



SUB-REGIONAL OPERATING GROUP (SROG) Advisory Committee

MEETING NOTICE AND TENTATIVE AGENDA

Thursday, August 21, 2025 – 1:00 p.m.

**Arizona Municipal Water Users Association
Board Room
3003 North Central Avenue, Suite 1550
Phoenix, Arizona 85012**

A. Call to Order—Mr. Mark Roye, Chair, Glendale

B. General Business—Items for Discussion and Possible Action

1. Approval of the Minutes from the March 20, 2025 Meeting
2. Schedule Next Meeting Date: Thursday, September 18, 2025, at 1:00 p.m.
3. Information Items
 - a. Multi-City Project Analysis of the 91st Avenue WWTP
 - b. Aging Report
4. 91st Avenue WWTP Year End Flow and Loading Report for Fiscal Year 2024-25

Wilson Engineers will present the results of their Flow, COD, and TSS Loading and Analysis (robust analysis) for Fiscal Year 2024-25. The robust analysis is used as the basis for the final settlement.

Please refer to Agenda Item #4.

5. Calibration Report Fiscal Year 2024-25

The Calibration Report for Fiscal Year 2024-25 will be presented for acceptance.

Please refer to Agenda Item #5.

6. Request to Advertise – WS90100101 Process Piping Rehab

The City of Phoenix will request authorization to advertise, select a consultant, and negotiate a scope of work and fee for professional services to provide professional consultant services for study, design, and CA&I services related to the 91st Avenue Process Piping Rehab project.

C. Future Agenda Items

D. Adjournment

DRAFT

SROG ADVISORY COMMITTEE
MEETING MINUTES
March 20, 2025

MEMBERS

Patty Kennedy, Chair, Phoenix
Bryan Cassens for Kevin Rose, Scottsdale
Jeremy Mikus, Tempe
Arif Rahmen, Mesa
Mark Royce, Glendale

OTHERS

Michelle Barclay, AMWUA	Mark Lee, Consor
Tara Gonzales, Phoenix	Arno Leskinen, Dibble

A. Call to Order

Ms. Kennedy called the meeting to order at 1:03 p.m.

B. General Business – Items for Discussion and Possible Action

1. Approval of the Minutes from the January 23, 2025 Meeting

Upon a motion by Mr. Royce, a second by Mr. Rahman, and unanimous approval, the minutes of the January 23, 2025 meeting were approved.

2. The next SROG Advisory Committee meeting was scheduled for Thursday, April 24, 2025, 1:00 p.m.

3. Information Items

There were no comments on the information items.

4. WS90160107 – SAI Final Condition Assessment

Mr. Amavisca introduced Mr. Lee and Mr. Leskinen to present the final report. He reminded the committee that the last time this assessment was done was 10 years ago and only 5 miles of pipe were assessed, however this time the entire length was assessed. He stated

that once this report is approved, he'll come back and request permission to start the design phase, which will break the recommendations into 2 year increments over a 6 year program, focusing on grade 4 and 5 items for repair.

Mr. Lee explained that they looked at all 19 miles of the SAI from 48th Street and Southern all the way to the treatment plant at 91st Avenue. This included approximately 90,000 feet of pipe, and then an additional roughly 6,000 feet of the 51st Avenue siphon.

Mr. Leskinen discussed the manhole assessment, using three methodologies: surface inspection, CCTV inspection, and manned entry. This resulted in the identification of 23 grade five manholes with recessed covers, once those were identified a program was started to repair or replace those manhole covers, which is ongoing. Mr. Leskinen provided a detailed breakdown of the 148 manhole assessment. He explained that 5 of the 153 manholes were challenging to locate and inspect, and funds for establishing external access to those 5 manholes is included in the work estimate.

Mr. Lee stated that the SAI has 157 pipe segments and they were able to complete 146 of them. There are 4 partial pipe inspections due to the difficulty and length of the pipes.

Mr. Lee outlined the recommended rehabilitation methods: spot repairs and cured-in-place pipe (CIPP) and discussed cost sharing of the estimated \$92 million rehabilitation project. He mentioned that engineering costs, construction administration and inspection costs are built into the numbers for the overall program.

Mr. Lee explained that they identified are 12 different projects, each of them about 2500 feet of pipe. He informed the committee that there are quite a few pipes that are critical. He presented a prioritized list, with the worst shown first, including manhole costs. He stated that we are looking at about \$92 million worth of worth of rehab that's needed.

The report has gone out for comment to the SROG SPEC Committee.

Upon a motion by Ms. Kennedy, a second by Mr. Cassens, and unanimous approval the SROG Advisory Committee recommended to the SROG Committee acceptance of the SAI Condition Assessment Report as prepared by Consor as presented by the City of Phoenix.

5. Local Limits

Ms. Smith from the City of Phoenix presented the proposal for a local limits study. The study is recommended to update the local limits established in 2004. The study will be funded by the SROG CIP cash flow, with a budget of \$1 million. She mentioned that the 23rd Avenue WWTP is also going to be included in this study, however the City of Phoenix will be paying for that work separately.

Ms. Smith provided some background on this project. She stated in 1992 a study was conducted to establish local limits. In 1996 it was updated with no significant changes. She stated that early in the 2000s there was another reevaluation, and in 2004 SROG adopted new local limits. The new NPDES permit in 2025 required that we do a local limits review, which was completed and sent to EPA in by the our deadline in February, and that review recommended that we do a local limit study.

Mr. Roye asked if we were keeping AWP in mind as we pursue this study, Ms. Smith responded that AWP will be part of the discussions and all SROG partners are going to be included in the scoping of this project.

Upon a motion by Ms. Kennedy, a second by Mr. Roye and unanimous approval the SROG Advisory Committee authorized the City of Phoenix to advertise, select and negotiate scope of work and fee for professional services for an amount not to exceed \$1 million to perform a local limits study. Funds for these services are will be budgeted in ws 90120037, in the SROG CIP cash flow beginning in fiscal years. 2526 project number Ws, 90120037, will be billed per billing schedule. 41 which is 20% each for Glendale, Mesa, Phoenix, Scottsdale and Tempe.

C. Future Agenda Items

There was no discussion of this item.

D. Adjournment

The meeting adjourned at 1:58 p.m.

Multi-City Project Analysis
Detail of Expenditures As of June 30, 2025

Table 1

WBS Element	Project Title	Current Month Expenditures	Project To-Date Cost	Outstanding Contractual Amount	Total Project Cost
WS90100021	Flood Protection - Toxicity TIE/TRE	0.00	169,591.05	0.00	169,591.05
WS90100052	91st Ave-Two Phase Digester Study	0.00	8,395,331.23	0.00	8,395,331.23
WS90100092	91st Ave Instrumntation & Control	58,245.92	8,274,586.00	2,074,246.31	10,348,832.31
WS90100093	91st Ave WWTP Pipe/Equip Coating	13,250.00	5,957,999.57	510,220.05	6,468,219.62
WS90100094	91st Ave WWTP Safety	18,612.54	6,289,385.63	1,794,098.07	8,083,483.70
WS90100095	91st Ave WWTP Work & Asset Mgt	8,361.84	1,170,235.22	888,978.35	2,059,213.57
WS90100098	91st Ave Solar Drying Beds Imprvmnts	0.00	5,143,596.81	0.00	5,143,596.81
WS90100099	91st Ave Groundwater Wells Imprvmnts	0.00	6,096,648.43	0.00	6,096,648.43
WS90100100	91st Ave Support Facilities Rehab	295,663.00	13,149,845.91	3,351,088.82	16,500,934.73
WS90100101	91st Ave Process Piping Rehab	302,700.34	13,093,216.01	2,550,388.91	15,643,604.92
WS90100103	Toxicity Identification Evaluation	0.00	136,266.51	80,508.00	216,774.51
WS90100104	Multi-Phase Process Improvements	0.00	3,236,866.98	0.00	3,236,866.98
WS90100105	91st Ave WWTP Process Control 2016	632.00	8,616,999.82	1,143,041.16	9,760,040.98
WS90100106	91st Ave WWTP Fire Safety	3,160.00	8,672,241.69	2,813,675.37	11,485,917.06
WS90100107	91st Ave WWTP Facility Assessment	1,342.00	2,079,938.70	20,546.76	2,100,485.46
WS90100109	91st Ave WWTP Facility Rehab	472,322.32	19,360,971.89	4,803,420.96	24,164,392.85
WS90100111	91st Ave WWTP Solids Rehab Phase 1	3,449,997.82	33,285,029.65	44,586,437.44	77,871,467.09
WS90100112	91st Ave WWTP Plant 2B Rehab	5,109,238.36	73,089,556.75	13,557,436.13	86,646,992.88
WS90100113	Process Cntrl Sys Imp-91st Ave WWTP	0.00	615,807.40	2,382,441.74	2,998,249.14
WS90100115	91st Ave WWTP Master Plan	18,765.79	804,247.41	322,306.17	1,126,553.58
WS90120037	91st Ave WWTP Local Limits Study 12-13	0.00	123,657.04	83,322.27	206,979.31
WS90140006	Tres Rios Reuse/Recharge Phase II	0.00	62,243,910.72	0.00	62,243,910.72
WS90140016	Tres Rios Rehab and Replacement	9,571.13	3,088,418.26	1,434,083.95	4,522,502.21
WS90160084	SROG Interceptor Capacity Improvements	0.00	655,074.36	0.00	655,074.36
WS90160098	Glendale GL02 Metering Station	47,163.76	3,522,998.50	1,389,760.29	4,912,758.79
WS90160100	SAI 51 Ave Siphons Assessment SROG	0.00	1,498,273.30	0.00	1,498,273.30
WS90160106	SRO Condition Assessment	230,996.29	630,017.11	1,008,738.51	1,638,755.62
WS90160107	SAI Condition Assessment	4,108.00	1,748,315.24	310,471.92	2,058,787.16
Total		10,044,131.11	291,149,027.19	85,105,211.18	376,254,238.37

