancy District) S Third Party (Consultants) 19 Third Party (Other Agency) 13 Third Party (Utility Org.) 1 Volunteers 2

What funding is available to water utilities for water loss management activities?



 Drinking Water Revolving Fund 27
Technical Training 6 General 4 • Water Management Assistance 1 Leak Detection Grants 3 Community Development Block Grants 3
Rural Development Grants 4 Water Quality Protection Grants 1
Flushing Reduction Grants 1 Meter Accuracy Testing Grants 1
USDA Loans 2 Investor Capital 1

* What other form(s) is accepted for water loss reporting?

Both AWWA FWAS v6 and v5 14
Custom w Data Validity 10

Custom w & wo Data Validity 7

Any Method 1

No Ans 59

Attached to Annual Agey Report 10

Custom wo Data Validity 11

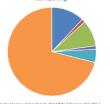
Custom, not M36 21

Other Form 8

No Other 4

* What form(s) is accepted for water loss

reporting? Check all that apply



Attached to Annual Agcy Report 10 FWAS if Pop Served>3,300 1 Other Form 8 Any Method 1 No Other 4 No Ans 59

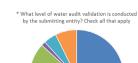
Size threshold for reporting (e.g., volume supplied,

number of connections or population served)

Volume-based 13
RCust-based 14
Revenue-based 2

Vol or #Cust-based 2 • Miles Main-based 1 • None 18

No Ans/Unknown 32



■ Yes 11 ■ No 26 ■ No Ans 45

Other thresholds for reporting (i.e. only water systems

who currently have State funding, only water systems applying for permits, other)

Withdrawal Permits Only 6 Funding Requests Only 4 Withdrawal & Funding, 2

Revenue-based 1
No Other 15

Water Purveyor 11
Watershed or Location 6 Population 2

NRW-based 3

IN No Ans 32

Not Sure 20 Self Reported 29 Level 1 Valid per WRF 4639 10 Level 1 Valid per WRF 5057 1 Self Rentd & Both WRF 3 Cther 5



Are water utilities required to submit any kind of

annual water loss reporting to your governmental

Yes 48 No 34

entity?

 None or Not Sure 17
HL Screen & Flag, No Follow 5 HL Screen & Flag, w Follow 16 Each Valid & Rwed w Follow 11 Other 18 No Ans 28

General encouragement of best practices 15

Master meter locating and testing 12

Eleakage surveys and management 16

Supply and demand management 1

Water Resource allocation 1

Maha and hydrant exercision

Real loss reduction 3

Billing systems 2

* What mechanism(s) would be needed to make

Utility type (publicly-owned, investor-

owned, both)

Public-owned only 8 Investor-owned only 8 Both 39 No Ans 27

 Legislative change 32
Rule or Code Change 35
Internal Policy Change 24 Legis + Rule + Policy 11
Legis + Rule 9
Legis + Policy 1

Not sure 4 Other 4



■Yes 30 ■No 27 ■No Ans 25

What is the enabling legislation or applicable

code for water loss reporting (provide bill or

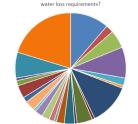
code citation if possible)?

Legislation or Code 49
In Progress 1
None 8
No Ans 24

Does your governmental entity encourage or require demonstration of water loss best practices as part of its

Bule + Policy 7

No dos 28



Revenue recovery 2

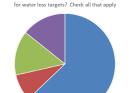
Leak/Break repairs !

Rates 1

■ No 10

Customer meter replacement at end of useful life 7 Pressure management 3 Webinars on best practices 1 Bleeder inspections 1 Water conservation programs 6 Fiscal and/or Asset Man Improved data validity 3

Water Loss Reduction Plan Auditing 2 No Ane 27



* What extent of customization is in place



Universal 22
Class-based 3
Sys-Specific 5
Other 5

■1-yr 16 ■3-yr 2 =5-yr 2 No Ans 27 None 31



providers, other)?

2021 AWWA TEC Survey of Governmental Water Loss Policies



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Analysis & Reporting DEC 2021



AUSTIN, TEXAS | DECEMBER 7-9



NORTH AMERICAN WATER LOSS2021

AUSTIN, TEXAS | DECEMBER 7-9









northamericanwaterloss.org

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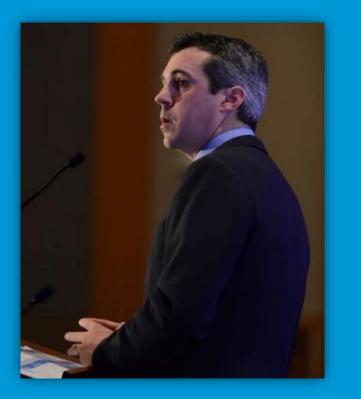






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Survey Says: The 2021 AWWA TEC Survey of Governmental Water Loss Policies

Will Jernigan, P.E.

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