**MULTI-CITY PROJECT ANALYSIS
DETAIL OF OUTSTANDING CONTRACTS AS OF JUNE 30, 2025
TABLE II**

PROJECT INDEX	CONTRACT NUMBER	VENDOR	CONTRACT AMOUNT	ORDER AMOUNT	LIQUID ENCUMBR	CONTRACT AMOUNT
<u>WS90100092 - 91ST AVE INSTRUMENTATION & CONTROL</u>						
	154042	WILSON ENGINEERS LLC	5,000,000.00		2,925,753.69	2,074,246.31
			9,949,990.06	(217,831.46)	7,657,912.29	2,074,246.31
<u>WS90100093 - 91st Ave WWTP Pipe/Equip Coatin</u>						
	149652	RFI CONSULTANTS LLC	300,000.00		197,481.95	102,518.05
	155549	PCL CONSTRUCTION INC	275,009.00		68,250.00	206,759.00
	158297	JOSEPH PAINTING COMPANY INC	284,840.00		83,897.00	200,943.00
			6,521,235.26	(592,168.05)	5,418,847.16	510,220.05
<u>WS90100094 - 91ST AVE WWTP Saftey</u>						
	149651	LUDVIK ELECTRIC COMPANY	21,695.00		-	21,695.00
	155549	PCL CONSTRUCTION INC	1,845,185.00		588,089.00	1,257,096.00
	155878	WATER WORKS ENGINEERS LLC	350,000.00		45,751.97	304,248.03
	155879	EIC ENGINEERS LLC	150,000.00		38,940.96	111,059.04
	155879	EIC ENGINEERING LLC	100,000.00		-	100,000.00
			7,878,177.94	(201,729.61)	5,804,629.98	1,794,098.07
<u>WS90100095 - 91ST AVE WWTP WORK & ASSET MGT</u>						
	158806	WILSON ENGINEERS LLC	969,496.46		651,853.57	317,642.89
	4400705877	PROCESS SOLUTIONS ASSURANCE	93,150.75		72,143.94	21,006.81
	4400849779	TMG UTILITY ADVISORY SERVICES INC	512,908.08		60,789.04	452,119.04
	4401055976	LCS TECHNOLOGIES INC	41,932.80		16,128.00	25,804.80
	4401092216	THE INTERSECT GROUP LLC	24,406.04		13,001.23	11,404.81
	4401104328	LCS TECHNOLOGIES INC	61,000.00		-	61,000.00
			2,020,995.11	(180,656.06)	951,360.70	888,978.35
<u>WS90100100 - 91ST AVE SUPPORT FACILITIES REHAB</u>						
	155549	PCL CONSTRUCTION INC	4,383,010.00		2,066,299.00	2,316,711.00
	155878	WATER WORKS ENGINEERS LLC	500,000.00		13,464.33	486,535.67
	155879	EIC ENGINEERS LLC	150,000.00		-	150,000.00
	155879	EIC ENGINEERING LLC	100,000.00		-	100,000.00
	4401043388	KING JR, TIMOTHY B	35,083.59		-	35,083.59
	4401043389	KING JR, TIMOTHY B	20,762.09		-	20,762.09
	4401043974	KING JR, TIMOTHY B	19,244.65		-	19,244.65
	4401043979	KING JR, TIMOTHY B	36,226.97		-	36,226.97
	4401072157	PROGRESSIVE SERVICES INC	26,130.00		-	26,130.00
	4401072159	PROGRESSIVE SERVICES INC	34,850.00		-	34,850.00
	4401073114	KING JR, TIMOTHY B	15,513.90		-	15,513.90
	4401079705	KING JR, TIMOTHY B	21,779.64		-	21,779.64
	4401079744	PROGRESSIVE SERVICES INC	46,977.50		-	46,977.50
	4401083360	KING JR, TIMOTHY B	41,273.81		-	41,273.81
			16,167,476.80	(177,519.83)	12,638,868.15	3,351,088.82

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<u>WS90100101 - 91ST AVE PROCESS PIPING REHAB</u>						
	147881	BROWN & CALDWELL	2,400,000.00	(400,000.00)	1,370,730.09	629,269.91
	155549	PCL CONSTRUCTION INC	6,138,911.00		4,217,792.00	1,921,119.00
			15,470,442.41	(415,800.00)	12,504,253.50	2,550,388.91
<u>WS90100103 - 91AV TOXICITY ID EVALUTN</u>						
	144947	HAZEN AND SAWYER P.C.	100,000.00		99,492.00	508.00
	161429	HAZEN AND SAWYER DPC	80,000.00		-	80,000.00
			180,000.00	-	99,492.00	80,508.00
<u>WS90100105 - 91st Ave WWTP Process Control</u>						
	155878	WATER WORKS ENGINEERS LLC	400,000.00		60,221.01	339,778.99
	155549	PCL CONSTRUCTION INC	2,130,563.00		1,967,525.00	163,038.00
	155879	EIC ENGINEERS LLC	450,000.00		92,085.83	357,914.17
	155879	EIC ENGINEERING LLC	100,000.00			100,000.00
	158310	LUDVIK ELECTRIC COMPANY	182,310.00			182,310.00
			9,860,460.00	(451,216.80)	8,266,202.04	1,143,041.16
<u>WS90100106 - 91st Ave WWTP Fire Safety</u>						
	147890	FELIX CONSTRUCTION CO	1,800,000.00		1,710,000.00	90,000.00
	155547	FELIX CONSTRUCTION CO	3,812,295.00		2,929,640.37	882,654.63
	161083	FELIX CONSTRUCTION CO	1,979,592.19		138,571.45	1,841,020.74
			7,591,887.19	-	4,778,211.82	2,813,675.37
<u>WS90100107 - 91WTP FCLTY ASSMT S-43505</u>						
	157194	ARCADIS US INC	227,961.00		207,414.24	20,546.76
			1,911,199.00	(34,672.30)	1,855,979.94	20,546.76

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<u>WS90100109 - 91st Ave WWTP Facility Rehab</u>						
	149651	LUDVIK ELECTRIC COMPANY	1,895,398.58		1,386,136.87	509,261.71
	155549	PCL CONSTRUCTION INC	8,656,312.00		5,312,334.00	3,343,978.00
	4401028708	GEA MECHANICAL EQUIPMENT US INC	137,368.66		119,353.64	18,015.02
	4401028711	GEA MECHANICAL EQUIPMENT US INC	573,322.35		114,968.09	458,354.26
	4401103085	WESTERN ENVIRONMENTAL EQUIP CO	56,877.52		56,877.52	-
	4401104204	DXP ENTERPRISES INC	17,480.26		-	17,480.26
	4401105184	GEA MECHANICAL EQUIPMENT US INC	76,580.79		-	76,580.79
	4401105712	DUPERON CORPORATION	35,903.16		-	35,903.16
	4401105716	DUPERON CORPORATION	199,677.19		-	199,677.19
	4401105839	STENZEL SEALING SOLUTIONS LLC	31,668.00		-	31,668.00
	4401107617	ARROWHEAD PUMP AND SUPPLY LLC	11,832.86		-	11,832.86
	4401107618	ARROWHEAD PUMP AND SUPPLY LLC	43,792.19		-	43,792.19
	4401107891	WESTERN ENVIRONMENTAL EQUIP CO	56,877.52		-	56,877.52
			23,972,436.92	(42,023.38)	19,126,992.58	4,803,420.96
<u>WS90100111 - 91st Ave WWTP Solids Rehab Phase 1</u>						
	152491	ARCADIS US INC	16,054,932.62	(5,129,022.91)	7,226,338.16	3,699,571.55
	153445	PCL CONSTRUCTION INC	65,708,873.22	(2,000,000.00)	23,992,007.33	39,716,865.89
	155549	PCL CONSTRUCTION INC	1,300,000.00		130,000.00	1,170,000.00
			84,912,308.84	(7,828,916.03)	32,496,955.37	44,586,437.44
<u>WS90100112 - 91st Ave WWTP Plant 2 Rehab</u>						
	153379	HAZEN AND SAWYER P.C.	9,821,321.89		7,498,864.25	2,322,457.64
	156753	MCCARTHY BUILDING COMPANIES INC	1,982,063.27		-	1,982,063.27
	157028	MCCARTHY BUILDING COMPANIES INC	73,500,000.00		64,247,084.78	9,252,915.22
			85,303,385.16	-	71,745,949.03	13,557,436.13
<u>WS90100113 - Process Cntrl Sys Imp-91st Ave</u>						
	155549	PCL CONSTRUCTION INC	1,736,826.00		173,682.00	1,563,144.00
	159237	ARCADIS US INC	571,066.92		54,231.20	516,835.72
	159238	OZ ENGINEERING	138,437.02		-	138,437.02
	161083	FELIX CONSTRUCTION CO	164,025.00		-	164,025.00
			2,993,653.14	-	611,211.40	2,382,441.74
<u>WS90100115 - 91st Ave WWTP Master Plan</u>						
	157696	ARCADIS US INC	1,031,828.08		709,521.91	322,306.17
			1,031,828.08	-	709,521.91	322,306.17
<u>WS90120037 - 91st Ave WWTP Local Limits Study</u>						
	157217	HAZEN AND SAWYER P.C.	198,557.56		115,235.29	83,322.27
			198,557.56	-	115,235.29	83,322.27

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<u>WS90140016 - Tres Rios Rehab and Replacement</u>						
	147890	FELIX CONSTRUCTION CO	1,403,189.00		1,333,029.55	70,159.45
	155547	FELIX CONSTRUCTION CO	539,830.00		512,838.50	26,991.50
	158310	LUDVIK ELECTRIC COMPANY	1,336,933.00		-	1,336,933.00
	4401017342	BROWN WHOLESALE ELECTRIC CO	8,398.51		8,398.51	-
			4,246,995.13	(8,895.43)	2,804,015.75	1,434,083.95
<u>WS90160098 Glendale GL02 Metering Station</u>						
	152493	WILSON ENGINEERS LLC	400,000.00		387,422.65	12,577.35
	159940	WILSON ENGINEERS LLC	779,635.30		389,509.60	390,125.70
	161083	FELIX CONSTRUCTION CO	1,034,221.00		47,163.76	987,057.24
			4,856,547.80	(52,665.83)	3,414,121.68	1,389,760.29
<u>WS90160106 Salt River Outfall (SRO) Condition Assessment</u>						
	160336	CONSOR NORTH AMERICA INC	1,449,520.38		440,781.87	1,008,738.51
			1,450,077.38	-	441,338.87	1,008,738.51
<u>WS90160107 Southern Ave Interceptor (SAI)</u>						
	159748	WACO LLC	142,840.76		131,862.75	10,978.01
	157885	PROJECT ENGINEERING CONSULTANTS LTD	1,700,000.00		1,400,506.09	299,493.91
			1,842,840.76	-	1,532,368.84	310,471.92
GRAND TOTAL						85,105,211.18

Multi-City Subregional Operating Group (SROG)
Customer Aging Report as of July 31, 2025

<i>Customer</i>				<i>Invoice</i>	<i>Date</i>	<i>Current</i>	<i>Current</i>	<i>-----Past Due-----</i>		
<i>Number</i>	<i>Fund</i>	<i>City</i>	<i>Description</i>	<i>Number</i>	<i>Mailed</i>	<i>Invoice</i>	<i>Balance</i>	<i>1-30 Days</i>	<i>31-60 Day</i>	<i>61-90 Days</i>
10000007	415	Glendale	Capital Projects	401031735	7/1/2025	442,038.83	0.00	0.00	0.00	0.00
10000001	20	Glendale	Operations & Maintenance	401034465	7/29/2025	379,627.00	379,627.00	0.00	0.00	0.00
10000008	416	Mesa	Capital Projects	401031736	7/1/2025	1,040,789.50	0.00	0.00	0.00	0.00
10000003	20	Mesa	Operations & Maintenance	401034466	7/29/2025	782,663.00	782,663.00	0.00	0.00	0.00
10000009	417	Scottsdale	Capital Projects	401031737	7/1/2025	722,095.00	0.00	0.00	0.00	0.00
10000002	20	Scottsdale	Operations & Maintenance	401034467	7/29/2025	312,667.00	312,667.00	0.00	0.00	0.00
10000000	20	Tempe	Operations & Maintenance	401034468	7/29/2025	635,641.00	635,641.00	0.00	0.00	0.00

Source: SAP preview of payments

Prepared by City of Phoenix Utilities Accounting



SUB-REGIONAL OPERATING GROUP (SROG)

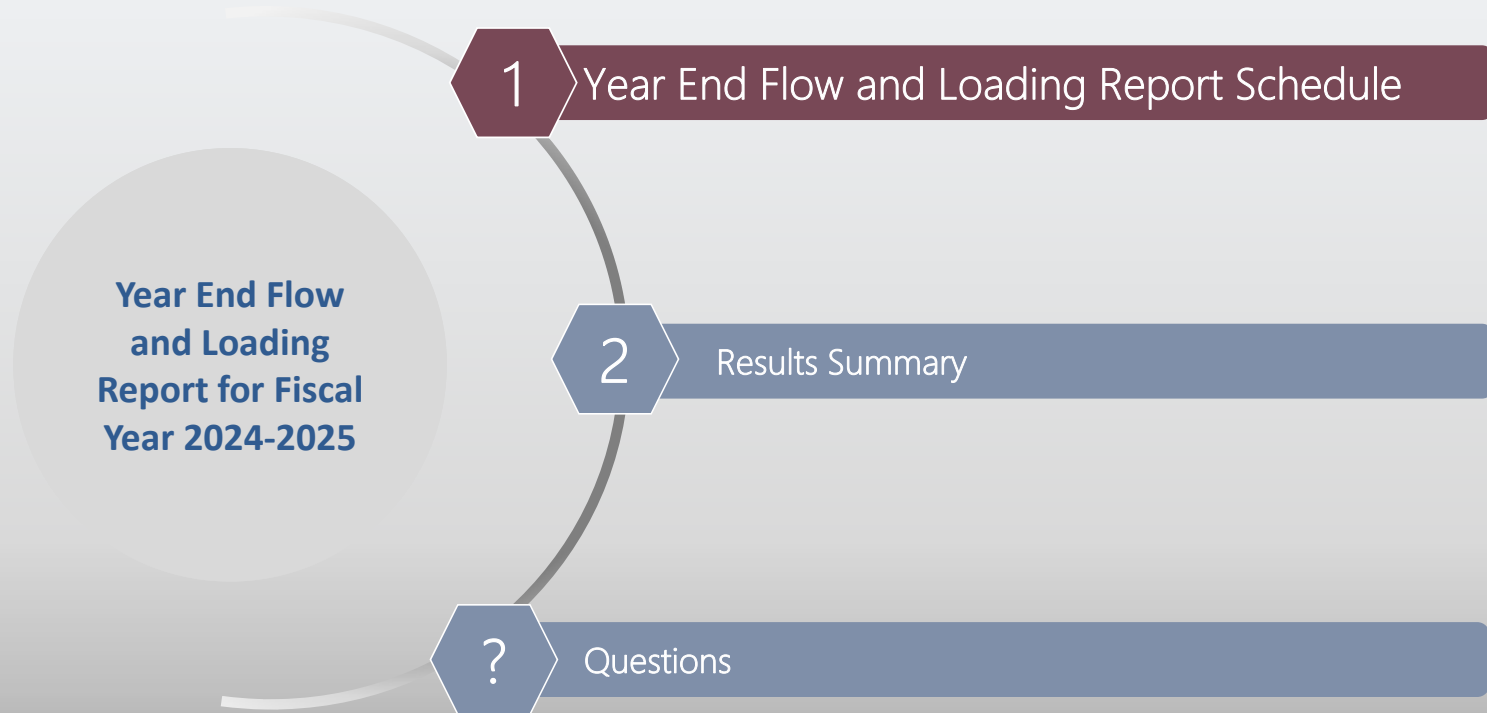
August 14, 2025



91st Avenue WWTP
SROG Support Services
COP Project: WS90100062

Year End Flow and
Loading Report
Fiscal Year 2024-2025

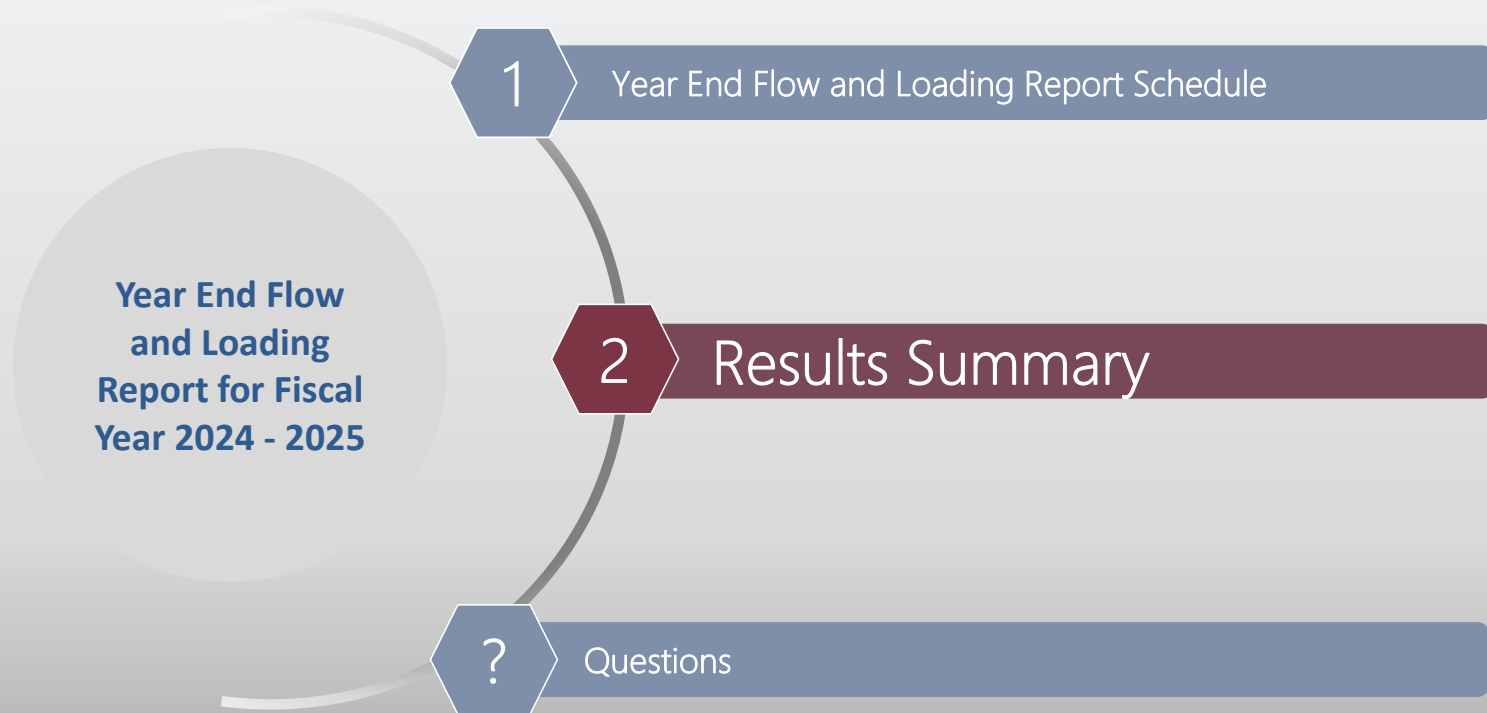
WILSON
ENGINEERS



YEAR END FLOW AND LOADING REPORT SCHEDULE

3

- Draft Report Development
 - June/July 2025
- Draft Report Distributed
 - August 1st, 2025
- Draft Report Presentation to SPEC
 - August 14th, 2025
- Final Report Presentation to SROG Advisors for Approval
 - August 21st, 2025



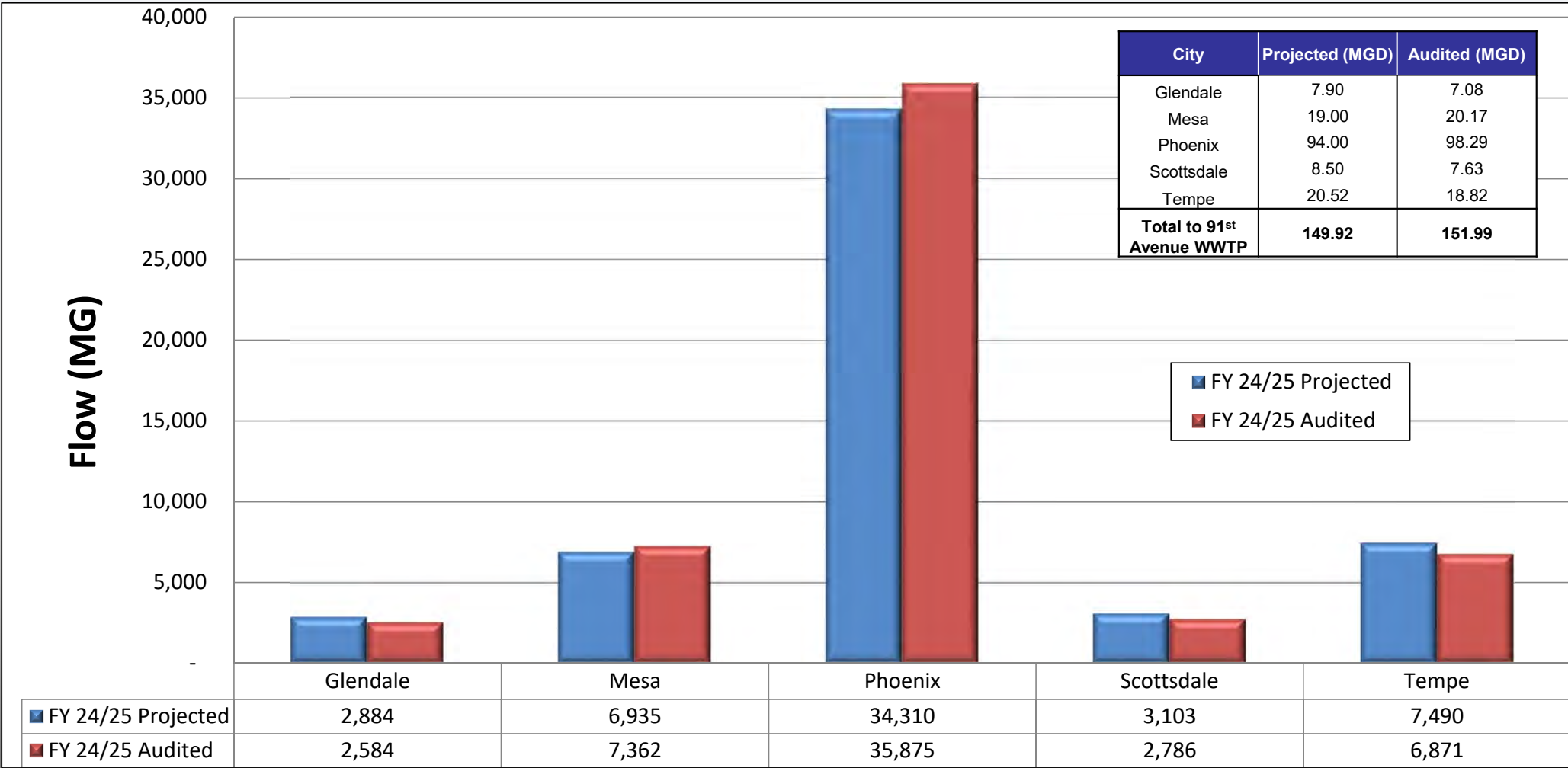
AVERAGE DAILY FLOW BY SROG CITY

5

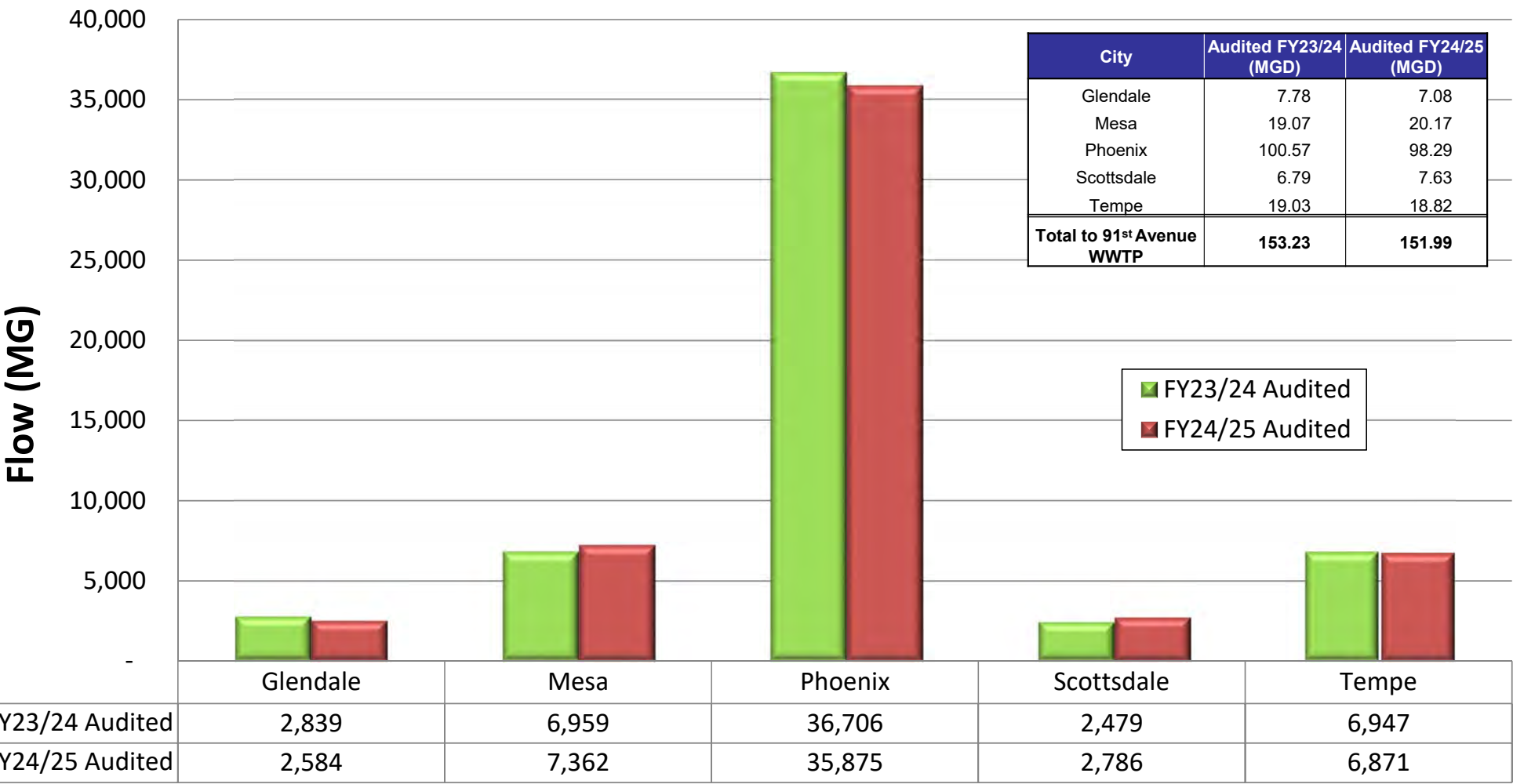
- FY 24/25 Audited

City	Total Yearly Flow (Million Gallons)	Average Daily Flow (MGD)
Glendale	2,584.31	7.08
Mesa	7,361.67	20.17
Phoenix	35,874.60	98.29
Scottsdale	2,785.83	7.63
Tempe	6,871.41	18.82
Total to 91st Avenue WWTP	55,477.82	151.99

Flows — Projected vs. Audited Values



FLOW AUDITED VALUES FY 23/24, FY 24/25



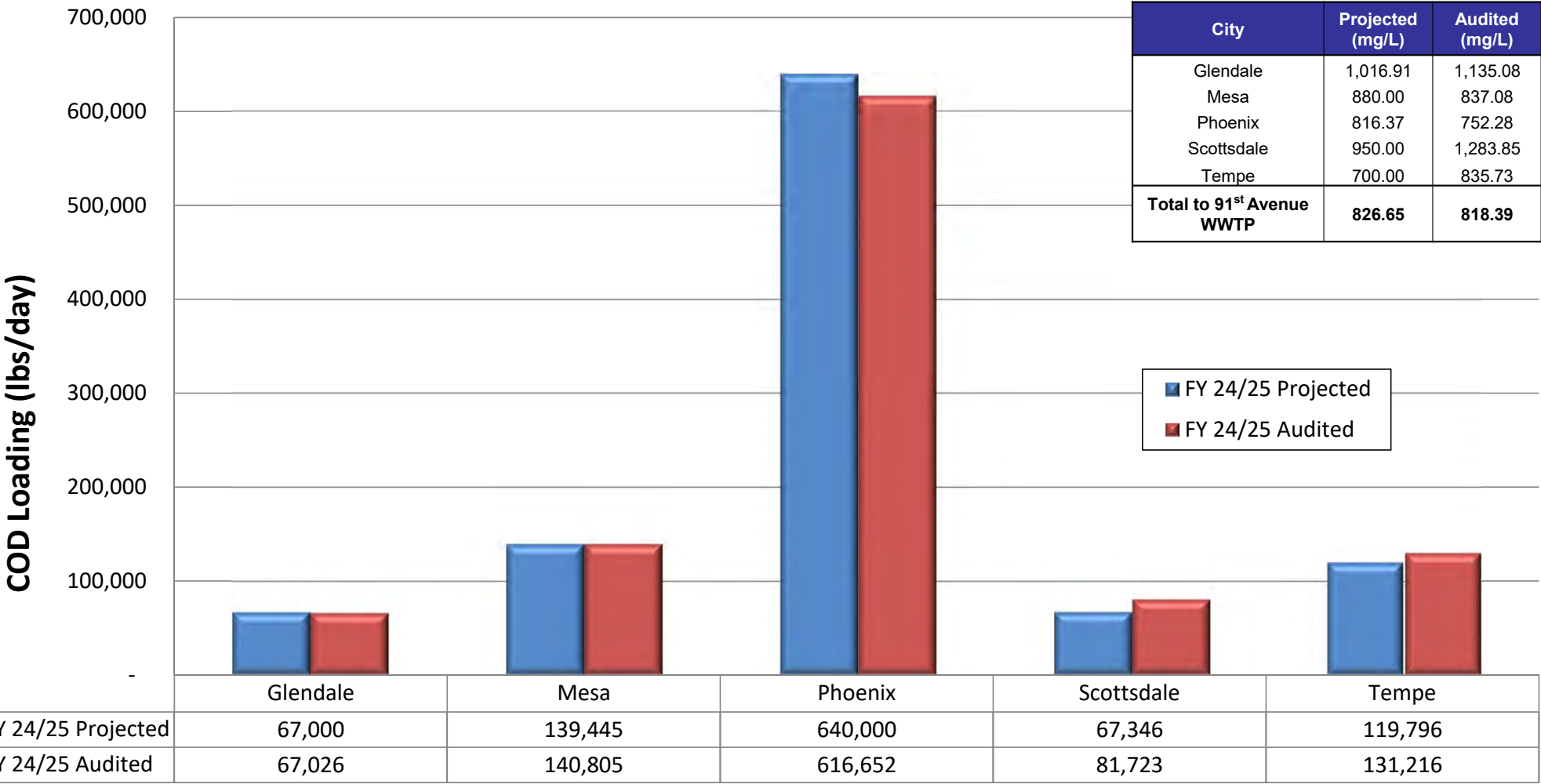
COD LOADING

8

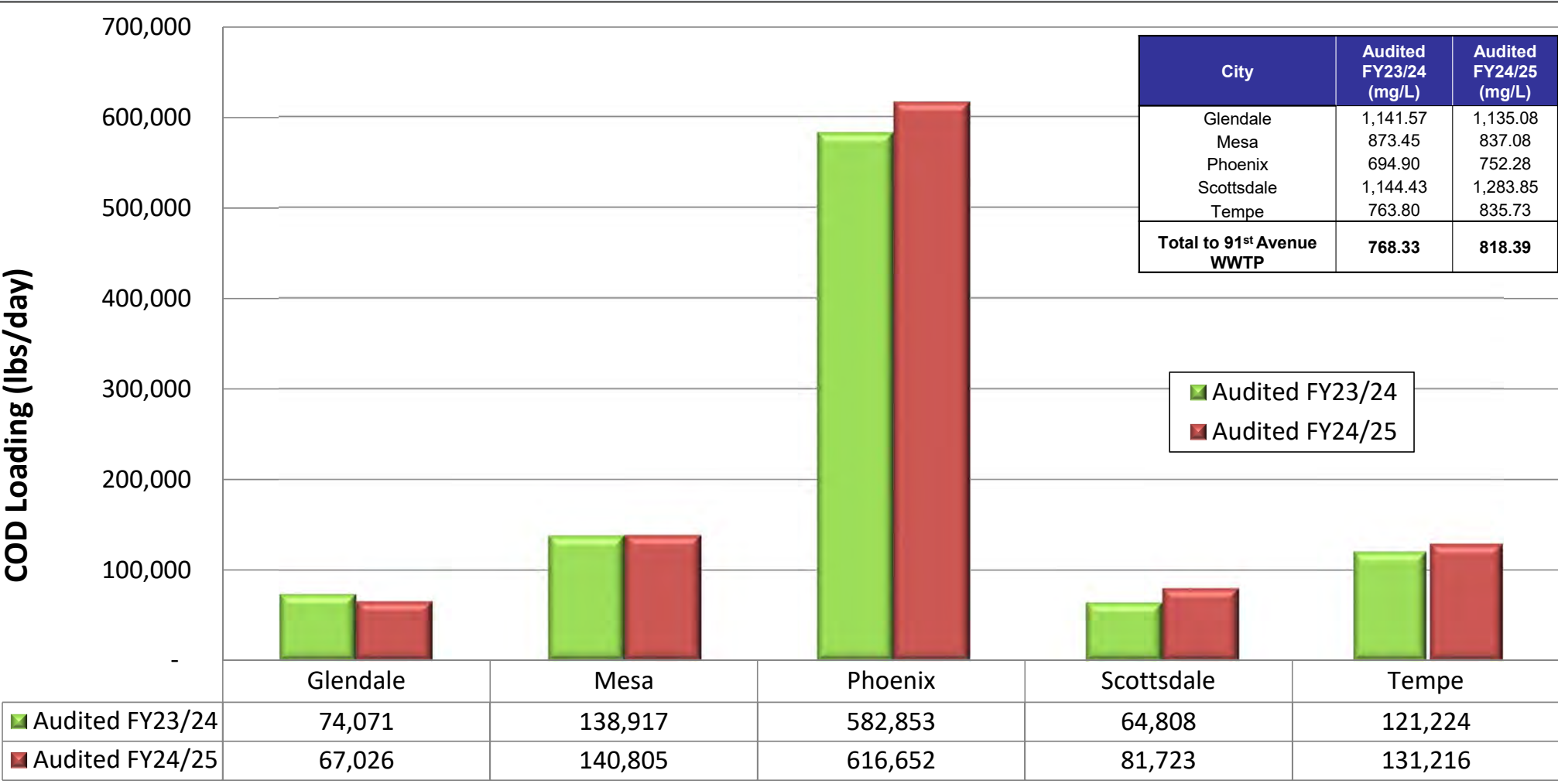
- FY24/25 Audited

City	Total Yearly Flow (million gallons)	Average Daily Flow (MGD)	Average Daily COD Loading (lbs/day)	Equivalent COD Concentration (mg/L)
Glendale	2,584.31	7.08	67,026	1,135.08
Mesa	7,361.67	20.17	140,805	837.08
Phoenix	35,874.60	98.29	616,652	752.28
Scottsdale	2,785.83	7.63	81,723	1,283.85
Tempe	6,871.41	18.82	131,216	835.73
Total to 91st Avenue WWTP	55,477.82	151.99	1,037,422	818.39

COD – PROJECTED VS. AUDITED VALUES FY24/25



COD AUDITED VALUES FY23/24, FY24/25



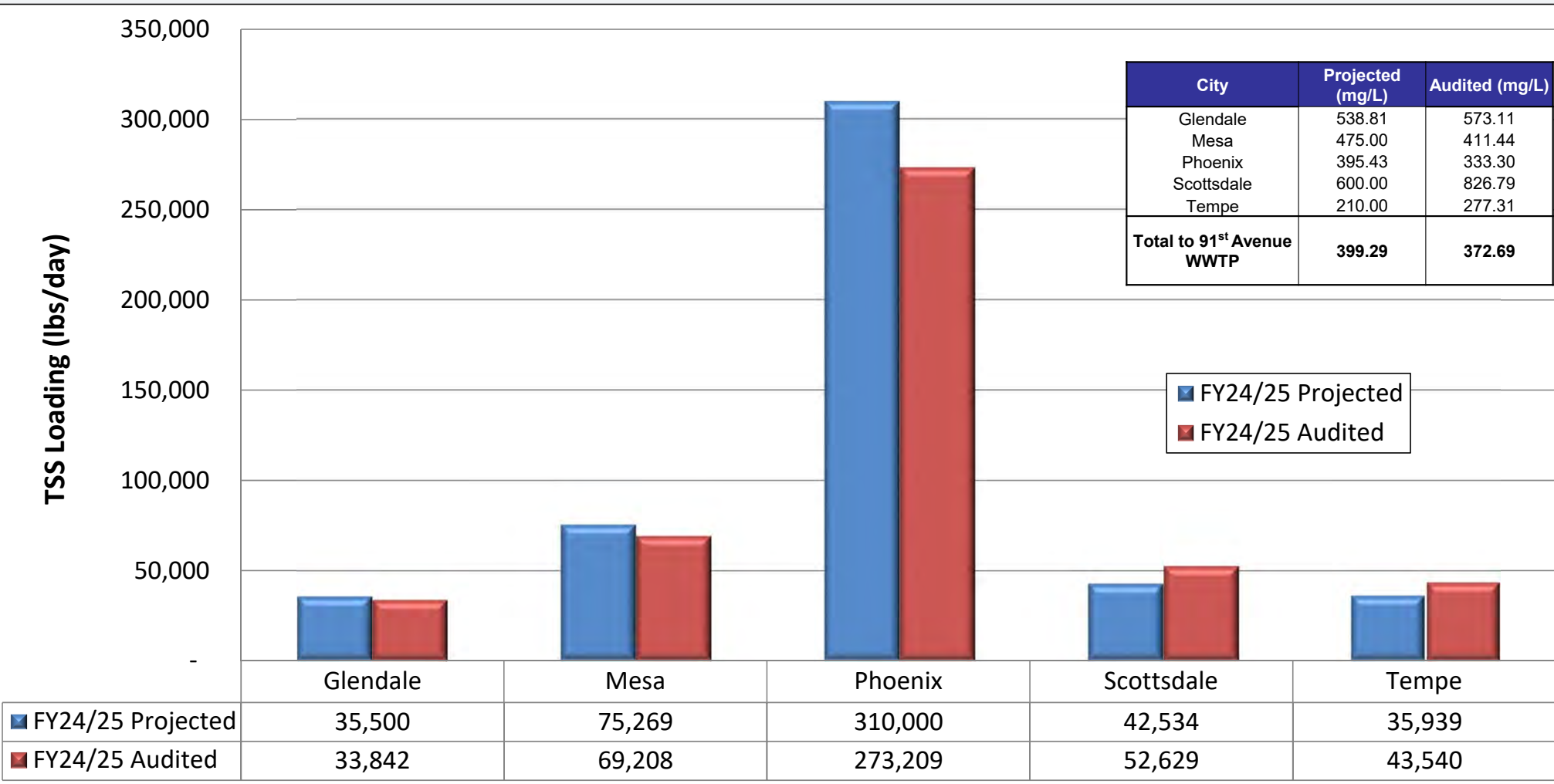
TSS LOADING

11

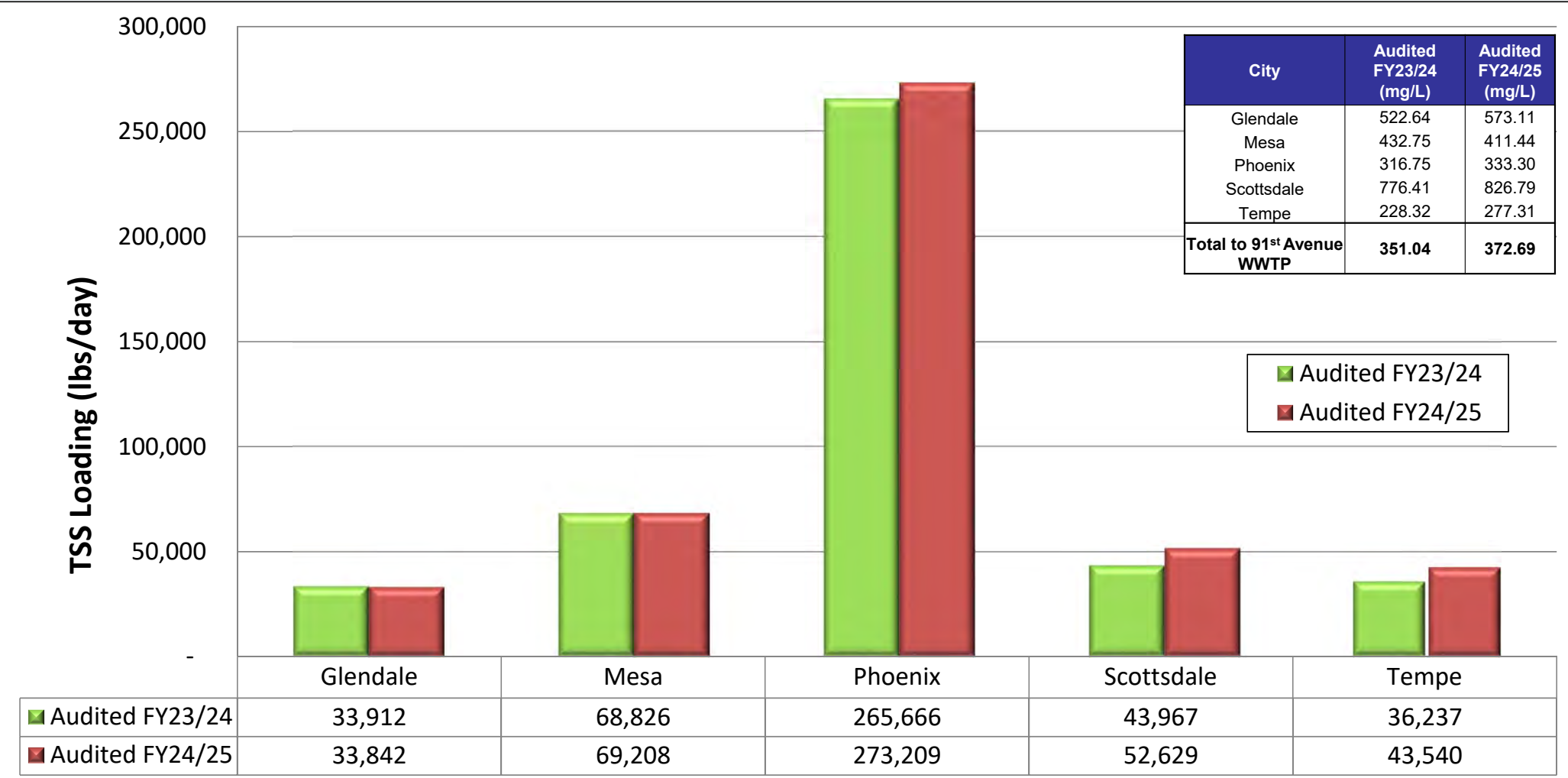
- FY24/25 Audited

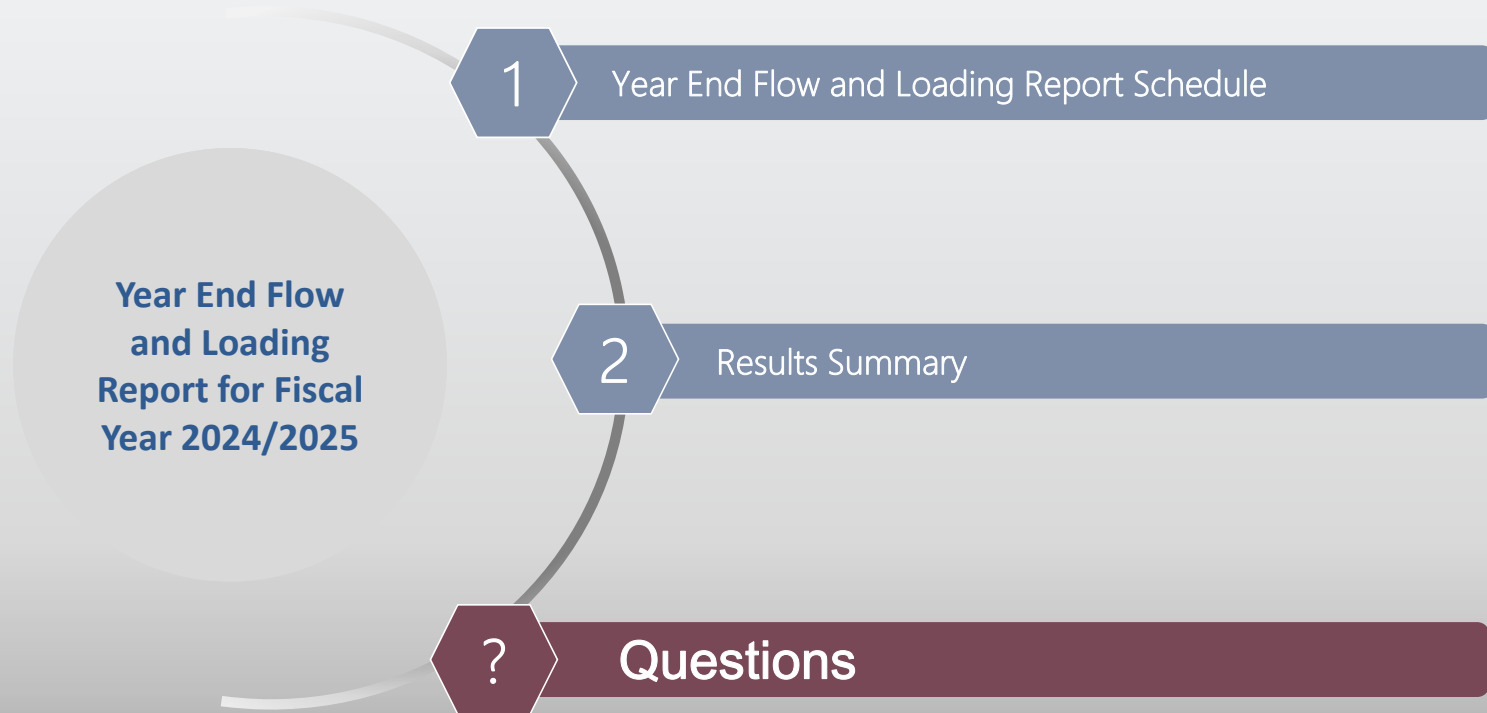
City	Total Yearly Flow (million gallons)	Average Daily Flow (MGD)	Average Daily TSS Loading (lbs/day)	Equivalent TSS Concentration (mg/L)
Glendale	2,584.31	7.08	33,842	573.11
Mesa	7,361.67	20.17	69,208	411.44
Phoenix	35,874.60	98.29	273,209	333.30
Scottsdale	2,785.83	7.63	52,629	826.79
Tempe	6,871.41	18.82	43,540	277.31
Total to 91st Avenue WWTP	55,477.82	151.99	472,428	372.69

TSS – PROJECTED VS. AUDITED VALUES FY24/25



TSS AUDITED VALUES FY23/24, FY24/25







Questions

INFLUENT FLOW AND LOADS TO 91ST AVENUE WWTP

16

Fiscal Year	91st Ave WWTP				
	Flow (MGD)	COD		TSS	
		(lbs/day)	(mg/L)	(lbs/day)	(mg/L)
FY 10/11	140.67	880,833	750.79	389,701	332.17
FY 11/12	140.81	853,291	726.61	372,231	316.97
FY 12/13	137.70	850,963	743.05	380,924	332.62
FY 13/14	137.73	897,243	781.12	410,559	357.43
FY 14/15	137.28	884,265	772.36	425,834	371.94
FY 15/16	135.62	891,238	787.94	412,519	364.71
FY 16/17	133.71	901,869	808.75	415,361	372.47
FY 17/18	135.12	913,082	810.27	427,906	379.73
FY 18/19	133.94	934,019	836.14	429,154	384.18
FY 19/20	135.16	930,718	825.72	432,508	383.71
FY 20/21	140.75	952,798	811.64	449,370	382.80
FY 21/22	148.99	1,002,704	806.93	496,117	399.25
FY 22/23	149.04	994,789	800.33	479,394	385.68
FY 23/24	153.23	981,873	768.33	448,608	351.04
FY 24/25	151.99	1,037,422	818.39	472,428	372.69

CITY OF GLENDALE FLOW AND LOADS TO 91ST AVENUE WWTP

17

Fiscal Year	City of Glendale				
	Flow (MGD)	COD		TSS	
		(lbs/day)	(mg/L)	(lbs/day)	(mg/L)
FY 10/11	8.14	56,519	832.89	27,595	406.66
FY 11/12	7.53	49,735	791.70	24,078	383.28
FY 12/13	7.08	54,737	929.26	26,183	444.50
FY 13/14	8.32	63,877	920.56	29,623	426.91
FY 14/15	6.70	59,322	1,061.92	29,982	536.71
FY 15/16	7.45	68,791	1,107.39	33,349	536.85
FY 16/17	7.46	62,741	1,008.19	32,113	516.03
FY 17/18	6.74	56,567	1,006.21	28,858	513.33
FY 18/19	7.04	63,582	1,083.67	32,412	552.41
FY 19/20	6.43	62,739	1,170.54	30,960	577.63
FY 20/21	8.98	63,100	842.64	28,581	381.67
FY 21/22	7.42	60,035	969.59	28,903	466.79
FY 22/23	7.97	63,887	961.37	34,312	516.32
FY 23/24	7.78	74,071	1,141.57	33,912	522.64
FY 24/25	7.08	67,026	1,135.08	33,842	573.11

CITY OF MESA FLOW AND LOADS TO 91ST AVENUE WWTP

18

Fiscal Year	City of Mesa				
	Flow (MGD)	COD		TSS	
		(lbs/day)	(mg/L)	(lbs/day)	(mg/L)
FY 10/11	17.23	124,280	865.03	65,655	456.98
FY 11/12	17.72	104,855	709.43	51,942	351.43
FY 12/13	16.13	108,075	805.84	52,901	394.44
FY 13/14	16.19	109,500	811.14	54,974	407.23
FY 14/15	15.94	106,450	800.90	55,985	421.22
FY 15/16	16.54	112,664	816.91	60,988	442.22
FY 16/17	16.62	114,716	827.43	60,434	435.90
FY 17/18	16.27	113,909	839.48	61,404	452.54
FY 18/19	16.77	117,166	837.80	60,553	432.99
FY 19/20	17.46	124,653	855.99	66,542	456.94
FY 20/21	16.51	109,362	794.13	56,029	406.85
FY 21/22	15.95	111,699	839.57	59,517	447.35
FY 22/23	15.95	116,962	879.53	62,745	471.83
FY 23/24	19.07	138,917	873.45	68,826	432.75
FY 24/25	20.17	140,805	837.08	69,208	411.44

CITY OF PHOENIX FLOW AND LOADS TO 91ST AVENUE WWTP

19

Fiscal Year	City of Phoenix				
	Flow (MGD)	COD		TSS	
		(lbs/day)	(mg/L)	(lbs/day)	(mg/L)
FY 10/11	83.61	517,937	742.81	219,193	314.36
FY 11/12	83.70	527,828	756.20	232,315	332.83
FY 12/13	84.43	521,538	742.67	232,512	331.10
FY 13/14	82.52	531,881	772.87	244,617	355.45
FY 14/15	84.05	542,061	773.29	259,211	369.78
FY 15/16	81.14	520,836	769.66	238,927	353.07
FY 16/17	80.33	541,345	808.01	238,585	356.11
FY 17/18	83.79	568,090	812.96	259,411	371.23
FY 18/19	81.73	581,318	852.80	260,209	381.73
FY 19/20	83.52	576,871	828.21	264,156	379.25
FY 20/21	87.39	604,306	829.11	290,310	398.31
FY 21/22	96.49	646,471	803.37	329,419	409.37
FY 22/23	98.16	631,400	771.23	300,513	367.06
FY 23/24	100.57	582,853	694.90	265,666	316.75
FY 24/25	98.29	616,652	752.28	273,209	333.30

CITY OF SCOTTSDALE FLOW AND LOADS TO 91ST AVENUE WWTP

20

City of Scottsdale					
Fiscal Year	Flow (MGD)	COD		TSS	
		(lbs/day)	(mg/L)	(lbs/day)	(mg/L)
FY 10/11	12.85	90,357	848.98	49,134	458.39
FY 11/12	14.44	79,502	660.31	38,031	315.87
FY 12/13	11.52	80,986	845.45	42,487	443.54
FY 13/14	11.30	86,892	922.12	49,484	525.13
FY 14/15	11.21	82,872	886.27	50,241	537.30
FY 15/16	11.05	86,808	942.01	49,309	535.08
FY 16/17	9.38	82,709	1,008.71	51,392	626.77
FY 17/18	9.47	73,732	933.63	49,242	623.52
FY 18/19	9.76	69,019	847.84	44,125	542.04
FY 19/20	9.26	68,761	890.70	44,646	578.33
FY 20/21	8.66	62,243	861.87	41,316	572.09
FY 21/22	9.52	74,376	936.86	45,930	578.55
FY 22/23	7.59	59,753	944.33	44,242	699.20
FY 23/24	6.79	64,808	1,144.43	43,967	776.41
FY 24/25	7.63	81,723	1,283.85	52,629	826.79

CITY OF TEMPE FLOW AND LOADS TO 91ST AVENUE WWTP

21

Fiscal Year	Flow (MGD)	City of Tempe			
		COD		TSS	
		(lbs/day)	(mg/L)	(lbs/day)	(mg/L)
FY 10/11	18.85	91,740	583.48	28,124	178.87
FY 11/12	17.42	91,371	628.74	25,865	177.98
FY 12/13	18.54	85,627	555.38	26,841	174.09
FY 13/14	19.41	105,093	649.30	31,861	196.85
FY 14/15	19.38	93,560	578.85	30,414	188.17
FY 15/16	19.45	102,139	629.68	29,946	184.61
FY 16/17	19.46	100,358	618.36	32,837	202.32
FY 17/18	18.85	100,785	641.10	28,991	184.41
FY 18/19	18.64	102,934	662.10	31,855	204.90
FY 19/20	18.49	97,694	633.49	26,204	170.38
FY 20/21	19.13	113,787	710.13	33,134	206.78
FY 21/22	19.61	110,123	673.23	32,348	197.76
FY 22/23	19.37	122,787	760.00	37,582	232.61
FY 23/24	19.03	121,224	763.80	36,237	228.32
FY 24/25	18.82	131,216	835.73	43,540	277.31



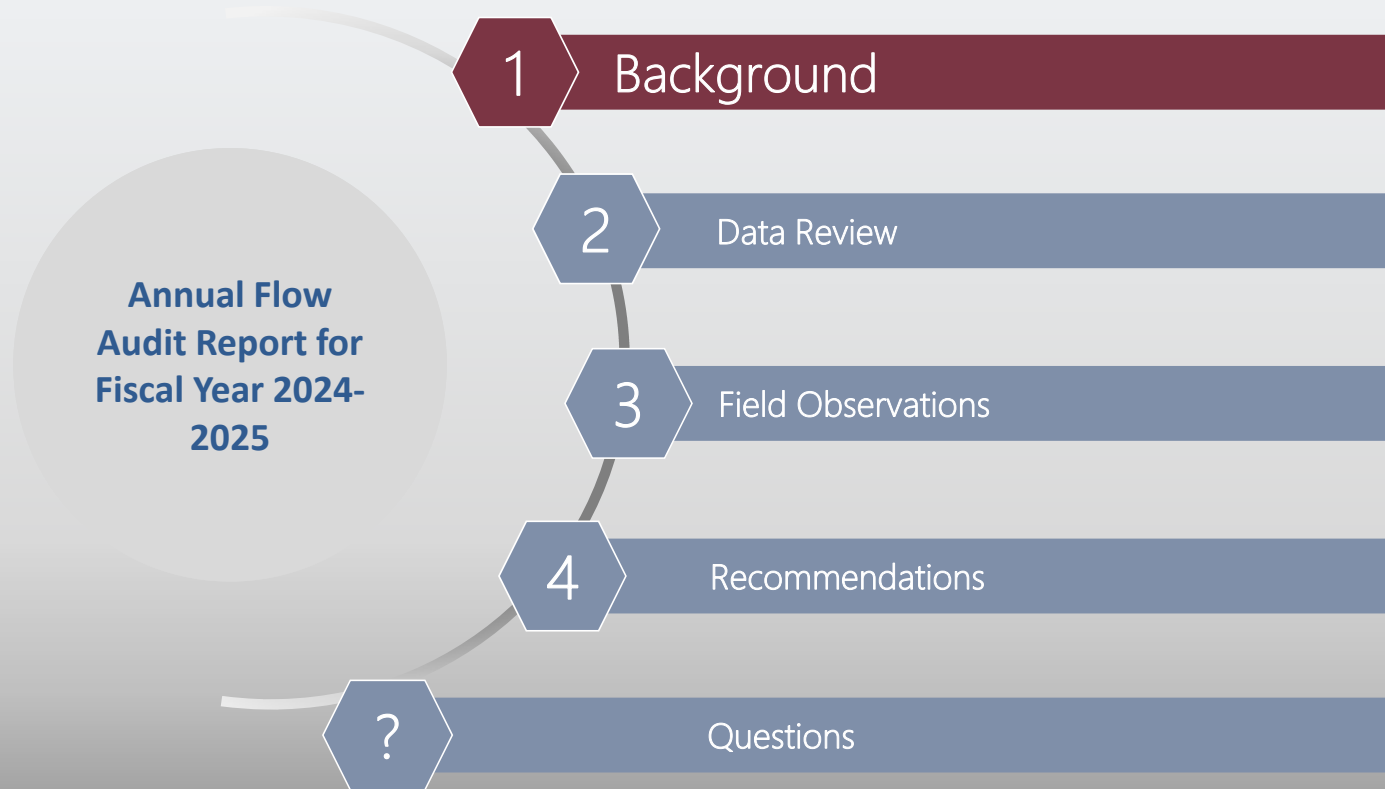
SUB-REGIONAL OPERATING GROUP (SROG)

August 14, 2025

91st Avenue WWTP
SROG Support Services
COP Project: WS90100062

Annual Calibration Audit Report Fiscal Year 2024-2025

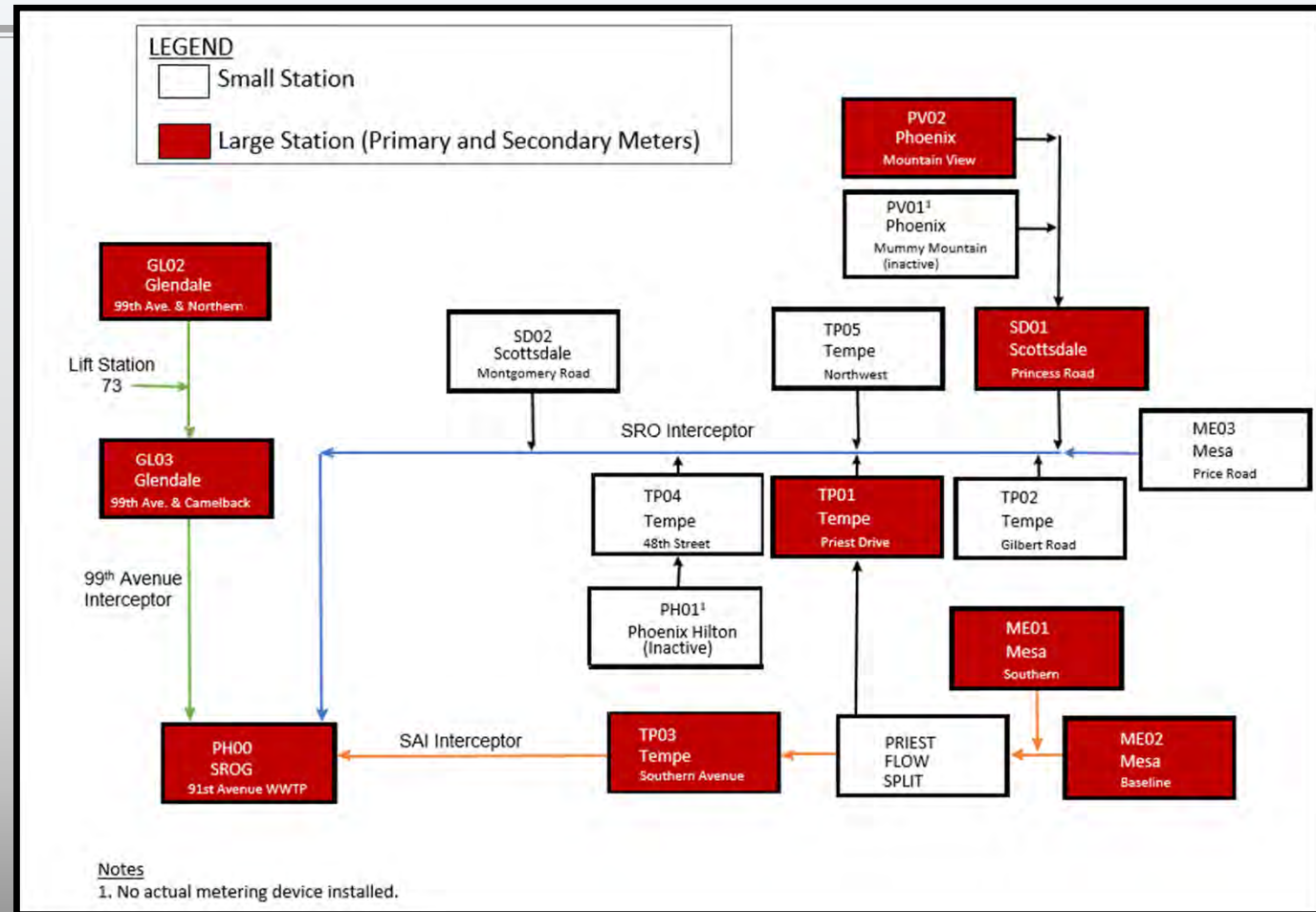
WILSON
ENGINEERS



BACKGROUND

3

- Large Station – Flows Greater than 5 MGD
- Small Station – Flow Less than 5 MGD



BACKGROUND

4

Station	Type	Primary Meter	Secondary Meter
PH00	Large	3 Lasers	6 Lasers
GL02	Large	Laser	Laser
GL03	Large	Laser	Laser
ME01	Large	Flume + Pulsar	ADFM
ME02	Large	Flume + Pulsar	ADFM
ME03	Small	Flume + Pulsar	----
SD01	Large	Laser	Laser
PV02	Large	Laser	Flume
TP01 ¹	Large	Laser	Flume + Hydorranger
TP02	Small	Flume + Hydorranger	----
TP03 ²	Large	Laser	Flume + Hydorranger
TP04	Small	Flume + Hydorranger	----
TP05	Small	Flume + Hydorranger	----

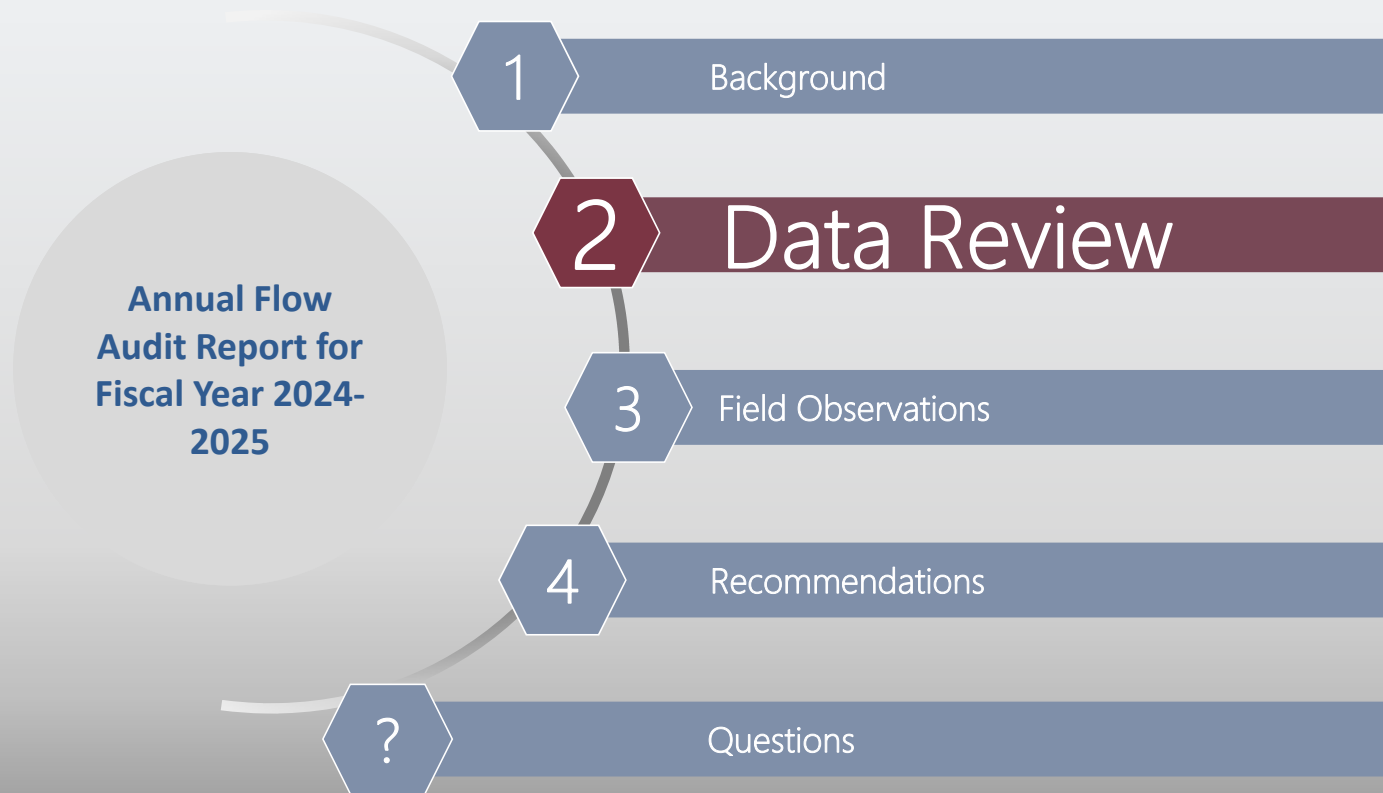
¹TP01 MS Under Construction for Period of December 2024 to July 2025. New Laser Flow Meter Operational Since July 2025.

²TP03 MS Under Construction for Period of October 2024 to May 2025. New Laser Flow Meter Operational Since May 2025.

ANNUAL FIELD CALIBRATION SCHEDULE

5

Date	Stations	Participants
3/17/2025	91 st Ave WWTP	Phoenix
3/18/2025	ME01, ME02, ME03	Phoenix, Mesa
3/19/2025	TP02, TP04, TP05	Phoenix, Tempe
3/24/2025	GL03, GL03, GL04	Phoenix, Glendale
3/25/2025	SC01, TL01	Phoenix, Glendale, EPCOR
3/26/2025	SD01, PV02	Phoenix, Scottsdale
6/12/2025	TP03	Phoenix, Tempe
7/18/2025	TP01	Phoenix, Tempe



DATA REVIEW

Notes:

Historical. Data previously metered at the station.

Audited. Adopted data following auditing protocols.

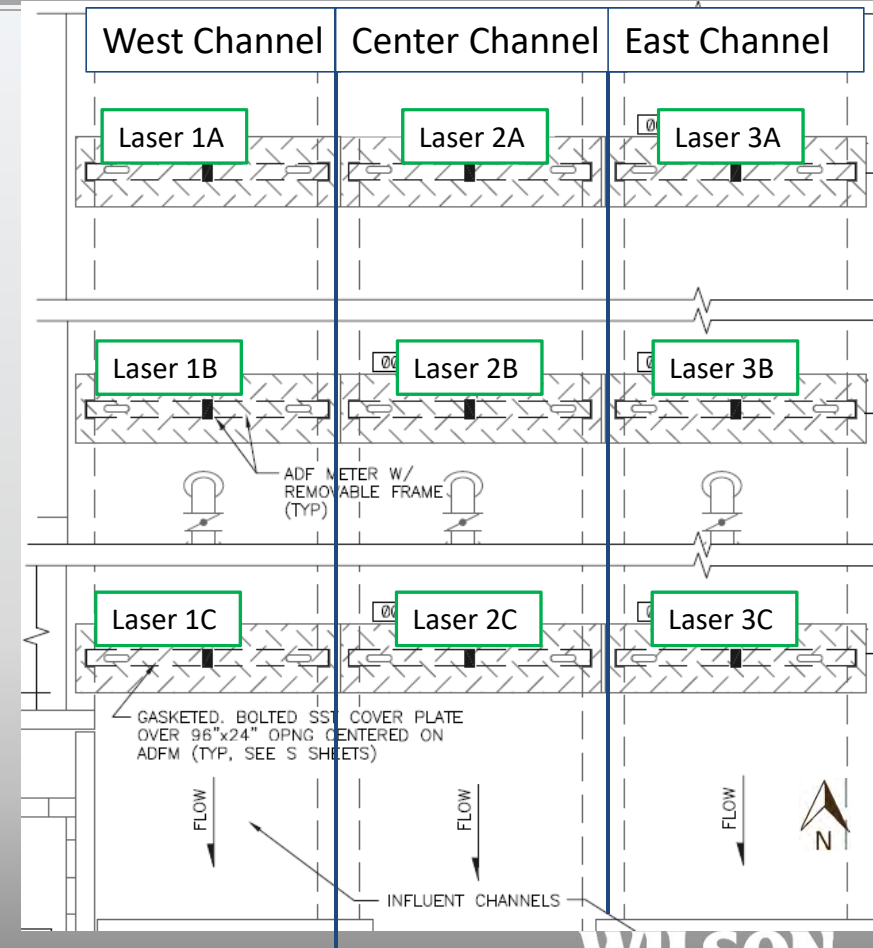
Year	2024						2025					
Month	July	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
PH00 (Lasers)	Laser	Laser	Laser	Laser	Laser	Laser	Laser	Laser	Laser	Laser	Laser	Laser
GL02 (Laser)	Laser	Laser	Laser	Laser Historical	Laser	Laser	Laser	Laser	Laser	Laser	Laser	Laser
GL03 (Laser)	Laser	Laser	Laser	Laser	Laser	Laser	Laser	Laser	Laser	Laser	Laser	Laser
ME01 (Flume)	Flume	Flume	Flume	Flume	Flume ADFM	Flume	Flume	Flume	Flume	Flume	Flume	Flume
ME02 (Flume)	Flume	Flume	Flume	Flume	Flume	Flume	Flume	Flume	Flume	Flume	Flume	Flume
ME03 (Flume)	Flume	Flume	Flume Historical	Flume	Flume	Flume	Flume	Flume	Flume	Flume Historical	Flume Historical	Flume Historical
PH01 (Flume)	Flume	Flume	Flume	Flume	Flume	Flume	Flume	Flume	Flume	Flume	Flume	Flume
SD01 (Laser)	Laser	Laser	Laser	Laser	Laser	Laser	Laser	Laser	Laser	Laser	Laser	Laser
PV02 (Laser)	Laser	Laser Historical	Laser	Laser	Laser	Laser	Laser	Laser	Laser	Laser	Laser	Laser
TP01 (Flume)	Flume	Flume	Flume	Flume	Flume	Flume Audited	Flume Audited	Flume Audited	Flume Audited	Flume Audited	Flume Audited	Flume Audited
TP02 (Flume)	Flume	Flume	Flume	Flume	Flume	Flume	Flume	Flume	Flume	Flume	Flume	Flume
TP03 (Flume)	Flume	Flume	Flume	Flume	Flume	Flume	Flume	Flume	Flume	Flume	Flume	Flume
TP04 (Flume)	Flume	Flume	Flume	Flume	Flume	Flume	Flume	Flume	Flume	Flume	Flume	Flume
TP05 (Flume)	Flume	Flume	Flume	Flume	Flume	Flume	Flume	Flume	Flume	Flume	Flume	Flume



GENERAL OBSERVATIONS – PH00 (3/17)

9

Laser	Observations
1A (Channel 1)	<i>Unit is in good working order.</i> Hard level measurement taken to confirm level readings.
1B (Channel 1)	<i>Unit is in good working order.</i> Hard level measurement taken to confirm level readings.
1C (Channel 1)	<i>Unit is in good working order.</i> Hard level measurement taken to confirm level readings.
2A (Channel 2) ¹	<i>Unit is in good working order.</i> Hard level measurement taken to confirm level readings.
2B (Channel 2) ¹	<i>Unit is in good working order.</i> Hard level measurement taken to confirm level readings.
2C (Channel 2) ¹	<i>Unit is in good working order.</i> Hard level measurement taken to confirm level readings.
3A (Channel 3)	<i>Unit is in good working order.</i> Hard level measurement taken to confirm level readings.
3B (Channel 3)	<i>Unit is in good working order.</i> Hard level measurement taken to confirm level readings.
3C (Channel 3)	<i>Unit is in good working order.</i> Hard level measurement taken to confirm level readings.



¹Channel Closed for Operation During Calibration Event.

Station/Meter	Observations
GL02 Temporary Laser	<i>Unit is in good working order.</i> Laser has been restored, updated, power cycled, and reprogrammed.
GL03 Laser 1 and Laser 2	<i>Units are in good working order.</i>

GENERAL OBSERVATIONS – MESA (3/8)

11

Station/Meter	Observations
ME01/ME02/ME03	<i>Communication Issues.</i> Continuous telephone modem communication issues for FY 2024/2025.
ME01 24” Parshall Flume	<i>Sensor needs to be changed out.</i> Response time of sensor is approximately 5 minutes.
ME02 36” Parshall Flume	<i>Unit is in good working order.</i>
ME03 18” Parshall Flume	<i>New meter is functioning well.</i>
ME01 ADFM	<i>Unit is in good working order.</i>
ME02 ADFM	<i>Unit is in good working order.</i>

Notes:

(1) ADFMs Production discontinued. No units available for replacement.

Station/Meter	Observations
PV02 24” Parshall Flume	<i>Unit is in good working order.</i> Unable to verify the signal to Scottsdale as no representative was present. Target values were changed for FY 2024/2025 as a new flow table had previously been loaded into the meter.
PV02 Laser	<i>Unit is in good working order.</i> Unable to verify calibrate ultrasonic sensor with the fixed target calibration method, however, the signature programming was verified.

GENERAL OBSERVATIONS – SCOTTSDALE (3/26)

13

Station/Meter	Observations
SD01 Laser 1 and Laser 2	<i>Units are in good working order.</i>

GENERAL OBSERVATIONS – TEMPE (3/19)

14

Station/Meter	Observations
TP01/TP02/TP03/ TP04/TP05	<i>Communication Issues.</i> Continuous telephone modem communication issues for FY 2024/2025.
TP01 48” Parshall Flume	<i>Unit is in good working order.</i>
TP01 Laser	<i>Unit is in good working order.</i> Laser installed and calibrated on July 2, 2025
TP02 18” Parshall Flume	<i>Unit is in good working order.</i> Ultrasonic sensor is very slow to respond and needs to be replaced.
TP03 48” Parshall Flume	<i>Unit is in good working order.</i>
TP03 Laser	<i>Unit is in good working order.</i> Laser installed and calibrated on May 15, 2025.
TP04 9” Parshall Flume	<i>Unit is in good working order.</i>
TP05 6” Parshall Flume	<i>Unit is in good working order.</i> Max flow updated as a result of coordination and verification of flow with the City of Tempe.



- Consider Replacing ADFMs at ME01 and ME02
- Consider Upgrading Communication Equipment at Stations with Communication Issues
 - Mesa and Tempe Stations
- Implement the SROG Lasers Maintenance Program
- Continue Project for Replacement of 91st Avenue WWTP and 23rd Avenue WWTP Influent Flume's Rosemount Radar Units.

